Pullar House 35 Kinnoull Street Perth PH1 5GD Tel: 01738 475300 Email: onlineapps@pkc.gov.uk

Applications cannot be validated until all the necessary documentation has been submitted and the required fee has been paid.

Thank you for completing this application form:

ONLINE REFERENCE 100757266-001

The online reference is the unique reference for your online form only. The Planning Authority will allocate an Application Number when your form is validated. Please quote this reference if you need to contact the planning Authority about this application.

Applicant or Agent Details

Are you an applicant or an agent? * (An agent is an architect, consultant or someone else acting on behalf of the applicant in connection with this application) ☐ Applicant ☒ Agent

Agent Details

Please enter Agent details

Company/Organisation:	Lichfields		
Ref. Number:		You must enter a Building Name or Number, or both: *	
First Name: *	Rachel	Building Name:	Caledonian Exchange
Last Name: *	Affleck	Building Number:	
Telephone Number: *	[redacted]	Address 1 (Street): *	Canning Street
Extension Number:		Address 2:	
Mobile Number:		Town/City: *	Edinburgh
Fax Number:		Country: *	United Kingdom
		Postcode: *	EH3 8EG
Email Address: *	[redacted]		

Is the applicant an individual or an organisation/corporate entity? *

☐ Individual ☒ Organisation/Corporate entity

Applicant Details

Please enter Applicant details

Title:		You must enter a Building Name or Number, or both: *	
Other Title:		Building Name:	McDonald's Restaurants Ltd
First Name: *		Building Number:	
Last Name: *		Address 1 (Street): *	The Oakwood
Company/Organisation	McDonald's Restaurants Ltd	Address 2:	Easterly Road
Telephone Number: *		Town/City: *	Leeds
Extension Number:		Country: *	United Kingdom
Mobile Number:		Postcode: *	LS8 2RB
Fax Number:			
Email Address: *	[redacted]		

Site Address Details

Planning Authority: Perth and Kinross Council

Full postal address of the site (including postcode where available):

Address 1:	
Address 2:	
Address 3:	
Address 4:	
Address 5:	
Town/City/Settlement:	
Post Code:	

Please identify/describe the location of the site or sites

Land 70 Metres West Of Langdale Perth Road Blairgowrie PH10 6EN

Northing	743921	Easting	317399

Description of Proposal

Please provide a description of your proposal to which your review relates. The description should be the same as given in the application form, or as amended with the agreement of the planning authority: *
(Max 500 characters)

Erection of restaurant unit with drive thru facilities and formation of vehicular access, parking areas, landscaping and associated works.

Type of Application

What type of application did you submit to the planning authority? *

☒ Application for planning permission (including householder application but excluding application to work minerals).

☐ Application for planning permission in principle.

☐ Further application.

☐ Application for approval of matters specified in conditions.

What does your review relate to? *

☒ Refusal Notice.

☐ Grant of permission with Conditions imposed.

☐ No decision reached within the prescribed period (two months after validation date or any agreed extension) – deemed refusal.

Statement of reasons for seeking review

You must state in full, why you are a seeking a review of the planning authority's decision (or failure to make a decision). Your statement must set out all matters you consider require to be taken into account in determining your review. If necessary this can be provided as a separate document in the 'Supporting Documents' section: * (Max 500 characters)

Note: you are unlikely to have a further opportunity to add to your statement of appeal at a later date, so it is essential that you produce all of the information you want the decision-maker to take into account.

You should not however raise any new matter which was not before the planning authority at the time it decided your application (or at the time expiry of the period of determination), unless you can demonstrate that the new matter could not have been raised before that time or that it not being raised before that time is a consequence of exceptional circumstances.

Please see enclosed Statement of Appeal.

Have you raised any matters which were not before the appointed officer at the time the Determination on your application was made? * ☐ Yes ☒ No

If yes, you should explain in the box below, why you are raising the new matter, why it was not raised with the appointed officer before your application was determined and why you consider it should be considered in your review: * (Max 500 characters)

Please provide a list of all supporting documents, materials and evidence which you wish to submit with your notice of review and intend to rely on in support of your review. You can attach these documents electronically later in the process: * (Max 500 characters)

Please see Appendix 3 of Statement of Appeal.

Application Details

Please provide the application reference no. given to you by your planning authority for your previous application.

25/01116/FLL

What date was the application submitted to the planning authority? *

24/07/2025

What date was the decision issued by the planning authority? *

13/03/2026

Review Procedure

The Local Review Body will decide on the procedure to be used to determine your review and may at any time during the review process require that further information or representations be made to enable them to determine the review. Further information may be required by one or a combination of procedures, such as: written submissions; the holding of one or more hearing sessions and/or inspecting the land which is the subject of the review case.

Can this review continue to a conclusion, in your opinion, based on a review of the relevant information provided by yourself and other parties only, without any further procedures? For example, written submission, hearing session, site inspection. *

☐ Yes ☒ No

Please indicate what procedure (or combination of procedures) you think is most appropriate for the handling of your review. You may select more than one option if you wish the review to be a combination of procedures.

Please select a further procedure *

Holding one or more hearing sessions on specific matters

Please explain in detail in your own words why this further procedure is required and the matters set out in your statement of appeal it will deal with? (Max 500 characters)

Please see enclosed Notice of Review Form and Statement of Appeal.

In the event that the Local Review Body appointed to consider your application decides to inspect the site, in your opinion:

Can the site be clearly seen from a road or public land? * ☒ Yes ☐ No

Is it possible for the site to be accessed safely and without barriers to entry? * ☒ Yes ☐ No

Checklist – Application for Notice of Review

Please complete the following checklist to make sure you have provided all the necessary information in support of your appeal. Failure to submit all this information may result in your appeal being deemed invalid.

Have you provided the name and address of the applicant?. * ☒ Yes ☐ No

Have you provided the date and reference number of the application which is the subject of this review? * ☒ Yes ☐ No

If you are the agent, acting on behalf of the applicant, have you provided details of your name and address and indicated whether any notice or correspondence required in connection with the review should be sent to you or the applicant? * ☒ Yes ☐ No ☐ N/A

Have you provided a statement setting out your reasons for requiring a review and by what procedure (or combination of procedures) you wish the review to be conducted? * ☒ Yes ☐ No

Note: You must state, in full, why you are seeking a review on your application. Your statement must set out all matters you consider require to be taken into account in determining your review. You may not have a further opportunity to add to your statement of review at a later date. It is therefore essential that you submit with your notice of review, all necessary information and evidence that you rely on and wish the Local Review Body to consider as part of your review.

Please attach a copy of all documents, material and evidence which you intend to rely on (e.g. plans and Drawings) which are now the subject of this review * ☒ Yes ☐ No

Note: Where the review relates to a further application e.g. renewal of planning permission or modification, variation or removal of a planning condition or where it relates to an application for approval of matters specified in conditions, it is advisable to provide the application reference number, approved plans and decision notice (if any) from the earlier consent.

Declare – Notice of Review

I/We the applicant/agent certify that this is an application for review on the grounds stated.

Declaration Name: Miss Rachel Affleck

Declaration Date: 08/06/2026

Payment Details

Pay Direct

Created: 08/06/2026 17:21

Proposed drive-thru restaurant
Land at Perth Road, Blairgowrie

Planning Statement

McDonald's Restaurants Ltd

24 July 2025

LICHFIELDS

LICHFIELDS

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1.0 Introduction

1.1 This Planning Statement has been prepared by Lichfields on behalf of McDonald's Restaurants Limited ('McDonald's') to accompany a planning application for development at Perth Road, Blairgowrie ('the site').

1.2 Its purpose is to assist officers at Perth and Kinross Council ('the Council') in their consideration of the accompanying planning application.

Proposed development

1.3 This application seeks Planning Permission for:

1.4 *'Erection of drive-thru restaurant (Class 3/Sui Generis) with associated access, servicing, car parking, landscaping and other associated works and infrastructure'.*

1.5 The proposed development comprises:

- A new drive-thru restaurant, extending to 292 sq.m Gross Internal Area ('GIA') / 315 sq.m ('GEA');
- 38 parking bays, including three accessible bays and two grill bays;
- Three motorcycle parking spaces;
- Six cycle parking spaces in the form of three "Sheffield" cycle stands;
- Vehicle access to and from the proposed development via the unnamed access road to the south of the site;
- Recycling and waste facilities across the site to encourage the proper disposal of waste;
- Pedestrian access to the south of the site; and
- Within the site, pedestrian routes via paved footways and marked crossing facilities will be provided.

Pre-application process

1.6 A Pre-Application Enquiry was submitted in July 2024 to Perth and Kinross Council's Planning Service. A meeting with Perth and Kinross Council was then held on 9 August 2024, with representatives from Lichfields and McDonald's in attendance at this meeting. Formal written advice was then received on 11 November 2024.

1.7 Council Officers provided helpful feedback on the proposed development. The Council requested that a Town Centre First Assessment be carried out for Blairgowrie Town Centre. The Council also outlined that an Ecological Impact Assessment, Transport Statement and Noise Impact Assessment would be required.

1.8 This Statement considers the relevant planning issues for the proposed development in the context of the relevant planning policy and guidance. It also responds to the advice provided during the pre-application stage by the Council.

Planning application submission

1.9 This Statement is one of a suite of documents comprising:

- Drawing package, including location and site plans (AEW Architects);
- Planning application forms and certificates (Lichfields);
- Planning Statement (this document);
- Economic Statement (Lichfields);
- Transport Assessment and Travel Plan (Andrew Moseley Associates ('AMA'));
- Ecological Appraisal Survey (Encon Associates);
- Landscape Scheme (Encon Associates);
- Landscape Management Plan (Encon Associates);
- Odour Report (Encon Associates);
- Air Quality Assessment (Encon Associates);
- Flood Risk Screening and Drainage Impact Assessment (Glanville Consultants Ltd);
- Drainage Maintenance Plan (Glanville Consultants Ltd);
- Construction Environmental Management Plan (Glanville Consultants Ltd);
- Low and Zero Carbon ('LZC') Report (CDM Partnership);
- Lighting Plot (Signify); and
- Lighting Impact Assessment.

Structure of Statement

1.10 This Statement is structured as follows:

- **Section 2 –** describes the site and its context, including the relevant planning history;
- **Section 3** – describes the proposed development;
- **Section 4** – identifies the planning policy context of relevance to the proposed development;
- **Section 5** – assesses the development in the context of the relevant town centre assessment;
- **Section 6** – assesses the proposed development against the relevant planning policy considerations; and
- **Section 7** – sets out the conclusions of the Statement.

2.0 Site context

Site and surroundings

2.1 The application site comprises 0.29 hectares and lies to the west of Perth Road (A93). The site benefits from Planning Permission in Principle as part of a wider development site for a mixed-use development. This is discussed further below under Planning History.

2.2 The location of the site is shown in the Location Plan that has been submitted with the application (ref. 13638_AEW_2473_1001).

2.3 The site is bound to the south by Westpark Retail Park, which includes retail stores occupied by Lidl, Home Bargains and a drive-thru Starbucks; to the east by Perth Road (A93), with residential properties beyond; to the west by an area of Ancient Woodland; and to the north by grassland which has Planning Permission for a housing development - 71 houses and 32 flats. Please see the Planning History section below for details.

2.4 The site does not contain or adjoin any listed buildings and is not located within a conservation area. The Fir Hillock Scheduled Monument is located approximately 700m north-west of the site, and a Site of Special Scientific Interest (Ardblair and Myreside Fens) is located approximately 900m north-west of the site. In addition, an area of Ancient Woodland is located approximately 120m to the west of the subject site.

Accessibility

2.5 The accessibility of the site and the proposed development is considered in the accompanying Transport Assessment (June 2025), prepared by AMA.

2.6 The site is approximately 1.2 km from Blairgowrie Town Centre and is well served by sustainable travel modes. Two bus stops are available on Perth Road (A93), directly to the east of the stie, approximately 70m from the proposed development and can be accessed via the existing pedestrian infrastructure. These bus stops are served by bus services 58 and 63 and provide connections to Blairgowrie and Perth seven days a week, and Carsie and Rattray six days a week.

2.7 The site is also accessible by cyclists and pedestrians, with good quality and well-lit pedestrian infrastructure along Perth Road. A toucan crossing is provided across Perth Road adjacent to the site which provides a convenient crossing point to the residential area to the east. Given the site is only 1.2km from Blairgowrie Town Centre, the site also provides the opportunity for customers to walk from the town centre.

2.8 Given the site is located directly adjacent to a retail park, the location of the proposed development is in an area where customers are already in the area or on the road network, therefore, it is considered an appropriate location for the proposals.

Planning history

2.9 The subject site is part of a wider development of 29 hectares which is allocated for a mix of uses in the Perth and Kinross Local Development Plan ('LDP') (adopted November 2019).

Wider development site

2.10 In December 2018, Planning Permission in Principle (ref. 17/00939/IPM) was granted for a mixed-use development on the site. This comprised residential development, employment land and commercial units, including a restaurant, hotel and drive-thru café.

2.11 The proposed development site is located where the hotel was approved on the original masterplan for the site (see approved site plan below). The hotel has not been developed.

Figure 2.1 – Approved indicative site plan (Planning Permission in Principle ref. 17/00939/IPM)

2.12 Following the approval of the Planning Permission in Principle, Planning Permission was granted on 16 January 2020 for approval of matters specified in conditions in relation to the earlier Planning Permission in Principle for the site (ref. 17/00939/IPM). This was for the erection of retail units (Class 1) and the formation of parking areas (ref. 19/00163/AMM). This development has been built out to the south of the subject site and comprises Westpark Retail Park.

Neighbouring sites

2.13 A review of the planning portal has identified the following applications that have been submitted to the Council since the approval of the Planning Permission in Principle that are relevant to these proposals. The first is an AMSC application for the site immediately to the north of the application site associated with permission ref. 17/00939/IPM, the following three are new slot in applications within the retail park area to the south of the application site:

- Ref. 22/00060/AMM – Planning Permission was granted on 23 March 2023 for the approval of matters specified in conditions in relation to the earlier Planning Permission in Principle (ref. 17/00939/IPM) for the erection of 71 no. dwellinghouses and 32 no. flats. This development is located immediately to the north of the subject

site. A number of non- material variations have been considered by the Council and conditions discharged since the permission was granted.

- Ref. 20/01696/FLL – Planning Permission was granted on 20 January 2021 for the erection of a retail unit (Class 1) with associated access, car parking and servicing. This relates to the Planning Permission for the Home Bargains to the south of the site, which is now operational.
- Ref. 21/01595/FLL – Planning Permission was granted on 20 December 2021 for the erection of a coffee shop/takeaway and associated works. This relates to the now operational Starbucks drive-thru to the south of the site.
- Ref. 24/01573/FLL – A planning application was submitted for an EV charging hub at Westpark Retail Park in November 2024. This application was refused in February 2025.

Summary

2.14 In summary, the site benefits from an existing Planning Permission in Principle and the principle of commercial development in the proposed location has therefore already been established. The site is on the edge of Westpark Retail Park which is an established retail/drive-thru development. It is therefore considered that the principle of a drive-thru restaurant in this location should be seen in the context of this established retail destination. It is our view that the proposed development would complement the surrounding development and the character of the area providing additional services within the retail park.

2.15 The site also benefits from an accessible location with good links to cycle routes, public transport and the local road network. Given the location of the site, the proposed development would be compatible with the nearby commercial uses, and would complement the retail function of the park, resulting in linked trips.

3.0 The proposed development

3.1 The accompanying application seeks Planning Permission for the development of a drive-thru restaurant (Class 3/Sui Generis) to be operated by McDonald's. The description of development is therefore as follows:

3.2 *"Erection of drive-thru restaurant (Class 3/Sui Generis) with associated access, servicing, car parking, landscaping and other associated works and infrastructure'.*

3.3 The restaurant will typically receive three deliveries per week. This will be scheduled to arrive at quiet trading periods. It is proposed that servicing will be undertaken from within the car park adjacent to the proposed restaurant building. More details about the proposed servicing arrangements are set out in the accompanying Transport Assessment.

Restaurant building design

3.4 The restaurant building is proposed to be located to the east of the site, with car parking provided to the west. The northern boundary of the site will comprise a tree buffer to screen the development from the proposed housing development to the north (ref. 22/00060/AMM).

3.5 The floorspace of the proposed drive-thru restaurant will extend to 292 GIA/315 GEA. There will be a variety of different table sizes and seating types to suit customer needs.

3.6 Internally, there will be a dining area, toilet facilities, kitchen space, staff room and other associated spaces needed for the operation of such a premises, such as stores and chillers. Externally, the restaurant will include a drive-thru lane and a small patio area with tables and chairs.

3.7 The Landscape Scheme (ref. A6760_01D) includes a range of soft landscape measures, including new grass verges established with flowering lawn mix and new native hedgerows and trees for ecological enhancement. Hard landscape includes surface footways to provide a legible and safe pedestrian environment.

3.8 Recycling and waste facilities will be provided across the site to encourage the proper disposal of waste.

Access and parking

3.9 The proposed site layout has been designed with pedestrian and cycle access in mind. As set out in Section 2 above, the site is located directly adjacent to Perth Road which is served by two existing bus routes that operate seven days a week. These services (58 and 63) connect the existing retail park with Blairgowrie Town Centre and further afield.

3.10 It is proposed that the existing footway to the south of the site will be extended to provide access into the site, providing safe pedestrian access to the proposed development. Within the site, pedestrian routes via paved footways and marked crossing facilities will also be provided. Access for cyclists is proposed to be via the main site access.

3.11 Access for cyclists is proposed to be via the main site access and there will be provision of six cycle parking spaces adjacent to the restaurant building.

3.12 Within the proposed drive-thru restaurant development site, a total of 38 general parking bays will be provided which will include three accessible bays directly adjacent to the restaurant building and will comprise three motorcycle spaces.

3.13 In addition to this, the proposed drive-thru restaurant would be located directly to the north of Westpark Retail Park, which is currently served by approximately 115 car parking spaces. Given the site will effectively provide an extension to the retail park, it is expected that a large proportion of customers travelling to the proposed McDonald's restaurant will be linked trips with the adjacent retail units and therefore, a proportion of customers will park within the wider retail park.

3.14 Vehicle access to and from the proposed development is proposed via the unnamed access road to the south of the site, which is the servicing access for the retail park. This will be via a new priority junction. The current bell mouth serving the development plot will be stopped up. It is also proposed that the existing access road will be widened to approximately 6 metres to permit two-way vehicle movements up to and including the subject site.

3.15 The main vehicle access into the retail park will remain unchanged and will continue to be taken from a separate ghost island junction to the south.

Economic impact

3.16 The proposed development at Blairgowrie will provide a range of economic benefits.

3.17 The restaurant is expected to employ approximately 80-100 staff once the development is operational, comprising approximately 55-75 full time equivalent ('FTE') job roles for local residents. The proposed development will therefore bring significant socio-economic benefits through job creation and training opportunities to residents. It will also provide a new local restaurant to Blairgowrie.

3.18 Further consideration of the socio-economic impacts of the proposed development are provided at Section 6 of this Statement and in the accompanying Economic Statement (Lichfields, July 2025).

Environmental sustainability

3.19 The scale of McDonald's business represents an opportunity to have a positive impact on some of the biggest challenges facing the world today. The threat of climate change is one such challenge and McDonald's is proud of the investment they have made to reduce their carbon footprint in the UK.

3.20 McDonald's was the first restaurant chain to set science-based greenhouse gas reduction targets at a global level. Working with all franchisees, their aim is to reduce greenhouse gas emissions related to all restaurants and offices by 36% by 2030. Additionally, McDonald's is committed to a 31% reduction in emissions intensity (per metric tonne of food and packaging) across the supply chain by 2030.

3.21 To meet these targets, McDonald's buy 100% renewable electricity and have invested in long term partnership agreements to develop the renewable energy infrastructure in the UK. The absence of on-site fossil fuel use, together with McDonald's electricity procurement

agreements, eliminates the production of greenhouse gases from on-site operations. In recognition of global warming potential (GWP) associated with refrigeration gases, McDonald's have moved to the latest reduced GWP air conditioning refrigerants ahead of any legislation in this regard.

3.22 The first McDonald's restaurant built to the UKGBC net-zero emissions standard opened in 2021 in Market Drayton. McDonald's ambition is to reach net zero emissions in restaurants and offices by 2030, and their overall goal is to reach net zero emissions across the entire business and value chain in the UK and Ireland by 2040.

Waste and use of recycled material in construction

3.23 McDonald's are challenging themselves to reduce carbon emissions in construction and use, and work with their suppliers to find solutions that will set high standards for the industry. Building materials are sourced locally where possible and carbon-intensive materials have been replaced with alternatives made with recycled car tyres, plastic bottles, and white goods. This includes the following:

- Restaurant timber effect cladding panels: 47% recycled content;
- Restaurant dark grey cladding panels: 47% recycled content;
- Corral grey cladding panels: Recycled IT equipment; and
- Plant parapet: Recycled plastic.

3.24 Materials for the building are selected to provide the required aesthetics combined with maximum durability and robustness. The requirement for replacement, maintenance and repair will be minimal during the building lifecycles, thus providing a good low level of energy input over the whole lifecycle. Many of the materials used in the construction of the building are recyclable at the end of life, including the grey cladding panels to the corral, steel and rubber seals from the security doors, restaurant cladding panels, timber and aluminium window and door frames and the black cladding panels to the plant parapet.

3.25 From 2023, furniture will be sourced from recycled or certified materials and designed to be recycled or reused at end of life, as part of the McDonald's Plan for Change.

The restaurant building

3.26 The design of the new building has been directly influenced by sustainability and the standard practices to enable the reduction in their carbon footprint. Approximately, 90% of new restaurants are built using modular construction techniques, which use considerably less energy, inclusive of the reduction of the total number of deliveries to site during the build. Modular construction takes place in a controlled environment, which allows a highly monitored and efficient process, where leftover materials can be used in future projects and ultimately reduce the general building waste. The construction time is also reduced, minimising the potential disruption to neighbours.

3.27 In addition to the above, the walls of the building are insulated using British sheep's wool which is 100% biodegradable, and the extent of glazing has been reduced compared to previous designs. PV panels will be installed to generate renewable energy.

3.28 The external shell is designed to prevent air leakage and achieve the U-value required by current building regulation standards, and McDonald's utilise a sophisticated building management control system with specifically engineered energy reduction strategies to maximise operating efficiencies. McDonald's kitchen appliances have standby reminders, and a metering system has been introduced which measures the amount of electricity used in every half hour of the day. Restaurant Managers receive daily graphs to help them make energy saving adjustments.

3.29 All new restaurants are fitted with standard equipment and maintenance programmes, in line with Green Building Guidelines, which were introduced as a McDonald's Europe initiative and include:

- Lighting - LED lighting is also used, resulting in a 50% reduction in energy use compared to fluorescent lights.
- Water - Auto shut-off taps fitted to wash-hand basins in addition to flow control limited to 6l/min; replacement of urinals with waterless units and WCs fitted with dual flush of 4.5l and 3l flushes (unless external drainage requires greater volume). In addition, systems are leak checked with hot water temperatures reduced to a maximum of 60 degrees C. Pipes are checked for missing insulation.
- HVAC - Automatic closures fitted to all internal doors and draft-proofing fitted or repaired to all doors and windows, including the use of energy save reminder stickers in the back of house area. Variable speed control fans are installed so that they are not required to run when ventilation is not required, and room sensors installed to monitor internal air temperatures.

Sustainable development and climate change

3.30 McDonald's have a commitment to addressing the climate crisis. To achieve this, the proposed development includes the following measures to enhance sustainability:

3.31 A commitment to achieving net zero carbon emissions by 2040 – the proposed drive-thru restaurant has been designed with this goal in mind;

- Ensuring that the animal feed used by their suppliers is deforestation free by 2026;
- The aim to source all packaging from renewable and recyclable materials by 2025;
- Over 80% of kitchen waste is recycled, which equates to 40% of total waste; and

3.32 An assessment of the proposed development in relation to sustainability is provided in Section 6 of this Statement. A Low and Zero Carbon ('LZC') report (June 2025), prepared by CDM Partnership, is also submitted with the accompanying application for consideration.

Summary

3.33 In summary, the proposed development seeks to provide a new sustainable drive-thru restaurant in an accessible location. Visual impact and landscape have been carefully considered to ensure that the proposed development is not detrimental in this respect.

3.34 The proposed drive-thru restaurant will be built and will operate in a sustainable manner, in line with McDonald's Net Zero commitments to minimise any potential climate impacts.

3.35 The proposed development will also provide significant economic benefits to Blairgowrie and the wider area, both directly through investment and job creation, and indirectly through business rates and the wider supply chain, which will enhance the local economy.

4.0 Planning policy context

4.1 This section outlines the planning policy context against which the accompanying planning application should be assessed. An assessment of the proposed development in the context of the planning policies outlined below is provided at Section 6 of this Statement.

Relevant planning policy and guidance

4.2 The planning policy and guidance documents that are of relevance to the planning application are as follows:

- National Planning Framework 4 ('NPF4') – adopted February 2023;
- Perth and Kinross Local Development Plan ('LDP') – adopted November 2019; and
- Supplementary guidance – Perth and Kinross Council.

NPF4

4.3 NPF4 was adopted by Scottish Ministers on 13 February 2023. It outlines the government's planning policies for Scotland and how these are expected to be applied.

4.4 NPF4 supersedes the previous National Planning Framework 3 (June 2014) and Scottish Planning Policy (June 2014).

4.5 The key policies of relevance to the proposed development include:

- Policy 1 – Tackling the climate and nature crises;
- Policy 2 – Climate mitigation and adaptation;
- Policy 3 – Biodiversity;
- Policy 9 – Brownfield, vacant and derelict land and empty buildings;
- Policy 12 – Zero waste;
- Policy 13 – Sustainable transport;
- Policy 14 – Design, quality and place;
- Policy 15 – Local living and 20-minute neighbourhoods;
- Policy 22 – Flood risk and water management;
- Policy 25 – Community wealth building; and
- Policy 27 – City, town, local and commercial centres.

Perth and Kinross LDP

4.6 The Perth and Kinross LDP was adopted in November 2019. The LDP shows the site is part of a wider allocation for mixed use development (ref. MU5) which identifies the site for 200 residential units, 4 hectares of employment uses and 4 hectares for education use.

4.7 The key policies of relevance to the proposed development include:

- Policy 1 – Placemaking;

- Policy 7B – Mixed-Use Sites;
- Policy 13 – Retail and Commercial Leisure Proposals;
- Policy 41 – Biodiversity;
- Policy 53C – Surface Water Drainage;
- Policy 56 – Noise Pollution; and
- Policy 60B – New Development Proposals.

Supplementary guidance

4.8 Statutory Supplementary Guidance and non-statutory Planning Guidance form part of the extant Perth and Kinross LDP and cover a range of topic areas.

4.9 The relevant guidance that will be assessed as part of this Planning Statement are:

- Supplementary Guidance – Placemaking (statutory);
- Planning Guidance – Delivery of Development Sites (non-statutory); and
- Planning Guidance – Planning and Biodiversity (non-statutory).

5.0 Town Centre First Assessment

5.1 The proposed development comprises a restaurant with drive-thru facility (Use Class 3/Sui Generis) extending to 292 sq.m GIA / 315 sq.m GEA, to be operated by McDonald's.

Policy context

5.2 Part (b) of Policy 27 (City, town, local and commercial centres) of NPF4 states that proposals for uses that generate significant footfall will not be supported outside town centres unless a Town Centre First Assessment demonstrates that all centre and edge of centre options have been sequentially assessed and discounted as unsuitable or unavailable.

5.3 Despite the site's location adjacent to an existing retail park and within a development site for mixed-use development which is allocated in the extant LDP, the site is 'out-of-centre' in planning policy terms.

5.4 As part of the pre-application discussions with Perth and Kinross Council, it was therefore agreed that an assessment of Blairgowrie Town Centre would be undertaken. In accordance with the provisions of NPF4, this centre has therefore been assessed to determine whether there are any sequentially preferable sites in the town centre or indeed in any edge of centre locations that could accommodate the proposed development.

McDonald's commercial requirement

5.5 In undertaking the Town Centre First Assessment, it is important to consider, from the outset, the commercial need that the proposed development is seeking to meet.

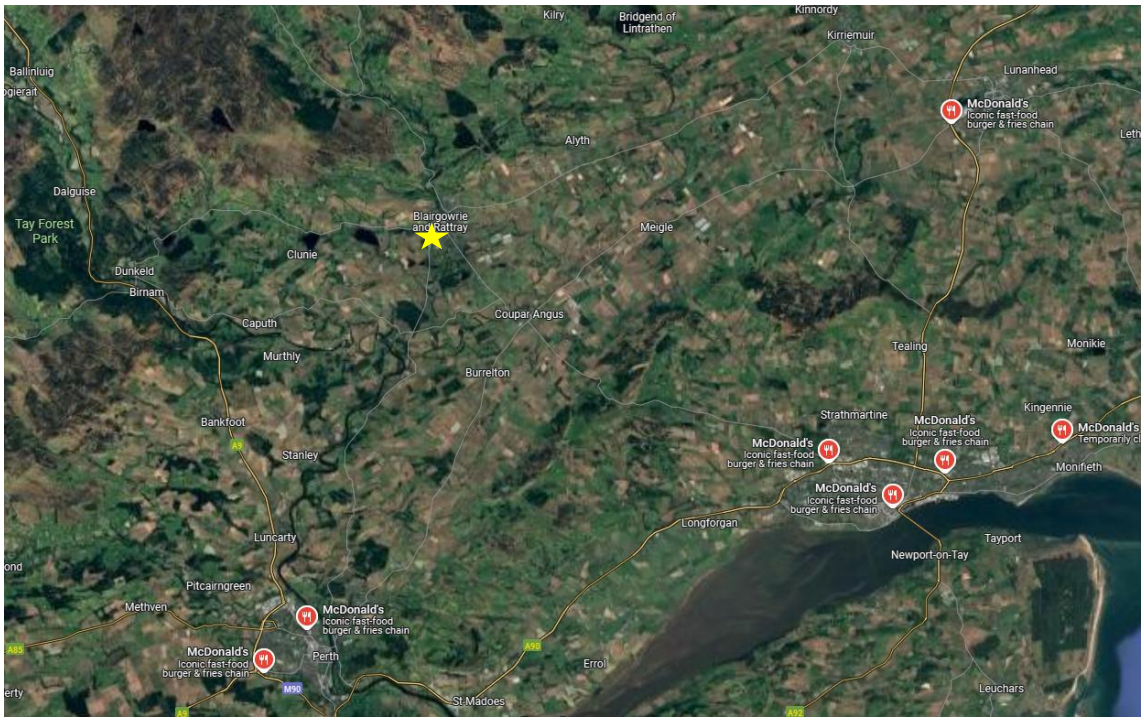
5.6 In this case, McDonald's have a requirement for a drive-thru restaurant which can serve the area of Blairgowrie. The subject site is considered the ideal location to meet McDonald's requirement because it is located adjacent to an existing retail park, where there are already commercial operators. Indeed, McDonald's are keen to locate their proposed restaurant adjacent to other retail and commercial uses at Westpark Retail Park at Perth Road, given the potential for linked trips.

5.7 Figure 5.1 identifies the subject site with a yellow star and demonstrates the area of Blairgowrie is currently not well served by a conveniently accessible McDonald's restaurant.

5.8 The nearest McDonald's restaurants are located in:

- **Perth (Dunkeld Road)** – 12.5 miles from the site
- **Dundee (Camperdown)** – 14.1 miles from the site
- **Perth (Broxden)** – 14.2 miles from the site
- **Dundee (Reform Street)** – 16.5 miles from the site
- **Forfar** – 16.6 miles from the site

Figure 5.1 – Existing McDonald's Coverage (Approximate site location indicated by a yellow star)



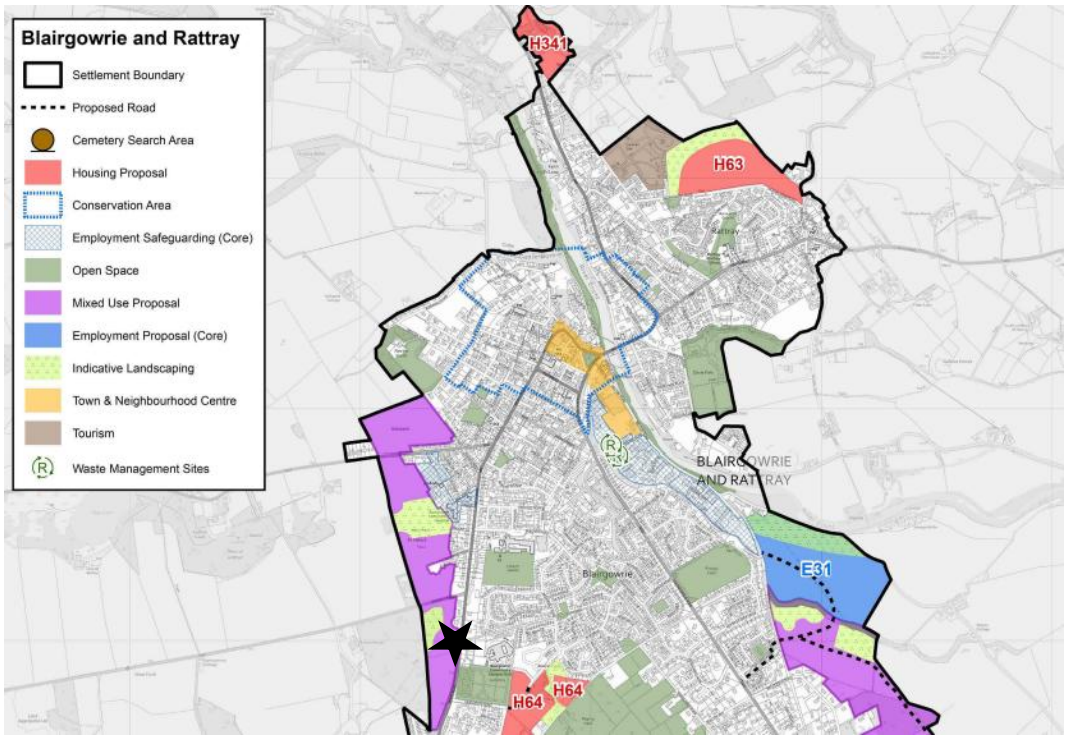
Source: Google Maps

Methodology

5.9 As outlined above, the Town Centre First Assessment assesses potential alternative sites within and on the edge of Blairgowrie Town Centre.

5.10 Figure 5.2 below is an extract from the extant LDP which shows the boundary of Blairgowrie Town Centre (outlined in orange). The centre is located approximately 1.2km to the north-east of the subject site which we have indicated with black star.

Figure 5.2 – Extract from extant LDP showing Blairgowrie Town Centre (highlighted orange), subject site shown by black star



Source: Perth and Kinross LDP (2019)

5.11 The proposed drive-thru restaurant with associated surface level car parking responds to the specific business model requirements of McDonald's. As such, in following the sequential approach, consideration has been given to whether the potential alternative sites can accommodate the proposed development in its entirety. Consideration has also been given to the size of each site, taking into account the size of the application site (0.29 ha).

5.12 Notwithstanding this, NPF4 states that applicants and local authorities should demonstrate flexibility on issues in terms of scale. In this context, the suitability of alternative sites should be assessed in their physical capability to accommodate the form of development proposed in the application.

5.13 This policy interpretation is consistent with the legal judgement on the sequential approach in Tesco Stores Ltd v Dundee City Council Supreme Court Judgement (21 March 2012) which is binding to Local Planning Authorities across the UK. This judgement confirmed that the understanding of what is suitable (in the context of the sequential test) is not a matter of planning judgement, but of legal interpretation. As such, if a developer of an out-of-centre site has demonstrated a degree of flexibility in assessing whether they are available and suitable, the sequential test is satisfied.

5.14 Site visits were undertaken by Lichfields in November 2024 and June 2025. This led to the identification of the following potential alternative sites located within/at the edge of Blairgowrie Town Centre.

Blairgowrie Town Centre

Former Supermarket, Commercial Street

5.15 This site is located on Commercial Street, within Blairgowrie Town Centre and the Blairgowrie Conservation Area. The site was formerly occupied by a supermarket which ceased operation in August 2018. Since then, the site has been actively marketed.

5.16 According to the agent's particulars, the site is 0.89 ha and comprises a large detached single storey self-contained retail unit with parking to the front and rear which would be suitable for retail use.

5.17 The site does not meet McDonald's requirements given that it is significantly larger than McDonald's require (the site is more than three times the size of the application site). It is also located within a Conservation Area which is unlikely to be considered an appropriate location for a drive-thru restaurant. As such, the site is not considered to be sequentially preferable in this instance.

Figure 5.2 – Former Supermarket, Commercial Street

Source: Lichfields

Edge of Centre

5.18 In line with national and local planning policy, sites located within edge of centre locations relative to Blairgowrie Town Centre have also been considered and assessed in terms of their suitability, as set out below.

Former Littles Restaurant, Riverside Road

5.19 This site is located on Riverside Road, to the north-east of Blairgowrie Town Centre and within Blairgowrie Conservation Area. The site comprises a Category B-listed church building which was converted into a restaurant in 2015.

5.20 While the site is situated in a location which is visually prominent to customers and passing traffic, the size of the site is only 0.15 hectares and therefore is not large enough to accommodate the required restaurant and drive-thru lane. Additionally, the building itself is a prominent building within Blairgowrie Conservation Area and is a Category B-listed building as a result of its architectural qualities and significance and as such, it is unlikely that this could be demolished to facilitate the development of a McDonald's drive-thru restaurant as proposed in the subject application.

5.21 Furthermore, the site currently benefits from Planning Permission and Listed Building Consent (approved July 2024, ref. 24/00698/FLL) to change part of its use to a fitness studio (class 11) and undertake associated alterations to the building which indicate that the building is unlikely to still be available.

5.22 As such, this site is not considered to meet McDonald's commercial requirements and is therefore not considered to be suitable to accommodate the proposed development.

Figure 5.3 - Former Littles Restaurant, Riverside Road

Source: Lichfields

Travis Perkins, Welton Road

5.23 This site is located on the edge of Blairgowrie Town Centre within a trading estate. It is safeguarded in the LDP for employment uses. The site is currently being actively marketed for lease and marketing collateral indicates that the floorspace of the unit is 700 sq.m. The existing building is therefore significantly larger than McDonald's require and not suitable for conversion.

5.24 This site has therefore been discounted as not suitable to accommodate the proposed development.

Figure 5.4 – Travis Perkins, Welton Road

Source: Lichfields

5.25 A number of other units were identified as vacant within and at the edge of Blairgowrie Town Centre, but they have been discounted as too small to accommodate the proposals.

Summary

5.26 McDonald's have specific locational requirements for a restaurant at Blairgowrie. The subject site meets this requirement.

5.27 There are no sequentially preferable opportunities within or on the edge of Blairgowrie Town Centre that could realistically accommodate the proposed development. While a number of vacant sites have been identified, none are suitable for the proposed development and it is concluded that there are no sequentially preferable development opportunities.

5.28 On this basis, it is concluded that the proposals meet the requirements of Part (b) of Policy 27 of NPF4.

6.0 Compliance with planning policy

6.1 This section assesses the proposals against the relevant planning policy and guidance identified in Section 4 of this Statement.

6.2 There are clear arguments that weigh in favour of the proposed development which are set out below.

Principle of development

6.3 NPF4 Policy 9 (Brownfield, vacant and derelict land and empty buildings) part b) states "*proposals on greenfield sites will not be supported unless the site has been allocated for development or the proposal is explicitly supported by policies in the LDP*".

6.4 The site is located on a vacant, greenfield site. However, the site forms part of a wider allocation in the LDP for mixed use (LDP ref. MU5). It is therefore allocated for development in the LDP and subject to LDP Policy 7B (Mixed-Use Sites).

6.5 Policy 7B (Mixed-Use Sites) states areas identified for mixed use are intended to promote the integration of employment generating opportunities with housing. It states, within these areas, a range of uses such as housing, offices and leisure will be acceptable, provided they are compatible with the amenity of adjoining uses.

6.6 On this basis, it is considered that development of a McDonald's restaurant is acceptable given that the site is located adjacent to an existing retail park, so it will be seen in the context of this neighbouring development. The proposed development would also be complementary to the neighbouring business uses in the surrounding area as it would provide a destination for employees of and visitors to the neighbouring businesses and a new restaurant for local residents.

6.7 The principle of development in this location has also already been established by Planning Permission in Principle ref. 17/00939/IPM. This therefore demonstrates that the location is capable of accommodating development, without impacting the character of the wider area.

6.8 It is therefore considered that the proposals will relate to the scale and character of the area. The proposals therefore comply with NPF4 Policy 9 (Brownfield, vacant and derelict land and empty buildings) and LDP Policy 7B (Mixed-Use Sites).

20-minute neighbourhoods

6.9 NPF4 Policy 15 (Local Living and 20-minute neighbourhoods) encourages development proposals to support local living and reduce the need to travel.

6.10 As shown in Figure 5.1 of this report, there are no McDonald's restaurants within 20km of Blairgowrie. The proposed development would therefore provide a more conveniently accessible restaurant for customers who live and work in Blairgowrie. The proposed development would also provide residents of Blairgowrie with the opportunity to walk or cycle to a McDonald's restaurant, encouraging/supporting sustainable travel.

6.11 In planning terms, the addition of a new restaurant in Blairgowrie is clearly beneficial as it will provide an opportunity to reduce the distance local people are travelling to access a

McDonald's restaurant and is likely to reduce overall traffic levels/traffic demand. The proposals therefore comply with NPF4 Policy 15 (Local living and 20-minute neighbourhoods) as the new restaurant will reduce the need to travel as far to visit a McDonald's restaurant.

Sustainable economic growth

6.12 NPF4 Policy 25 (Community wealth building) part (a) states that "*development proposals which contribute to local or regional community wealth building strategies and are consistent with local economic priorities will be supported".* This includes local job creation, supporting community led proposals and increased spending within communities. Part (b) of Policy 25 does not apply.

6.13 The proposed development is consistent with local economic priorities and will create a significant number of economic benefits. This includes:

- Supporting 140 direct FTE construction jobs, as well as supporting a further 120 indirect and induced FTE jobs during the construction phase;
- Generating an additional £4.1 million of GVA during construction;
- Creating 80-100 direct headcount jobs (55-75 direct FTE jobs) on-site once the development is completed and operational – and a further 30 indirect and induced jobs; and
- Delivering an uplift in business rates revenue in the range of £39,000 to £42,500.

6.14 McDonald's also support local communities in a wide variety of ways. This includes delivering strong staff training programmes, investing more than £43 million in training each year; providing financial support to improve the standards and growth of community-led football teams; and McDonald's operate their own independently registered charity, Ronald McDonald House Charities UK, which helps support families while their children are in a hospital or hospice.

6.15 Overall, it is considered that the proposal accords with NPF4 Policy 25 (Community wealth building).

Main town centre uses

6.16 The proposed development is for a drive-thru restaurant (Class 3/Sui Generis) extending to 292 sq.m GIA / 315 sq.m GEA. The site is out of centre in planning policy terms.

6.17 Policy 27 (City, town, local and commercial centres) of NPF4 focuses on cities and town centres and is relevant to the proposed development. LDP Policy 13 (Retail and Commercial Leisure Proposals) also requires uses that will generate a significant footfall to accord with the Town Centre First approach. It is assumed that since NPF4 was adopted after the LDP, new development proposals should focus on the sequential requirements set out in NPF4.

6.18 Part (a) of Policy 27 states *"development proposals that enhance and improve the vitality and viability of city, town and local centres, including proposals that increase the mix of uses will be supported"*. This section of the policy does not specifically apply because the proposal is not located within a town centre.

6.19 Part (b) of Policy 27 states *"development proposals will be consistent with the town centre first approach. It states that proposals for uses which will generate significant footfall will not be supported outwith town centres unless a Town Centre First Assessment has been carried out*.

6.20 As outlined in Section 5 of this Statement, a comprehensive Town Centre First Assessment has been undertaken to determine whether there are any potential alternative sites in sequentially preferable locations that could accommodate the proposed development. As it has been demonstrated that none of the sites identified are suitable or available, it is considered that the proposals accord with Part (b) of Policy 27 (City, town, local and commercial centres) of NPF4.

Health and wellbeing

6.21 NPF4 Policy 27 (Part (c)) states *"development proposals for non-retail uses will not be supported if further provision of these services will undermine the character and amenity of the area or the health and wellbeing of communities particularly in disadvantaged areas. These include:*

- *Hot food takeaways, including permanently sited vans;*
- *Betting offices; and*
- *High interest money lending premises*".

6.22 The proposed development is not likely to impact on the character and amenity of the area, given it is located adjacent to an established retail park and will therefore be seen in the context of this development. Additionally, the proposed development will bring significant economic, social and regeneration benefits to Blairgowrie as it will bring a prominent, well-connected, vacant site into use, along with significant job creation and training opportunities.

6.23 In terms of health and wellbeing, it is important to highlight that McDonald's supports the promotion of healthier lifestyles and tackling obesity and is committed to giving their customers a range of options and supporting them to better understand the choices they make. Nutritional information is presented in a variety of ways to customers, from nutrition labelling on select food packaging, as well as displaying calories on menu boards.

6.24 McDonald's nutritional strategy in the UK has been in place for over 15 years. During this time, McDonald's has reformulated over 200 of their ingredients and invested heavily in broadening its menu of balanced healthy options. McDonald's has introduced more salad options, as well as fruit and vegetable bags, orange juice, mineral water and organic semi-skimmed milk. Currently 92% of the core food and drink menu is under 500 calories.

6.25 In addition, McDonald's seeks to encourage young people to have active lifestyles and has supported community football through their longstanding partnerships with the four UK football associations. McDonald's now has over 600 Fun Football Centres that provide hundreds of free football sessions designed with their UKFA partners and delivered by a team of fully qualified coaches across the UK. It is important that this, and the above information on McDonald's nutritional strategy, is taken into account as part of the determination of the subject application.

6.26 Given the above, it should be clear that the proposed McDonald's approach is very different from that of other hot food takeaway operators who do not operate such a wide-ranging menu, or provide customers with information on nutrition and calories to help customers make an informed choice. This should therefore be taken into account when considering the proposed use.

Drive-thru developments

6.27 NPF4 Policy 27 (Part (d)) states "*drive-through developments will only be supported where they are specifically supported in the LDP*".

6.28 As NPF4 was adopted on 13 February 2023, Part (d) of Policy 27 should be considered in the context of the transitional arrangements as set out by the Scottish Government in February 2023. This makes clear that there is no ban on drive-thru developments, but rather local authorities should consider the need for drive-thru development in forthcoming LDPs. Additionally, there must be time for LDPs to be updated before this policy can be properly applied.

6.29 The guidance further states that in applying Policy 27(d) and whether such developments are supported, planning authorities may regard wider uses that are compatible with the drive-thru function to be included, as there is no single class of development that this relates to and may sometimes be considered as sui generis. Suitable locations may include for example those allocated for Class 1 shops or Class 3 food and drink.

6.30 On that basis, in the absence of a 'new style' LDP, prepared in the context of NPF4 and the new policies it has introduced, proposals for drive-thru related development should be considered against the full range of policies set out within the existing development plan, i.e. in this case, NPF4 and the Perth and Kinross LDP (November 2019).

6.31 In this context, the proposed development is located adjacent to an established retail park, where a mix of Class 1, Class 3 and drive-thru uses are located. The proposed development would be compatible with these nearby commercial uses, and indeed, would complement the retail function of the park, resulting in linked trips.

6.32 It is essential that planning balance is applied to all decision making. Decisions should be based on the individual facts and circumstances of the case and consideration should be given to the wider policies of the development plan. The site is allocated for mixed-use development and benefits from Planning Permission for commercial development. It is also a well-located site next to public transport uses, so it is an ideal location for a drive-thru development. This is also demonstrated by the fact that a drive-thru unit already operates adjacent to the site.

Traffic and transport

6.33 NPF4 Policy 13 (Sustainable Transport) calls for development proposals to be located in areas that can be accessed by sustainable modes of transport. LDP Policy 1 (Placemaking) and LDP Policy 60B (New development proposals) also require new developments to prioritise active travel and aim to reduce reliance on the private car.

6.34 A Transport Assessment and Travel Plan have been prepared by AMA and accompany the planning application.

Sustainable transport

6.35 The site is accessible by walking, cycling and public transport. The proposed development will be accessible on foot from the surrounding residential area of Blairgowrie, including Blairgowrie Town Centre, and lies in close proximity to bus stops, so will therefore be accessible by public transport. Further details of opportunities for sustainable access to the site are discussed in the submitted Travel Plan.

Access and trip generation

6.36 The site will be accessed by all modes of transport via a new priority junction to the south of the site. The current bell mouth serving the subject site will be stopped up. The access road will be widened to approximately 6m to permit two-way vehicle movements up to and including the McDonald's site. It will then continue west through a one-way carriageway, for further access to the retail park. The main vehicle access into the retail park will remain unchanged and will continue to be taken from a separate ghost island junction to the south.

6.37 Given the nature of the development, it is concluded that the majority of vehicular trips to McDonald's restaurants will be 'pass by trips', with customers already be on the local road network. The Transport Assessment demonstrates that on a Friday afternoon peak, 13% of trips to the McDonald's restaurant could be expected to be additional trips, and 87% would be from vehicles already on the road network. For the Saturday peak, 16% would be additional trips and 84% already on the road network. Thus, the modelling undertaken in the Transport Assessment demonstrates that the traffic associated with the development can be accommodated on the surrounding highway without having a detrimental impact.

Parking

6.38 The proposals include for 38 general parking bays, including three accessible spaces and two reserve bays. There will also be three motorcycle spaces and six cycle parking spaces in the form of "Sheffield" stands. The proposed level of car parking and is therefore considered sufficient and will meet the anticipated demand of the proposed restaurant.

6.39 In addition to this, the proposed drive-thru restaurant would be located to the north of Westpark Retail Park, which is currently occupied by approximately 115 car parking spaces. Given the site is located within a retail park, it is expected that a large proportion of customers travelling to the proposed McDonald's restaurant will be linked trips with the adjacent retail units and therefore, a proportion of customers will park within the wider retail park.

6.40 In summary, it is considered that the proposal accords with NPF4 Policy 13 (Sustainable Transport); LDP Policy 1 (Placemaking); and LDP Policy 60B (New Development Proposals).

Amenity

6.41 NPF4 Policy 14 (Design, quality and place) and LDP Policy 1 (Placemaking) set out that development proposals should be designed to improve the quality of the area.

6.42 LDP Policy 56 (Noise Pollution) states there will be presumption against the siting of development proposals which will generate high levels of noise in the locality.

6.43 The individual issues that may have potential to impact on amenity enjoyed by residents living in the local area are discussed below.

Noise

6.44 During pre-application discussions with Perth and Kinross Council, it was noted that the acoustic impact of the proposals should be considered in the assessment of the planning application.

6.45 Acoustic surveys have been undertaken to determine the existing noise conditions on site and to reach conclusions about the predicted noise levels associated with the proposed development during the operational phase of development and their impact. A Noise Impact Assessment is in the process of being finalised and will be submitted to the Council for consideration in due course in line with the requirements of Policy 56 – Noise Pollution.

Air quality

6.46 An Air Quality Assessment, prepared by Encon Associates, has been prepared an accompanies this planning application. This report has been prepared in accordance with IAQM Guidance and discusses the effects of the proposed development on local air quality.

6.47 The report identifies that due to the proximity of nearby residential receptors, the site is considered to have a low risk of impacts with regards to dust soiling and PM10 concentrations. However, following the implementation of appropriate mitigation measures, impacts associated with the construction of development are likely to be insignificant.

6.48 The report identifies that the proposals will not generate a significant number of additional vehicle movements on the adjacent road network. Impacts on local air quality associated with operational traffic will be negligible. Furthermore, all energy provision will be provided by low emission or non-combustible sources, therefore it is concluded that on-site emissions will be negligible. This means that no mitigation is necessary.

6.49 Overall, the Air Quality Assessment concludes that air quality impacts as a result of this development are not likely to be significant. On this basis, the proposed development complies with national air quality legislation and NPF4 Policy 14 (Design, quality and place).

Light

6.50 A Lighting Impact Assessment of the proposed development has been prepared by LAUK Lighting to accompany the application. The assessment examines each of the application site's boundaries, verifies the effective use of LED optics and the lux contours that have been achieved and then considers the potential impact on nearby uses (including neighbouring properties), ecology and the preservation of the night sky.

6.51 The assessment concludes that the proposed lighting design will not have any obtrusive lighting impact on nearby residential dwelling including the southern facades of the approved residential properties to the north of the site. The lighting of the site has been designed to avoid adverse impacts on airborne wildlife activity in accordance with the recommendations of the Institute of Lighting Professionals for developments in areas of

any potential airborne wildlife activity. Additionally, the use of downward projection luminaires set at zero tilt will eliminate any potential night sky pollution and the proposed lighting design eliminates any light spill into nearby woodland.

6.52 As such, the proposed lighting of the development does not create any adverse impact on the amenity of surrounding uses and is therefore compatible with its setting and surroundings in line with the requirements of NPF4 Policy 14 (Design, quality and place).

Energy

6.53 NPF4 Policy 1 (Tackling the climate and nature crises) states *"when considering all development proposals significant weight will be given to the global climate and nature crises".*

6.54 NPF4 Policy 2 (Climate mitigation and adaptation) requires developments to be designed to minimise greenhouse gas emissions and to be adaptable to future risks of climate change.

6.55 LDP Policy 1 (Placemaking) states development should be planned and designed with reference to climate change, mitigation and adaptation.

6.56 A Low and Zero Carbon Report has been prepared by CDM Partnership to assess the compliance of the proposal with regards to energy efficiency and assess the suitability of the applicable Low and Zero Carbon (LZC) technologies.

6.57 Based on an assessment of LZC technologies, air source heat pumps are proposed to be used for the development as the preferred renewable and low carbon technology to meet the total heating, cooling and DHW demand of the building, combined with 25m² photovoltaic (PV) panels to reduce the overall carbon emissions by 25.78% compared to the notional building.

6.58 Overall, the report demonstrates that by the installation and operation of low and zero-carbon generating technologies, a 12.5% carbon emission reduction contribution is achieved, which exceeds the 10% target stated in Perth and Kinross LDP. Additionally, the proposed building accords with NPF4 Policy 1 (Tackling the climate and nature crises), NPF4 Policy 2 (Climate mitigation and adaptation) and LDP Policy 1 (Placemaking).

Ecology

6.59 NPF4 Policy 3 (Biodiversity) and LDP Policy 41 (Biodiversity) requires development proposals to enhance and conserve biodiversity. It sets out that adverse impacts should be minimised by careful planning and design. Planning Guidance (Planning and Biodiversity) sets out the key biodiversity issues and opportunities that should be considered within new developments.

6.60 An Ecological Appraisal has been prepared by Encon Associates to accompany the planning application.

6.61 The report recommends mitigation measures to prevent any potential adverse impacts on ecology. This includes implementing a wildlife friendly lighting design to minimise the effects on nocturnal wildlife, particularly bats. The report also outlines that in order to prevent trapping amphibians in drains on the site, 45-degree angled kerbs should be used

throughout the development. Where this is not possible, recessed wildlife kerbs should be installed adjacent to all gully pots/drains.

6.62 There are also opportunities to enhance the ecological value of the site post-development, through planting trees, shrubs, hedgerows and wildflower grassland which will benefit pollinators, birds and other urban wildlife.

6.63 Overall, the report concludes that provided all the mitigation measures recommended within the Ecological Appraisal are implemented, the proposals would comply with NPF4 Policy 3 (Biodiversity); LDP Policy 41 (Biodiversity) and LDP Planning Guidance (Planning and Biodiversity).

Flood risk and drainage

6.64 NPF4 Policy 22 (Flood risk and water management) part (c) states that development proposals must not increase the risk of surface water and should manage all rain and surface water through sustainable urban drainage systems. This is also set out in LDP Policy 53C (Surface water drainage).

6.65 A Flood Risk Screening and Drainage Impact Assessment has been prepared by Glanville Consultants which proposes an outline drainage strategy for the development. A Drainage Maintenance Plan also accompanies the planning application.

6.66 It is concluded that flood risks within the site are minimal and that the proposed design ensures that flood risks are not increased by the development.

6.67 The proposed surface water drainage strategy follows sustainable drainage guidance. The report identifies that infiltration is suitable and that all surface water will be collected within a permeable sub-base under the permeable car park surfacing via diffuser boxes. Rainfall will be collected from the main car park /patio by permeable paving and will be attenuated within the permeable sub-base with rainwater falling on the drive thru lane being collected by an adjacent Bio-Retention strip. The permeable pavement sub-base will then discharge to a detention basin before ultimately being discharged into the nearby watercourse.

6.68 The sustainable surface water drainage system is designed to accommodate a 1:200-year event plus the appropriate climate change allowance for this site, without flooding.

6.69 The development's foul water drainage strategy utilises gravity to take effluent to the nearest foul sewer adjacent to the site. The design includes many access points for maintenance and an alarmed grease trap to ensure downstream sewers are protected from cooking waste/grease.

6.70 The proposed development therefore complies with NPF4 Policy 22 (Flood risk and water management) and LDP Policy 53C (Surface Water Drainage).

Summary

6.71 In summary, it is essential that planning balance is applied to the decision on the proposed drive-thru development at Blairgowrie. The decision should be made on the individual facts and circumstances of the case and consideration must be given to the wider policies of the development plan, including both Perth and Kinross LDP and NPF4. Planning judgement

should also be proportional and reasonable, so should not be based on compliance with one policy alone.

6.72 The application proposals are considered to accord with the relevant policies within the adopted plan when read as a whole. The site lies in a commercial area, which is surrounded by established retail/drive-thru uses. It is therefore considered that the proposed development is compatible with nearby commercial uses and indeed would complement the retail function of the park, resulting in linked trips.

6.73 It is therefore considered that the principle of the proposed development is acceptable given the absence of any significant technical or amenity conflicts, alongside its location adjacent to existing commercial uses, as well as the range of socio-economic benefits the development would deliver.

7.0 Conclusions

7.1 This Planning Statement has been prepared by Lichfields on behalf of McDonald's Restaurants Limited. It accompanies a planning application in relation to the development of land at Perth Road, Blairgowrie for the following:

'Erection of drive-thru restaurant (Class 3/Sui Generis) with associated access, servicing, car parking, landscaping and other associated works and infrastructure'.

7.2 This Statement has assessed the application against the Statutory Development Plan, as well as other material considerations.

7.3 The application site comprises vacant land to the west of Perth Road which is allocated for mixed-use development in the LDP. The site is located adjacent to an established retail park, and therefore the proposals will be seen in the context of the surrounding uses and will fit in with the character of the area.

7.4 A comprehensive Town Centre First Assessment has been undertaken, and no suitable sequentially preferable sites have been identified.

7.5 The planning application also confirms that there will be no adverse impact in terms of odour or traffic as a result of the proposed development. Furthermore, it is not considered that there is any aspect of the proposal that would impact negatively on health and no evidence that the development would give rise to significant adverse effects on health and wellbeing. This is particularly the case given McDonald's ongoing responsible approach to offering balanced options and promoting active lifestyles.

7.6 In the context of the above, the proposed development is considered to accord with the relevant policies within the adopted Development Plan, when read as a whole. In particular, it is considered that the principle of the proposed development is acceptable given the planning history of the site and given its proximity to existing commercial uses, as well as the range of socio-economic benefits the development would deliver.

7.7 In this regard, the scheme will result in a series of economic benefits for the area including:

- Supporting 140 direct FTE construction jobs, as well as supporting a further 120 indirect and induced FTE jobs during the construction phase;
- Generating an additional £4.1 million of GVA during construction;
- Creating 80-100 direct headcount jobs (55-75 direct FTE jobs) on-site once the development is completed and operational – and a further 30 indirect and induced jobs; and
- Delivering an uplift in business rates revenue in the range of £39,000 to £42,500.

7.8 In overall summary, the proposals will provide a high-quality development on a vacant site adjacent to Westpark Retail Park, Blairgowrie, and secure significant economic benefits for the local area. The application scheme is in accordance with the Development Plan when considered as a whole and Planning Permission should be granted without delay.

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Land West of Perth Road, Blairgowrie

Economic Statement

McDonald's Restaurants Ltd

24 July 2025

LICHFIELDS

LICHFIELDS

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1.0 Introduction

1.1 This Economic Statement has been prepared by Lichfields on behalf of McDonald's Restaurants Ltd ('McDonald's'). It accompanies a full planning application in relation to development on land west of Perth Road, Blairgowrie. The site is located within the Perth and Kinross local authority area.

1.2 This Statement provides an overview of the process and key criteria applied by McDonald's in identifying the application site as a commercial opportunity. In addition, it outlines the potential socio-economic impacts that could be unlocked as a result of the scheme's delivery.

Proposed Development

1.3 The accompanying planning application seeks permission for the erection of a Drive Thru restaurant (Class 3/Sui Generis) to be operated by McDonald's, with associated access, servicing, car parking, landscaping and other associated works. It is understood that the restaurant will have a Gross External Area (GEA) of 315 sq.m.

Structure

1.4 The remaining sections of the report are structured as follows:

- **Section 2.0:** provides an overview of the site selection process adopted by McDonald's in assessing the commercial viability of the application site;
- **Section 3.0:** outlines the key socio-economic impacts that could be unlocked by the delivery of the application site – during both the construction and operational phases; and
- **Section 4.0:** summarises the key messages from the preceding sections of the document.

2.0 Approach to Site Selection

2.1 McDonald's has a well-established methodology for selecting locations for its proposed restaurants. This section outlines the site selection process, and the factors used to assess the likely viability of the site.

McDonald's Store Format

2.2 The McDonald's brand is globally recognised and has been trading in the UK since 1974. The company currently trades from more than 1,400 restaurants across the UK and directly employs more than 170,000 people.

2.3 The 2024 *McDonald's at 50*: *Our social and economic impact*[1] report highlights the economic contribution of McDonald's operations at national and regional levels. In 2023, McDonald's sites across Scotland contributed £457 million to the national economy and supported 15,425 jobs. This included:

- 13,360 direct jobs within the 114 restaurants in the country;
- 325 indirect jobs in the supply chain;
- 1,735 induced jobs within the wider economy; and
- Spending £42.9 million in 2023 with suppliers based in Scotland.

2.4 Almost 90% of McDonald's restaurants are operated as local businesses by franchisees. This approach unlocks the opportunity for local investors to leverage the global marketing and branding of McDonald's, as well as benefitting from comprehensive training programmes and well-established supply chains. As a result, the development of a new McDonald's restaurant offers the potential for immediate growth and a lower risk of failure compared to an alternative independent start-up. As such, the anticipated employment opportunities supported by the proposals (see Section 3.0) are arguably more secure than those supported by an independent alternative.

2.5 The business' network of restaurants in the UK includes four principal formats, as summarised below:

- High Street;
- Drive Thru;
- Drive To; and
- Delivery Kitchen.

2.6 The most prevalent formats are Drive Thru and High Street, which account for approximately 1,000 sites and 400 sites respectively. The application site has been identified as a suitable location for a Drive Thru restaurant.

[1] McDonald's at 50: Our social and economic impact (2024)

Site Selection Process

2.7 Potential sites are identified through a number of sources, including McDonald's retained commercial property agents and external referrals. Locations are then assessed using a two-stage process, as outlined below:

- **Stage 1:** potential sites are assessed using McDonald's bespoke analytical model. This is used to determine whether sites are likely to represent suitable locations for investment; and
- **Stage 2:** for sites which progress from Stage 1, further analysis is conducted to determine the likely strength of their future trading performance. This assessment draws upon a review of comparable sites within McDonald's existing portfolio of assets.

Stage 1: Initial Modelling

2.8 The analytical model used at Stage 1 is proprietary to McDonald's. Details of the modelling approach are therefore commercially sensitive and cannot be disclosed in full. The modelling framework is dynamic. As such, it recognises that interdependencies exist between key metrics and influence the importance of each. The anticipated role and market position of a site can also impact upon the relative importance of key metrics. The list of criteria, therefore – and the threshold values which must be met for a site to be considered viable – may vary according to the type of site to be delivered.

2.9 McDonald's expect the application site to serve the needs of Blairgowrie, Rattray and the surrounding catchment a market where McDonald's does not have a present currently – as well as providing an alternative food and beverage option for retail customers at Westpark Retail Park.

2.10 Westpark Retail Park forms part of the wider Westpark Masterplan area which is a mixed-use development opportunity which includes plans to deliver a range of uses, including residential units, a care home facility, a hotel, as well as retail and commercial space.

2.11 In recognition of this, the issues assessed within McDonald's analytical model are as follows:

1 Proximity to existing network of McDonald's restaurants;

2 Local population;

3 Proximity to destination retail; and

4 Anticipated volume of traffic flows.

2.12 The following paragraphs provide an overview of each of the factors listed above and how the application site performs against them. It can be seen from the bulleted list above, that the model does not consider local representation of McDonald's competitors. It is understood, however, based upon discussions with McDonald's that:

- Competition is not considered to have a significant impact on trading levels of McDonald's stores; and
- Where competition does exert some influence on trading, this can often be positive, with greater range and choice making a destination more attractive and encouraging more customers to stop/visit.

Existing Network of Restaurants

2.13 In considering a site's relationship to McDonald's existing portfolio of restaurants, the analytical model generally seeks to maximise the distance between locations. This helps to ensure that new developments are positioned to serve new (or less well penetrated) catchment areas.

2.14 The distance considered acceptable by the analytical model can vary according to other factors (local population, traffic flows, proximity to anchor attractions etc.). For instance, the threshold for roadside sites located on *the same travel route* is typically 10km. In contrast, the threshold can fall to 1km in more densely populated areas. In deriving the list of nearby sites, the analytical model considers the impacts of Drive To and Drive Thru formats to be comparable.

2.15 The closest McDonald's restaurants to the application site that are listed below.

- **Dunkeld Road, Perth (20.1km)** – the site is situated along Dunkeld Road (A912) in Perth. The restaurant is located adjacent to an Asda Superstore and surrounded by residential development to the north of Perth town centre. As such it, serves a different market to that being targeted by the application site; and
- **Camperdown Leisure Park, Dundee (22.7 km)** – the site is situated at the Camperdown Leisure Park adjacent to the A90. Occupiers of the Leisure Park include Cineworld, the Weaver Mill public house, and Premier Inn. It also includes the Dundee Ice Arena (home to the Dundee Stars ice hockey team). The site predominantly serves customers visiting the Leisure Park, as well as road users along the A90 – a key East-West route linking Perth and Dundee. The market served by the site is therefore different to that being targeted by the proposed development; and
- **Broxden Interchange, Perth (22.9km)** – the site is situated at the Broxden Interchange, which is located near to the M90 and A93, on the western edge of Perth near the Perth Park and Ride and Broxden Business Park, as well as a large area of existing residential communities to the west of Perth town centre. The restaurant serves a different market to that being targeted by the application site.

2.16 It is clear, therefore, that there are no existing McDonald's within 20km of the application site. The proposed development on land West of Perth Road therefore provides an opportunity for McDonald's to establish a presence in an area where the business is not currently represented. It therefore meets the requirements of the analytical model with respect to its proximity to the existing network of restaurants.

Local Resident Population

2.17 McDonald's recognise that every site is unique in terms of revenue generators and that the level of influence and the importance of each fluctuates. McDonald's advise that the proposed restaurant is expected to serve Blairgowrie, Rattray and the surrounding communities. As outlined above, the area is currently unserved by McDonald's with the nearest restaurant located more than 20km away. The market population currently stands at 8,300 residents.

2.18 In addition, the site is expected to serve an 8-minute (non-overlapping) drive time catchment with a population of 10,900. McDonald's consider this to be acceptable for this

site, reflecting the strength of demand supported by other key drivers (most notably McDonald's current lack of representation in the market area). As outlined in paragraph 2.10, the application site is situated in the wider Westpark masterplan area which has outline approval to deliver up to 400 new homes. Future housing developments are excluded from the population figures referred to previously. However, McDonald's advise that this planned growth (in close proximity to the application site) has formed part of the company's decision-making process and will help to underpin the site's long-term viability.

Proximity to Destination Retail

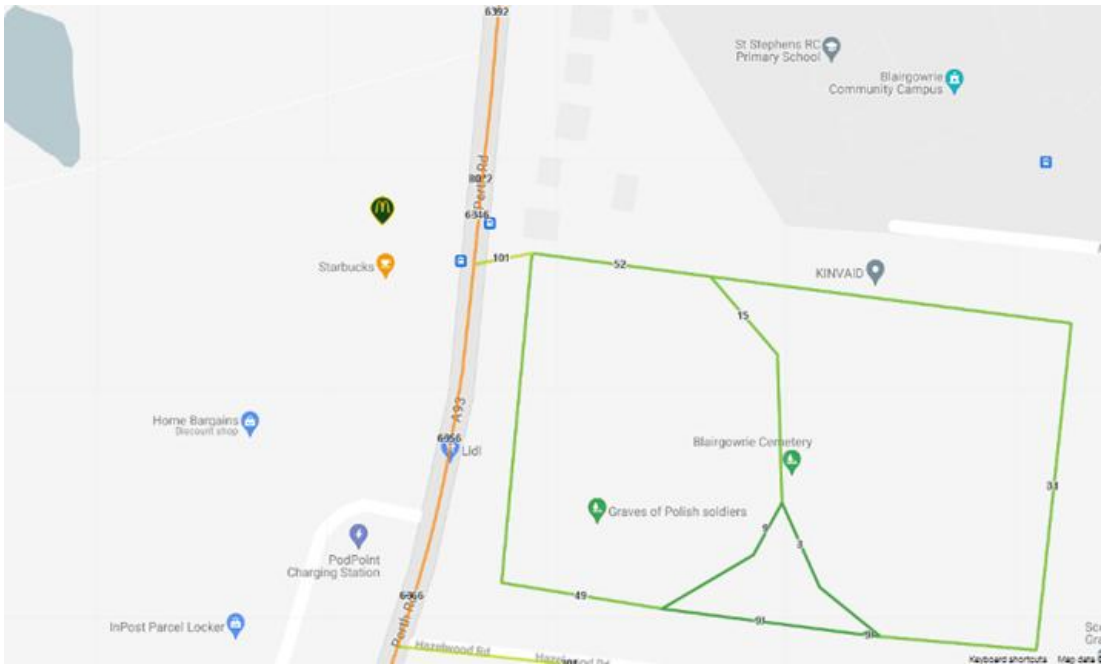
2.19 The application site forms part of Westpark Retail Park, a local retail park comprising of c.38,600 sq.ft of retail floorspace. The retail park is currently home to Lidl and Home Bargains and forms part of the wider 24.6ha Westpark development, a mixed-use scheme which forms part of the Local Development Plan (LDP2) where future phases of development are expected to include small scale retail/commercial and a hotel.

McDonald's advise that the strength and profile of the retail offer in the immediate vicinity of the application site will be a key driver of demand. It is anticipated that a proportion of sales at the restaurant will be attributable to people shopping at Westpark Retail Park. Indeed, McDonald's analysis of Visa transactions indicates that, on average 14%, of Drive Thru/Drive To sales are generated by retail-related custom (i.e. engaged in a transaction at a retail unit within 500m of a restaurant prior to their visit).

Traffic Flows

2.20 The Department for Transport (DfT) records data regarding traffic flows based on Average Annual Daily Flow (AADF). The McDonald's model uses a hybrid dataset, which triangulates data from DfT, TomTom and mobile phone activity. This provides estimates of AADF across the entire road network, with the data for the application site shown in Figure 2.1.

Figure 2.1 Traffic Flow Data, Proposed Blairgowrie Site



Source: 2018, 2023 Precisely. © 2006-2022 TomTom. All rights reserved

2.21 The McDonald's model suggests that the application site currently achieves an AADF of 6,400. This reflects the location of the site, situated on Perth Road (A93) which is a major A-road. Spanning over 100 miles, the road runs north-south, connecting Perth to Blairgowrie and Braemar, in the Cairngorms, before routing east along the River Dee to Aberdeen.

2.22 Given the strength of the other, principal, drivers of demand, McDonald's has advised that this level of traffic flow is considered to be sufficient to support a viable restaurant – particularly given the strategic nature of the A93 route.

Stage 2: Site Comparators

2.23 Based upon the Stage 1 analysis, the application site was identified as a potentially strong location for a Drive Thru restaurant. This reflects the size of the local population catchment, McDonald's lack of representation in the local area, and sites' proximity to Westpark Retail Park.

2.24 Stage 2 of the McDonald's assessment process generates a modelled sales estimate for sites which progress beyond Stage 1. This is used to determine the likely commercial viability of a site and draws principally upon an analysis of similar existing McDonald's locations. It is understood that the sales forecasts for the application site were developed using comparator locations, having regard to the following criteria:

- Proximity to McDonald's existing portfolio of restaurants;
- Market/population size;
- Proximity to retail provision; and
- Traffic flows.

2.25 The estimated sales figures for any site assessed at Stage 2 are an aggregate of three individual sales estimates. This approach is intended to reflect the core customer markets served by McDonald's across all formats:

- **Retail-related sales:** which take account of the size and strength of an area's retail draw and the potential of this to drive custom;
- **Residential and delivery sales:** which reflect the size of the residential catchment within an 8-minute radius (as well as the relationship to existing locations in the area); and
- **Transient custom:** this is based on passing trade influenced by proximity to the strategic road network, volume of traffic flows and distance to the nearest Drive Thru/To.

2.26 McDonald's assessment has identified the proposed restaurant at on land West of Perth Road as being commercially viable.

2.27 When combined with the factors outlined in preceding paragraphs, it is clear that McDonald's has been through a comprehensive site assessment process and that this exercise has identified the application site as a good commercial opportunity.

3.0 Socio-Economic Impact of Development

3.1 This section sets out the potential socio-economic impacts associated with the proposed development. The key impacts relate to the new employment opportunities and additional economic output that could be generated by the proposals (during both construction and operation). The environmental and wider community impacts associated with the scheme are also considered.

Construction Impacts

Direct Employment

3.2 The total construction cost for the development is estimated to be in the order of £2.6 million, with figures provided to Lichfields by McDonald's.

3.3 Using labour coefficients from the HCA Calculating Cost per Job Best Practice Note (2015), it is possible to estimate the number of direct construction jobs that could be supported by the proposed development over the course of the construction phase. Taking account of the nature of the proposals, a 'private commercial' coefficient is considered as the most appropriate for estimating the number of direct construction jobs. This coefficient assumes that 16.6 direct Full-Time Equivalent ('FTE') jobs will be supported over a 12-month period for every £1 million of construction value (in 2011 prices).

3.4 To use the coefficient, the construction cost of £2.6 million has been deflated from 2024 to 2011 prices using UK Government GDP deflator data (2023). Applying the private commercial coefficient to the deflated construction cost of £1.9 million and then dividing the result by the length of the construction period (12 weeks or 0.23 years), indicates that the proposed development could be expected to support 140 gross direct FTE jobs during the construction phase.

Indirect and Induced Employment

3.5 The construction of commercial property involves purchases from a range of suppliers, who in turn purchase from their own suppliers further down the supply chain. The relationship between the initial direct expenditure and total economic impacts is referred to as the 'multiplier effect' and demonstrates that an initial investment can have considerably larger economic benefits as this expenditure is transmitted through the economy.

3.6 As a result, it is anticipated that some businesses in the local and regional economy would benefit from trade linkages established during the construction of the scheme. Consequently, a number of *indirect* jobs would be supported through the supply of construction materials and equipment.

3.7 In addition, local businesses would generally be expected to benefit from a temporary increase in demand as a result of expenditure by direct and indirect workers during construction. This could be expected to include wage spending of workers in hotels, shops, bars, restaurants and other services and facilities. This helps to support further *induced* jobs.

3.8 Scottish Government Input Output Tables indicate that the construction industry has an indirect and induced employment multiplier of 1.86[2]. Applying this multiplier to the 140 direct FTE construction jobs derived above suggests that a further 120 FTE indirect and induced jobs could be supported through the construction phase. In total, therefore, the proposed development could be expected to support 260 direct, indirect, and induced FTE jobs during the construction phase.

Economic Output

3.9 The development proposals would also contribute to local economic output, as measured in terms of Gross Value Added (GVA) during the construction phase. GVA is a measure of the difference between what is produced as output (goods and services) and the inputs (raw materials, semi-finished products etc.) used in the production of the output. It represents the additional value that is added through economic activity. In measuring economic growth, economists typically have regard to the quarterly (or annual) change in GVA for a given area.

3.10 It is estimated that the scheme could be expected to deliver an additional £4.1 million of GVA during the construction phase. This estimate has been derived having regard to:

- The level of direct employment to be supported during construction;
- Average GVA per construction worker for Scotland[3]; and
- An appropriate GVA multiplier for the construction industry[4].

Operational Impacts

Direct Employment

3.11 It is estimated that the proposed development could support the creation of 80-100 gross direct headcount jobs, once completed and operational. This could be expected to correspond to approximately 55-75 gross direct FTE jobs. The headcount employment estimates have been provided by McDonald's having regard to the company's business model for the application site. Headcount jobs have been converted into FTE jobs by Lichfields, drawing upon analysis of employment data for a sample of almost 900 McDonald's restaurants across the UK.

Indirect and Induced Employment

3.12 In addition to the direct jobs considered above, some indirect employment would also be created by the additional spending on goods and services by a new McDonald's restaurant at the application site. The wage expenditure of workers directly employed, as well as those employed in local businesses supplying the restaurant, could also support induced jobs in shops, services, and other businesses in the local economy.

[2] Scottish Government Input Output Tables (2022) (data for the latest available year (2019); an employment multiplier of 1.86 implies that for every 1 direct job generated, a further 0.86 indirect and induced jobs would be supported in the supply chain.
[3] Experian, June 2023
[4] Scottish Government Input Output Tables (2022) (data for the latest available year (2019)) – estimated to be 1.76

3.13 Having regard to appropriate local and regional multipliers[5], it is estimated that the 55-75 direct FTE jobs created by the proposed development could support the creation of 20-30 'spin-off' FTE jobs in the local economy. At the Scottish level, in the order of 30-40 'spin-off' FTE jobs are estimated to be supported, which includes the 20-30 to be captured locally.

3.14 In total, therefore, the proposed development could support in the order of 85-115 FTE jobs (accounting for direct, indirect, and induced impacts) across Scotland, including 75-105 in Perth and Kinross.

Economic Output

3.15 The direct operational employment generated by the proposed development is likely to result in an increase in Gross Value Added.

3.16 It is estimated that the gross additional direct employment to be created could generate additional Gross Value Added in the order of £1.8-2.2 million per annum. This estimate has been derived having regard to:

- The level of gross direct headcount employment created by the proposals (80-100 jobs); and
- The average direct Gross Value Added per headcount job for McDonald's staff within Scotland[6].

Fiscal Impacts

3.17 It is expected that the proposed development could also support an uplift in business rates, which would be retained by Perth and Kinross Council. This would help to support the delivery of local services.

3.18 It is estimated that the proposed development could generate additional business rates in the order of £39,000 to £42,000 per annum. This has been estimated having regard to:

- The average Rateable Value per m^2 for other McDonald's restaurants in Perth and Kinross[7];
- The quantum of floorspace proposed at the application site (374 sq.m, GEA or 292 GIA); and
- The Intermediate Scottish Business Rates Multiplier (0.545).

3.19 Given the small local sample size, this Rateable Value has been sense-checked by applying the mean average Rateable Value (and associated Business Rates payments) from a wider sample of 29 McDonald's restaurants across Scotland. The business rate estimate using the wider sample data results in a business rates payable estimate of c.£39,000 and helps to verify the local level assessment (c.£42,000).

[5] HCA Additionality Guide, Fourth Edition 2014 – 'Recreation' multiplier: 1.38 local; 1.56 regional
[6] McDonald's at 50: Our social and economic impact (2024); £22,320 of direct GVA per headcount job
[7] Review of Scottish Assessors business rates assessments for Broxden Interchange; and Dunkeld Road McDonald's

Environmental Impacts

3.20 The scale of McDonald's operations presents an opportunity to have a positive impact on some of the biggest challenges facing the world today. The threat of climate change is one such challenge and McDonald's are proud of the investment they have made to reduce their carbon footprint in the UK.

3.21 McDonald's was the first restaurant chain to set science-based greenhouse gas reduction targets at a global level. Working with all franchisees, their aim is to achieve net zero emissions across all restaurants and offices by 2030, as well as net zero across the entire business and value chain by 2040.

3.22 To meet these targets, McDonald's as an organisation operate the following initiatives to promote environmental good practice:

- Purchase 100% renewable electricity for all restaurants owned and operated by the business;
- Cooking oil from restaurants is recycled into biodiesel using local collectors. The biodiesel is then used as fuel for McDonald's vehicles. In 2023, this helped to reduce carbon emissions by 16,250 tonnes;
- In the UK in 2023, 97.5% of customer packaging was designed to be recyclable or compostable; and
- Customer recycling stations are installed in all new restaurants, to encourage customers to dispose of their food packaging responsibly.

Community Benefits

3.23 In addition to the above, McDonald's as an organisation is committed to operating as a valued and responsible member of the communities in which it operates. This is supported by a range of activity including:

1 **Delivering strong staff training programmes** –McDonald's invested more than £62 million in training in 2023. Approximately two-thirds of McDonald's employees are aged between 16-25 and for many a job at McDonald's is the first step in their career. This highlights the importance of a strong training programme to enhance the development and work experience of school leavers and young people.

2 **Encouraging young people to lead more active lives** – McDonald's has a long tradition of supporting community football, providing financial support to grow and improve standards in grassroots football across England, Scotland, Wales and Northern Ireland. McDonald's most recent initiative, the Fun Football programme, was launched in 2019. It is the UK's largest grassroots participation programme for children aged 5-11. By 2026, the programme aims to deliver:

   a Access to free football coaching for more than a million children; and

   b Diversity, Equity and Inclusion training to over 800 grassroots coaches.

3 **Supporting charities** – McDonald's operates its own independently registered charity, Ronald McDonald House Charities UK, which helps support families with sick children in hospital. In 2023, franchisees, suppliers and customers raised £10.3

million for RMHC, which supported 8,415 families across the UK. In addition, McDonald's franchisees donated a further £4.5 million in 2023 to support a range of local initiatives.

4.0 Summary

4.1 The proposed development will deliver a McDonald's Drive Thru restaurant on land west of Perth Road, Blairgowrie. The application site has been identified – using McDonald's bespoke analytical model – as a location with strong commercial potential.

4.2 The analytical model has had regard to the following criteria:

- Proximity to existing network of McDonald's restaurants;
- Local resident population within an 8-minute drive time;
- Proximity to destination retail; and
- Anticipated volume of traffic flows.

4.3 Modelled estimates for the site have also been produced, drawing upon analysis of comparable McDonald's locations. The exercise has confirmed the commercial potential of the site.

4.4 In addition to the commercial opportunity presented by the site, it also offers the opportunity to generate the following economic impacts:

- Support 140 direct FTE construction jobs, as well as supporting a further 120 indirect and induced FTE jobs during the construction phase;
- Generate an additional £4.1 million of GVA during construction;
- Create in the order of 80-100 direct headcount jobs (55-75 direct FTE jobs) on-site once the development is completed and operational – and a further 30-40 indirect and induced jobs across Scotland; and
- Deliver an uplift in business rates revenue of between £39,000 to £42,000 per annum.

4.5 The development will, therefore, deliver a number of economic benefits which should be taken into account, and given weight, in the determination of the subject planning application.

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PROPOSED MCDONALD'S DRIVE THRU PERTH ROAD, BLAIRGOWRIE

TRANSPORT ASSESSMENT

JUNE 2025

REPORT NO 55002-001

PROPOSED MCDONALD'S DRIVE THRU PERTH ROAD, BLAIRGOWRIE

TRANSPORT ASSESSMENT

MCDONALD'S RESTAURANTS LTD

Planning Issue

Project no: 55002

Date: June 2025

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1 INTRODUCTION

1.1 OVERVIEW

1.1.1 Andrew Moseley Associates (AMA) has been commissioned by McDonald's Restaurants Ltd to prepare a Transport Assessment (TA) and Interim Travel Plan (ITP) to accompany a planning application for the development of a McDonald's restaurant with a drive-thru off the A93 Perth Road in Blairgowrie.

1.1.2 The proposed site is located approximately 1.4km south of the centre of Blairgowrie and would form part of the wider West Park Retail Park. Currently the site comprises undeveloped land which is bound to the north and west by further undeveloped land, to the east by the A93 Perth Road, and to the south by an unnamed access road associated with the retail park. The location of the site is illustrated indicatively at Figure 1.

1.1.3 The Local Planning Authority (LPA) and the Local Roads Authority is Perth and Kinross Council (PKC).

1.1.4 This TA has been prepared with reference to The National Planning Framework 4 (NPF4), Scottish Transport Assessment Guidance (2012) and Perth and Kinross Council Local Development Plan 2 (LDP2).

1.1.5 This TA will demonstrate that the site is well served by existing transport provision and is accessible to a large residential catchment. The report will also demonstrate that the traffic generated by the proposals will not result in a detrimental impact on the surrounding road network.

1.1.6 An ITP has also been prepared which sets out measures to encourage sustainable travel patterns and reduce the reliance on private car use.

1.2 REPORT STRUCTURE

1.2.1 The structure of the report is set out as follows:

- Section 2 – outlines the policy background at a national and local level;
- Section 3 – provides a description of the road network surrounding the site, details of the existing traffic flows and a review of the personal injury collision records;
- Section 4 – examines the accessibility of the site by sustainable modes of travel;
- Section 5 – describes the development proposals, including the proposed quantum of development, means of access and parking provision;
- Section 6 – summarises the assessment parameters and trips rates that have been adopted within this TA;
- Section 7 – examines the impact of development traffic on the local road network; and
- Section 8 – provides a summary of the TA.

2 POLICY BACKGROUND

2.1 NATIONAL PLANNING FRAMEWORK

2.1.1 The 'National Planning Framework' (NPF) 4 sets out the Scottish Governments spatial principles, regional priorities, national developments and national planning policy for the next 20 to 30 years. The document was published in February 2023 and replaces the NPF3 as well as the Scottish Planning Policy documents.

2.1.2 The NPF4 provides a vision for the planning system in Scotland, which seeks to grow the Scottish economy simultaneous of reducing carbon emissions and reducing the disparities in well-being and opportunity. Therefore, NPF4 sets out the following six overarching principles for future places and developments;

- Just transition. We will empower people to shape their places and ensure the transition to net zero is fair and inclusive.
- Conserving and recycling assets. We will make productive use of existing buildings, places, infrastructure and services, locking in carbon, minimising waste, and building a circular economy.
- Local living. We will support local liveability and improve community health and wellbeing by ensuring people can easily access services, greenspace, learning, work and leisure locally.
- Compact urban growth. We will limit urban expansion so we can optimise the use of land to provide services and resources, including carbon storage, flood risk management, blue and green infrastructure and biodiversity.
- Rebalanced development. We will target development to create opportunities for communities and investment in areas of past decline, and manage development sustainably in areas of high demand.
- Rural revitalisation. We will encourage sustainable development in rural areas, recognising the need to grow and support urban and rural communities together.

2.1.3 By applying these spatial principles, the national spatial strategy will broadly seek to support the planning and delivery of:

- sustainable places, where we reduce emissions, restore and better connect biodiversity.
- liveable places, where we can all live better, healthier lives.
- productive places, where we have a greener, fairer and more inclusive wellbeing economy.

2.1.4 With specific regard to Sustainable Transport, the NPF4 sets out the intent to:

- To encourage, promote and facilitate developments that prioritise walking, wheeling, cycling and public transport for everyday travel and reduce the need to travel unsustainably.

2.1.5 Within the targets to promote sustainable transport, the policy is seeking to achieve the following outcomes:

- Investment in transport infrastructure supports connectivity and reflects place based approaches and local living.
- More, better, safer and more inclusive active and sustainable travel opportunities.
- Developments are in locations which support sustainable travel.

2.1.6 NPF4 also details a number of policies that are designed to support development that helps to meet the greenhouse gas emissions targets. These policies ranges from the minimisation of new emissions, protection of biodiversity, use of previously used and developed land and sustainable waste management. Of these policies, Policy 13 specifically relates to the transition towards more sustainable, lower emissions travel including active travel and public transport.

2.1.7 Within Policy 13, seven subsections set out the requirements for new developments. Section b sets out:

- Development proposals will be supported where it can be demonstrated that the transport requirements generated have been considered in line with the sustainable travel and investment hierarchies and where appropriate they:
  I. Provide direct, easy, segregated and safe links to local facilities via walking, wheeling and cycling networks before occupation;
  II. Will be accessible by public transport, ideally supporting the use of existing services;
  III. Integrate transport modes;
  IV. Provide low or zero-emission vehicle and cycle charging points in safe and convenient locations, in alignment with building standards;
  V. Supply safe, secure and convenient cycle parking to meet the needs of users and which is more conveniently located than car parking;
  VI. Are designed to incorporate safety measures including safe crossings for walking and wheeling and reducing the number and speed of vehicles;
  VII. Have taken into account, at the earliest stage of design, the transport needs of diverse groups including users with protected characteristics to ensure the safety, ease and needs of all users; and
  VIII. Adequately mitigate any impact on local public access routes.

2.2 PLANNING ADVICE NOTE 75 (PLANNING FOR TRANSPORT)

2.2.1 The Planning Advice Note (PAN) sets out good practice guidance which planning authorities, developers and others should carry out in their proposals and project delivery. The document aims to create greater awareness of how linkages between planning and transport can be managed through highlighting the roles of different bodies and professions in the planning process.

2.2.2 Within the PAN, guidance is provided specifically on Transport Assessments and Travel Plans as well as the accessibility of development proposals.

2.2.3 Annex B of the PAN considers Personal Accessibility Analysis (PAA) which can be affected by:

- An individual's own mobility;
- By the physical disposition of destinations relative to the individual;
- By the availability of means of transport;
- Or by a combination of the three

2.2.4 Within this, accessibility profiles for sites should be established which reflect the catchment area served and the relative indicators for the accessibility of different sites. These are:

- Transport system accessibility by population sector to an opportunity:
  I. A transport improvement or an increase in the number of opportunities will increase accessibility.
  II. The scale of change is not easily assessed through qualitative comparisons.
- Accessibility to public transport services:

I. This is particularly useful if public transport services can be classified accurately in terms of their frequency or destination.
II. Obtaining detailed data on origins, destinations and routes of services can be a major exercise.
III. For accessibility of housing to public transport the recommended guidelines are less than 400m to bus services and up to 800m to rail services.
IV. Accessibility can be categorised, for example weak or strong.

- Accessibility to local facilities by walking and cycling:
  I. A maximum threshold of 1600m for walking is broadly in line with observed travel behaviour; and
  II. If there is a significant population within 800m then improvements to the quality of walking and cycling networks will increase accessibility.

2.2.5 Annex C of the PAN considers Mode Share Targets (MSTs) that should be considered within the Travel Plans for new developments.

2.2.6 Annex D sets out the requirements of a Transport Assessment, with the overall objectives to encourage sustainable travel in relation to the transport mode hierarchy. A Transport Assessment should include the following key elements:

- An assessment of travel characteristics;
- A description of the measures which are being adopted to influence travel impacts of the proposal;
- A description of the transport impacts of the development in a broader context and how these will be addressed.

2.2.7 Annex E sets out the guidance and requirements for Travel Plans. The PAN states that the content of a travel plan should be agreed in conjunction with the Local Authority and reflect the aims and objectives of the Council as a whole. The use of measures is to meet targets which have been derived from the transport assessment or the Local Transport Strategy. The plan should encourage change in a manageable way for those it is targeting.

2.2.8 Research has also demonstrated that:

- Containing only marketing and promotion are unlikely to achieve any modal shift.
- Car-sharing and cycle measures may achieve 3-6% reduction in drive alone commuting.

2.3 TRANSPORT ASSESSMENT GUIDANCE

2.3.1 The Transport Scotland Transport Assessment Guidance is the current document that is to assist in the preparation of Transport Assessments for development proposals in Scotland. The document sets out requirements according to the scale of development being proposed; from a local development which requires a simple Transport Statement providing an explanation of transport issues through to a major development where detailed technical analyses will be required in a Transport Assessment accompanied by a supporting Travel Plan.

2.4 LOCAL POLICY

Perth and Kinross Council Local Development Plan 2

2.4.1 Perth and Kinross Council's second Local Development Plan (LDP2) covers all of Perth and Kinross; it provides the planning framework and guides all future development and use of the land. It acts as a catalyst for changes and improvement in the area and shapes the environment and economy of Perth and Kinross. It also sets out how the council aims to work towards a vision for the area, showing which land is being allocated to meet the area's development needs to 2029 and beyond. The Plan was adopted by the Council in November 2019.

2.4.2 The policies contained within the Plan that relate to transport are summarised below:

2.4.3 Policy 60B details how new development proposals that involve significant travel generation should be well-served by, and easily accessible to all modes of transport.

2.4.4 Sustainable modes of walking, cycling and public transport should be considered, prior to private car journeys. The aim of all development should be to reduce travel demand by car, and ensure a realistic choice of access and travel modes is available, including opportunities for active travel and green networks.

2.4.5 All development proposals (including small-scale proposals) should:

(a) be designed for the safety and convenience of all potential users;

(b) incorporate appropriate mitigation on-site and/or off-site, provided through developer contributions where appropriate, which might include improvements and enhancements to the walking/cycling network and public transport services including railway and level crossings, road improvements and new roads;

(c) incorporate appropriate levels of parking provision not exceeding the maximum parking standards laid out in SPP, including application of maximum on-site parking standards to help encourage and promote a shift to the more sustainable modes of travel of walking, cycling and public transport;

(d) fit with the strategic aims and objectives of the Regional Transport Strategy and the Tay Cities Deal;

(e) support the provision of infrastructure necessary to support positive changes in Low and Ultra Low Emission Vehicle transport technologies, such as charging points for electric vehicles, hydrogen refuelling facilities and car clubs, including for residential development."

2.4.6 In certain circumstances developers may be required to:

(a) prepare and implement travel plans to support all significant travel generating developments;

(b) prepare a Transport Assessment and implement appropriate mitigation measures where required.

2.4.7 Development for significant travel generating uses in locations which would encourage reliance on the private car will only be supported where:

(a) direct links to the core paths networks are or can be made available;

(b) access to local bus routes with an appropriate frequency of service which involve walking no more than 400m are available;

(c) it would not have a detrimental effect on the safe and efficient operation of the strategic road and/or rail network including level crossings;

(d) the transport assessment identifies satisfactory mechanisms for meeting sustainable transport requirements, including the implementation of a site travel plan.

2.4.8 Developers should include consideration of the impact of proposals on the core paths network and local and strategic transport network.

2.4.9 New developments should provide access from the development to off-road walking and cycling provision as part of the green network and contribute to its enhancement and improved connectivity. Existing active travel routes will be safeguarded and incorporated into development. Cycle parking facilities should be provided.

2.4.10 Development proposals should not exceed maximum on-site parking standards, including disabled parking, to help encourage and promote a shift to the more sustainable modes of travel of walking, cycling and public transport.

2.4.11 Section 3 of this report highlights the existing sustainable travel modes within the vicinity of the site including regular bus services within 400m of the site on the A93 Perth Road.

2.4.12 Section 5 summarises the development proposals which will include new footways and integration with existing paths surrounding the site.

2.4.13 Section 7 of this report assesses the traffic associated with the development on the surrounding road network.

Tayside and Central Scotland Regional Transport Strategy 2024 – 2034

2.4.14 The Regional Transport Strategy was adopted in 2024 and sets out the vision for the improving the regions transport infrastructure and services through to 2034.

2.4.15 Key outcomes to achieve the strategic objectives of the Transport Strategy are outlined below.

1. To take climate action

- Reduce estimated CO2 emissions from transport in the region
- Increase the share of EV and low emission vehicle use.
- Reduce freight mileage by road.
- Reduce car kilometres (car km) driven.
- Ensure strategic and lifeline routes (and services) are resilient to climate change, extreme weather and emergencies.

2. To reduce inequalities

- Improve ability for young people, and disadvantaged and rural communities to access jobs, education and services.
- Improve ability of 16-24 year olds to access jobs and further education.
- Improve ability of all in the lowest SIMD data zones (all domains), targeted by the respective Councils, to access jobs, education and services.
- Improve ability of families, targeted in local child poverty action plans, to access jobs, education and services.
- Improve ability of rural communities to access jobs, education and services.

- Improve the ability of over-65s, and those in lowest SIMD data zones targeted by the respective Councils, to access social activities.
- Improve the ability of people with disabilities to access jobs, education and services.
- Improve the safety and security of vulnerable and protected characteristic groups in the street environment and on public transport.

3. To improve health and wellbeing

- Improve road safety for vulnerable users (pedestrians, cyclists, children and older people, lower SIMD quintile).
- Reduce transport emissions in declared air quality management areas.
- Improve access to healthcare.
- Improve the ability of all in the lowest SIMD data zones (health domain), targeted by the respective Councils, to access healthcare.
- Improve the ability of rural communities to access healthcare.
- Improve the ability of over-65s to access healthcare (primary healthcare/hospitals).
- Increase the share of personal trips made by sustainable modes such as walking, wheeling, cycling and public transport.
- Increase levels of physical activity.
- Increase the levels of walking, wheeling and cycling in the lowest SIMD data zones (health domain), targeted by the respective Councils.
- Improve the ability to access active leisure facilities and green space for lowest SIMD data zones.
- Reduce the impact of traffic on communities on strategic routes.

4. To help deliver sustainable, inclusive economic growth

- Reliable inter-regional and intra-regional journey times.
- Improve public transport journey times, and journey time reliability on strategic road and rail routes.
- Improve journey time reliability for freight through the region, and to key destinations in the region.
- Improved ability for young people, and disadvantaged and rural communities to access jobs and education.
- See outcomes to reduce inequalities above.

3 EXISTING CONDITIONS

3.1 SITE LOCATION

3.1.1 The proposed site is located approximately 1.4km south of the centre of Blairgowrie and currently comprises undeveloped land which is bound to the north and west by further undeveloped land, to the east by the A93 Perth Road, and to the south by an unnamed access road which leads to the Wet Park Retail Park. The location of the site is illustrated indicatively at Figure 1.

3.2 LOCAL ROAD NETWORK

Access Road

3.2.1 The unnamed access road to the south of the site is a single two-way carriageway measuring approximately 4m in width. The road is lit and has footways on both sides of the eastern portion of the carriageway. As part of the development proposals, the access road will be widened to 6m, subject to LPA approval, to permit two-way movements up to and including the proposed development.

3.2.2 Beyond the proposed development the access road becomes one way and provides access to a small car park and the rear of the retail park.

3.2.3 An existing junction bellmouth has been constructed to the site, this will be stopped up as part of the proposals with a new access constructed into the site in the form of a priority junction.

A93 Perth Road

3.2.4 The A93 is a single carriageway road measuring approximately 6.5m in width. It runs in a north – south alignment towards Blairgowrie and Rattray town centres in the north and Perth to the south. A lit footway is provided along both sides of the carriageway which is subject to a 30mph speed limit within the vicinity of the site, with a 20mph school zone speed limit advisory when lights are flashing.

3.2.5 A toucan crossing is present on the A93 in the vicinity of the site access.

3.2.6 The main vehicle access into the West Park Retail Park is located 90m to the south of the development access and features a ghost island facility for right turning traffic.

A9

3.2.7 The A9 is a primary trunk road in Scotland, linking Perth with the M90, and provides access to Edinburgh in the south. To the north, the A9 carries on, providing access to Inverness and other northern settlements. An A9 access point is located approximately 20km west of the site through a priority-controlled T-junction which is subject to a speed limit of 60mph.

3.2.8 The site is therefore considered to be well located for access to the local, regional and national road networks.

3.3 TRAFFIC BASE FLOWS

3.3.1 Traffic surveys have been undertaken at the following junctions to obtain existing traffic flows on the local road network. The surveys were undertaken on Friday 21st June (07:00-19:00) and Saturday 22nd June 2024 (07:00-19:00) a neutral period outside of school holidays:

- Site access Road / A93 Perth Road (Retail Park North junction); and
- Main Retail Park Access / A93 Perth Road (Retail Park South junction)

3.3.2 The flows identified through the above survey have been converted to Passenger Car Units (PCUs) for the purposes of capacity modelling, assuming the conversion factors set out below in Table 3-1.

Table 3-1 PCU Factors

	Car / LGV	OGV1	OGV2	Bus/Coach	Motorcycle	Cycle
Factor	1.0	1.5	2.3	2	0.4	0.2

3.3.3 The resultant 2024 peak hour flows are set out below:

- Junction 1: Friday network AM peak hour between 08:00 and 09:00;
- Junction 1: Friday network PM peak hour between 16:00 and 17:00; and
- Junction 1: Saturday network peak hour between 11:00 and 12:00.

3.3.4 Details of the 2024 base traffic flows are set out in Figure 6.

3.4 PERSONAL INJURY COLLISION

3.4.1 Personal Injury Collision (PIC) data for the local road network in the vicinity of the site has been obtained and reviewed using Crash Map to identify accidents recorded by the police.

3.4.2 The most recent five-year period for which personal injury collision data is available for has been considered (2022-2018). The area under consideration includes the A93 Perth Road from Dunkeld Road to the north, to Golf Course Road in the south.

3.4.3 A review of the Crash Map database displayed a total of one collision recorded within the study area, which resulted in slight injury.

3.4.4 The collision occurred on the A93 Perth Road, approximately 215m north of the A93 Perth Road / Hazelwood Road junction, to the north of the site access. Details regarding the collision are as follows:

- A collision resulting in slight injury occurred on the carriageway on the 9th of August 2019. It was recorded that the collision involved two vehicles, with two casualties. No other road users were recorded as being involved;

3.4.5 The PIC data demonstrates there was one slight collision to the north of the site within the most recent five-year period.

3.4.6 It is therefore concluded that there are no extant safety issues on the road network in the vicinity of the development site. As such, it is considered that there are no existing road safety issues that would be exacerbated by the development proposals.

4 EXISTING SUSTAINABLE TRANSPORT PROVISION

4.1 INTRODUCTION

4.1.1 NPF4 states that new developments should be provided in sustainable locations, where the need to travel is minimised and the use of sustainable modes can be maximised.

4.1.2 The site has a good level of accessibility and access to sustainable modes of transport within a reasonable distance of the site. Travel by non-car modes will be encouraged, and the proposals include pedestrian and cycle infrastructure within the site.

4.1.3 This section outlines the existing walking, cycling and public transport facilities within the vicinity of the development site and describes the accessibility of the site in terms of its proximity to key services and destinations.

4.2 WALKING ACCESSIBILITY

4.2.1 Walking is considered to be the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under two kilometres.

4.2.2 Figure 2 shows a 2km walking catchment area from the centre of the site. This demonstrates that the entirety of Blairgowrie town centre can be accessed within 2km as well as residential areas to the south and east of the site.

4.2.3 Good quality pedestrian infrastructure surrounds the site. In particular, a lit footway is provided along both sides of the A93 Perth Road carriageway towards Blairgowrie town centre. A toucan crossing is provided across the A93 in the vicinity of the site for access to residential areas to the east.

4.2.4 It is considered that customers and staff residing or working in the local area have good opportunities to travel to the site on foot.

4.3 CYCLING ACCESSIBILITY

4.3.1 In addition to walking, cycling also has potential to substitute for short car trips, particularly those under 5 kilometres, and to form part of a longer journey by public transport.

4.3.2 Figure 4 shows a 5km cycling catchment area from the centre of the site. This shows that the entirety of Blairgowrie and Rattray can be accessed as well as surrounding residential areas to the north, south and east. The areas of Rosemount and Carsie can also be accessed to the east and south of the site respectively.

4.3.3 Cycle parking will be provided to further encourage and facilitate cycling to and from the site in the form of three Sheffield stands which can accommodated six cycles.

4.4 PUBLIC TRANSPORT

Bus Services

4.4.1 The site well located for access by bus as the closest bus stops are located on the A93 Perth Road to approximately 70m walking distance from the development entrance offering northbound services towards Blairgowrie and Rattray and southbound services towards Perth. These bus stops are provided with a shelter and timetable information. The southbound bus stop benefits from an existing toucan crossing of the A93.

4.4.2 The bus stops located within the vicinity of the site are shown in Figure 5 and details of the buses which serve them are provided in Table 4-1.

Table 4-1 Local Bus Services

Service	Route	Approximate Frequency		
		Monday – Friday	Saturday	Sunday
58	Blairgowrie - Perth	Up to 6 services per day	Up to 6 services per day	Every 30 minutes
63	Carsie - Rattray	Every 30 minutes	Every 30 minutes	No service

4.4.3 The services set out within Table 4-1 provide travel to a range of local destinations. Whilst it is less likely that customers will travel to the site by bus, this forms a reasonable travel mode for employees.

4.5 SUMMARY

4.5.1 This section has shown that it is feasible for employees and customers to walk, cycle or use public transport from the surrounding residential areas. Given the nature of the proposed use, it is considered that the location of the site is consistent with national and local policy objectives.

5 DEVELOPMENT PROPOSALS

5.1 DEVELOPMENT PROPOSALS AND SITE LAYOUT

5.1.1 The development proposals are for a 292sqm gross internal area (GIA) McDonald's restaurant with drive-thru facility, including associated site access, servicing arrangements and parking. It is expected that the restaurant would operate daily between the hours of 06:00 to 24:00. The proposed site layout is attached at Appendix A.

5.1.2 The McDonald's car park will operate with a clockwise, one-way system. The drive-thru will commence from the northwestern edge of the car park and continue around the north and east of the building, exiting into the car park to the west.

5.1.3 It is expected there would be approximately 55-75 direct full-time equivalent staff employed by the restaurant. Staff work shifts and the number of staff expected to be on shift at any one time would be 20 people. McDonald's staff work varying shift patterns depending on their needs and the requirements of the restaurant. The minimum core time is four hours.

5.2 PROPOSED ACCESS

5.2.1 Access to the external road network will be from an existing priority junction with the A93. Access into the site will be created with a new priority junction on the northern side of the access road.

5.2.2 The current bellmouth serving the development plot will be stopped up. The existing footway to the south of the site will continue into the site, providing safe pedestrian access fronting the site.

5.2.3 It is proposed this existing access road will be widened to approximately 6m to permit two-way vehicle movements up to and including the McDonalds site. The priority access junction into the site will feature a dropped kerb crossing with tactile paving.

5.2.4 A visibility splay drawing is presented in Appendix C – AMA-55002-SK002 which demonstrates that visibility of 2.4m x 43m can be achieved for vehicles exiting the site. It should be noted when exiting the site no vehicles will be approaching from the east as the access road becomes one-way immediately to the west of the McDonalds access.

5.2.5 The access road continues west through a one-way carriageway, for further access into the retail park. Principal vehicle access into the retail park will remain unchanged and will continue to be taken from a separate ghost island junction to the south.

5.3 SERVICING ARRANGEMENTS

5.3.1 McDonald's has been trading in the UK since 1974. The company operates over 1,348 fast service restaurants (+90 ROI) of which around 1,204 are restaurants with drive thru facilities.

5.3.2 Martin Brower are McDonald's sole distributor for all its products and have a fleet of 150 vehicles. They utilise multi-temperature vehicles which allows all of the restaurant's requirements for frozen, chilled and ambient products to be delivered in one visit. This therefore reduces the number of deliveries each restaurant receives.

5.3.3 Restaurants typically receive three deliveries per week. Servicing McDonald's restaurants whilst they are open is a common practise and does not present any operational difficulties.

5.3.4 Martin Brower use a sophisticated computerised planning tool (Paragon), which enables requirements of delivery destinations to be set and ensures they are complied with on every occasion a delivery is planned. The restaurant is allocated a 2-hour delivery slot and the delivery will be planned within this. Notification of the planned delivery is emailed to the restaurant two days before delivery. On the day of the delivery, the GPS system linked to Paragon will automatically email the restaurant 30-minutes prior to the vehicles arrival.

5.3.5 The goods are typically delivered by a HGV lorry, up to 16.5m in length. This is usually parked for between 15 minutes – 30 minutes within the 2-hour delivery slot. The duration of the stay depends upon the range and quantity of products to be delivered.

5.3.6 It is proposed that servicing would be undertaken from the car park with deliveries scheduled to arrive and depart outside of store trading hours.

5.3.7 The swept path analysis is presented in **Appendix B – AMA-55002-ATR005-1.5**. The analysis demonstrates that a delivery vehicle can enter, manoeuvre around and exit the site.

5.3.8 Refuse collection for McDonald's is undertaken by a private contractor three times per week. Waste minimisation and recycling are promoted. Waste minimisation has been achieved through the re-design of tray liners and specifying the use of light weight bin liners. Food wastage is minimised through the use of a computer system which monitors the amount of food served at given times of day resulting in more accurate preparation and ordering of stock. This therefore reduces the quantum of waste and frequency of collection required. Service vehicles also collect empty delivery trays and crates which are returned to supplies for reuse.

5.3.9 The swept path analysis is presented in **Appendix B – AMA-55002-ATR005-2.5** based on a refuse vehicle of 9.6m in length typically used by the private contractor. The analysis demonstrates that a standard refuse vehicle can enter, manoeuvre around, and exit the site. Refuse collection will be undertaken from the main car park within the northern parking aisle with similar arrangements to the servicing as outlined in Section 5.3.8.

5.3.10 Cooking oil from restaurants is collected by Martin Brower's delivery vehicles and is recycled into bio diesel. The bio diesel is used as fuel by all McDonald's delivery vehicles, resulting in a carbon saving of 8,200 tonnes per annum.

5.3.11 The arrangements described above follow a 'tried and tested' methodology used successfully across the UK and there are no reasons to suggest why it could not be successfully undertaken in this location.

5.4 PARKING

5.4.1 The proposals include 38 car parking spaces, including three accessible spaces and two grill bays to serve the McDonald's restaurant. Six cycle parking spaces in the form of Sheffield cycle hoops will also be provided. A further three motorcycle spaces will be provided.

5.4.2 The proposed level of parking provision is in line with McDonald's operational requirements as proven over numerous sites across the country. The proposed level of parking provision has also been shown to be suitable based on the surveyed peak parking demand set out within **Section 6**.

5.4.3 The proposed quantum of parking would comply with the standards set out in the National Roads Development Guide for Class 3 use with three accessible bays and would be below the potential maximum vehicle parking level of 58 spaces based on GFA. Furthermore, the provision for cycle and motorcycle spaces would accord with national standards. The provision is therefore considered to be appropriate.

5.4.4 It is also noted the existing retail park to the south offers c.115 parking spaces and this will likely lead to linked trips on foot between the retail park and the McDonalds restaurant.

5.5 DRIVE-THRU LANE OPERATION

5.5.1 The drive-thru lane forms an integral part of the McDonald's operation, and this lane is shown to route around the northern and eastern extents of the site.

5.5.2 When a customer wishes to purchase a meal without leaving their vehicle, the following steps are taken:

- Enter the drive-thru lane;
- Place an order at a Customer Order Display (COD) units;
- Pay at the first booth; and
- Collect meal from the second booth.

5.5.3 In the event that a customer places a large or unusual order, which could take longer to prepare (and potentially delay other drivers using the drive-thru lane), then a member of staff will divert them to one of the 'reserve bays'. Once the order is ready, a member of staff will carry the meal from the restaurant to the customer.

5.5.4 In order to assist with order taking, the proposal includes two vertical ordering points, so that customer orders can be prepared quicker. Drivers waiting to order would use the first available COD unit within the singular drive thru lane depending upon how many vehicles are waiting. Both COD units would operate simultaneously at all times of the day, and in practice, can be likened to a dual pay barrier arrangement at multi-storey car parks across the country.

5.5.5 There is space within the drive-thru lane for 13 vehicles to stack from the order point. There is further space within the car park for two additional vehicles to wait without obstructing the general operation of the car park.

6 ASSESSMENT PARAMETERS

6.1 INTRODUCTION

6.1.1 This section sets out the methodology and parameters used in assessing the proposed development and its potential impact on the road network.

6.2 ASSESSMENT YEARS

6.2.1 The following assessment years have been considered in respect of analysing the capacity of the local road network:

- 2024 Base Year – representing the existing situation on the local road network; and
- 2029 Future Year – representing a horizon period of five years after the lodging of the planning application. This allows time for the development to be constructed and for it to become operational.

6.3 FUTURE YEAR ASSESSMENT SCENARIOS

Do Minimum Scenario

6.3.1 The Do-Minimum scenario is considered to represent a future year situation on the local road network, without the proposed development taking place. In addition to the Base scenario, all local background traffic growth has been included. The resulting 2029 Do-Minimum Traffic Flows are set out on Figure 7 for the weekday AM and PM and Saturday peak hours, respectively.

With Development Scenario

6.3.2 The With-Development scenario is considered to represent the future situation on the local road network with the proposed development. The traffic flows have been derived by adding the development traffic flows (which reflect the likely vehicle trip generation associated with the proposals) to the Do Minimum Traffic Flows. The resulting 2029 With Development Traffic Flows are set out on Figure 9 for the weekday AM and PM and Saturday peak hours, respectively.

6.4 TRAFFIC GROWTH

6.4.1 Tempro version 8.1 has been used to growth up the 2024 base data to provide 2029 traffic flows using growth factors for Perth & Kinross. These are summarised below:

- AM Peak Hour Period: 1.031
- PM Peak Hour Period: 1.027
- Saturday Inter Peak Hour Period: 1.028

6.5 COMMITTED DEVELOPMENTS

6.5.1 Committed development flows have been included for all future residential phases of the Westpark development located to the north of the site, comprising 417 dwellings.

6.5.2 Traffic flows have been obtained from the approved September 2017 Transport Assessment produced by Andrew Carrie Consultants. Retail Park traffic flows were removed as these have been picked up within the traffic surveys to avoid double counting. The committed residential flows have been included in all future year 2029 assessments.

6.6 DEVELOPMENT TRAFFIC GENERATION

6.6.1 McDonald's operates in excess of 1,300 restaurants across the UK and it is key to their business to ensure efficient operation of all sites to ensure quality of service and efficiency. Therefore, to adopt robust trip rates for the proposed drive thru proposal McDonalds regularly undertake traffic counts and customer interview surveys on newly opened and existing sites to provide robust data for new restaurants in terms of trip generation and types of trips.

6.6.2 One of McDonald's appointed roads consultant's (ADL) have previously commissioned counts and customer interview surveys at three McDonald's restaurants with drive thru facilities located in areas of similar characteristics and surroundings to that of the proposed site. These are as follows:

- Pomphlett Road, Plymouth, PL9 7BH;
- Dundee Road, Arbroath, DD11 2NQ; and
- Morris Street, Wigan, WN1 3RB.

6.6.3 These restaurants are considered to be the most appropriate comparable restaurants for the following reasons:

- All restaurants are located on key edge of town arterial routes;
- All restaurants are located adjacent to a significant retail / food store offering; and
- The restaurants are of a similar scale to the proposal.

6.6.4 The average of the three survey results has been taken as the proposed traffic generation for the site for the Friday PM and Saturday Peaks. The resultant peak hour traffic generations are detailed in Table 6-1.

Table 6-1 Proposed PM Peak Hour Trip Generation and Surveyed Saturday Trip Generation

Peak Hour	Proposed Traffic	
	In	Out
Weekday 18:00 – 19:00	94	99
Saturday 13:00 – 14:00	102	112

6.6.5 As can be seen, the proposed site would generate approximately 193 two-way vehicle trips in the PM peak hour and 214 two-way vehicle trips in the Saturday inter peak hour.

6.6.6 Average specific trip restaurant rates are considered appropriate and highly robust for use as there is proven to be no significant relationship between McDonald's traffic and floor area, dining area, seating numbers or parking provision with each restaurant having a varying number of trips generated, therefore the above is considered appropriate and is not adjusted by any specific variable.

TRICS Database

6.6.7 To ensure the highest trip generation for the proposed development has been assessed in each scenario, the TRICS database has also been interrogated. As there are no existing surveys during the AM peak period, the resultant TRICS trip rates and generation will be used for the AM peak period. For the PM and Saturday peak periods, the higher of the existing surveys and TRICS generated trips will be used for the site, ensuring a robust assessment of the site.

6.6.8 For the TRICS report, McDonald's restaurants in 'Edge of Town Centre', 'Suburban' and 'Edge of Town' locations have been selected – all of the sites included are occupied by McDonald's, ensuring the data is relevant to the proposals.

6.6.9 Whilst outside of the recorded AM, PM and Saturday network peak hours, the peak hour selected from the TRICS output for the respective peaks are 10:00 to 11:00, 18:00 to 19:00 and 12:00 to 13:00, ensuring a robust assessment.

6.6.10 The TRICS trip rates and resulting vehicle trip generation are summarised in Table 6-2 whilst the full outputs are appended at Appendix D.

Table 6-2 Proposed AM and Saturday Peak Hour Trip Generation

Peak Hour	Trip Rates		Trip Generation	
	Arrivals	Departures	Arrivals	Departures
Weekday AM 10:00-11:00	16.005	15.734	40	39
Weekday PM 18:00-19:00	20.904	21.879	52	55
Saturday 12:00-13:00	37.946	36.905	95	92

6.6.11 As set out within Table 6-1, the observed trips from McDonalds store surveys for the weekday PM peak and Saturday peak are higher than the TRICS trips set out in Table 6-2.

6.6.12 Therefore, to ensure a robust approach, the existing McDonalds stores will be used for the weekday PM and Saturday peak periods. The TRICS trip generations will be used for the weekday AM peak period assessment.

6.7 MCDONALDS TRIPS BY TYPE

6.7.1 Given the location of the proposed site adjacent to a main road, and the distance of the site from a major settlement, it is considered that the majority of trips attracted to the site are unlikely to be new to the network, but existing trips that visit the site enroute to another destination. The primary trip types referred to in this report are as follows:

Additional Trips

6.7.2 These are specific car journeys to visit the McDonald's, whereby customers return to their original location immediately after completing their visit:

- e.g. Home → McDonald's → Home
- In the case of the proposed restaurant these are specific car journeys to visit the restaurant

Diverted Trips

6.7.3 These are trips where a driver is already on the network and alters their route to visit the McDonald's:

- Home → McDonald's → Other
- Work → McDonald's → Home
- In the case of the proposed restaurant, these are existing trips on the A93 Perth Road which divert to the site. It is not expected that drivers would divert from the wider road network (i.e. the A9) given the travel distances involved. However, due to the lack of other McDonald's restaurants in the area, diverted travel distances may be longer.

Pass By Trips

6.7.4 These are also trips which are already on the network in any event which as the driver passes the McDonald's they decide to make a visit.

6.7.5 In the case of the proposed restaurant, these would be trips "passing" the site along the A93 Perth Road.

Shared Trips

6.7.6 These are trips which are undertaken to visit multiple uses within a single location. In the case of the proposed development, surrounding facilities include a retail park which has the possibility of sharing trips between other shops within the location.

6.7.7 It should be noted that 'Additional Trips' are not necessarily all 'new' trips, as customers of the new restaurant may well have previously visited other restaurants or hot food takeaway locations. Collectively pass-by and diverted can be referred to as 'existing trips' as these represent existing vehicles already on the network.

Percentage Split of Trip Types

6.7.8 The customer interview survey results have been fully analysed and the average survey results are provided in Table 6-3.

Table 6-3 Proposed Trips by Type

Trip Type	Definition	Friday PM		Saturday	
		No.	%	No.	%
Additional Trips	Same origin & destination McDonald's sole purpose of trip	7	13%	10	16%
Existing Trips	Different origin & destination	10	18%	3	4%
	Same origin & destination McDonald's not sole purpose of trip	26	42%	30	44%
Shared Trip	Visit local facilities before or after McDonald's	16	28%	22	36%
Total Survey		59	100%	65	100%

6.7.9 Table 6-3 details that on a Friday PM Peak 13% of trips to the McDonald's restaurant could be expected to be additional trips and 87% would be existing on the road network. For the Saturday Peak 16% would be additional trips and 84% already existing on the road network.

6.7.10 The results also demonstrate that 28% and 36% for the Friday and Saturday peaks respectively could be expected to be shared trips with the adjacent retail park.

6.7.11 Based upon the McDonald's proportional trip types proposed in Table 6-3, the proposed peak hour traffic has been split into additional, pass by / diverted and shared trips in Table 6-4.

Table 6-4 – Proposed Trip Generation By Type

Trip Type	From TRICS			From Existing Surveys			From Existing Surveys		
	Friday AM			Friday PM			Saturday		
	%	In	Out	%	In	Out	%	In	Out
Additional	13%	5	5	13%	12	13	16%	16	18
Pass-by	59%	24	23	59%	56	58	48%	49	54
Shared	28%	11	11	28%	26	28	36%	37	40
Total	100%	40	39	100%	94	99	100%	102	112

6.7.12 Whilst no surveys were undertaken at the chosen McDonald's stores in the AM peak period, it has been assumed that the trip proportions from the PM peak would be similar and have therefore been applied to the trips in the AM peak period.

6.7.13 The following trips would therefore be generated by the proposed restaurant in the peak hours:

Friday AM Peak

- 10 'new' two-way trips on the network; and
- 47 two-way trips as 'existing journeys' making a visit to the restaurant
- 22 two-way trips 'shared' with the adjacent retail uses.

Friday PM Peak

- 25 'new' two-way trips on the network; and
- 114 two-way trips as 'existing journeys' making a visit to the restaurant.
- 54 two-way trips 'shared' with the adjacent retail uses.

Saturday Peak

- 34 'new' two-way trips on the network; and
- 103 two-way trips as 'existing journeys' making a visit to the restaurant.
- 77 two-way trips 'shared' with the adjacent retail uses.

6.7.14 In the worst-case scenario, 34 new two-way trips would be generated by the proposals, which is approximately one trip every two minutes during the Saturday peak hour. It is not considered that this represents a significant impact, however, for robustness this will be assessed further in **Section 7** of this TA.

6.8 DEVELOPMENT TRAFFIC DISTRIBUTION AND ASSIGNMENT

Additional Trips

6.8.1 It can be assumed that those trips that are new to the network, specifically to visit the site, will come from the local area. It is not envisaged customers will travel a significant distance to access a McDonald's. Furthermore, the nearest existing McDonald's to the site, is 26km away in Perth, making the site a lone option for customers in the region.

6.8.2 The distribution of new trips at the site access / A93 junction has used the turning proportions of observed movements from the survey of the main retail park access junction as a proxy given this is the more heavily used junction at present. The average turning proportions across all time periods are shown below. These were applied to new vehicle movements:

- 65% to/75% from the north
- 35% to/25% from the south

6.9 PARKING DEMAND

6.9.1 The average parking demand for the proposed McDonald's (including staff, grill bays and accessible parking) is expected to be as follows based on the demand surveyed at the three comparable sites:

- Friday – 26 vehicles; and
- Saturday – 29 vehicles.

6.9.2 It should be noted that any overspill parking was captured within the surveys in order to provide an accurate picture of the parking situation.

6.9.3 The parking proposals for 38 spaces (including two grill bays) is therefore sufficient to accommodate the expected level of demand on site.

6.10 DRIVE-THRU QUEUE

6.10.1 The proposed drive-thru queues are based upon the average queues of the three surveyed restaurant sites which are summarised in **Table 6-5**. This includes all vehicles waiting in the drive-thru lane back from the collection booth.

Table 6-5 Drive Thru Queues

	Friday PM Peak	Saturday Peak
Min Q	0	0
Max Q	7	9
Average	4	3

6.10.2 The proposed drive-thru lane has the capacity to accommodate approximately 12 vehicles from the collection point to the entrance from the car park, therefore, is more than suitable to meet anticipated

demand during peak times. A further two vehicles can be accommodated within the car park between the drive-thru lane entry and the site access.

6.11 SUMMARY

6.11.1 The trip generation for the proposed restaurant has been derived based on three existing McDonald's restaurant sites. All three of the McDonald's sites are considered to be similar in location, being that they are all situated within close proximity to arterial routes and have similar scales to the proposal.

6.11.2 The assumptions behind the proportions of additional, existing and shared trips generated by the development are considered appropriate and robust.

6.11.3 These assumptions have been applied to the future year assessment and the impact of the proposed restaurant on the capacity of the road network is detailed in Section 7.

7 FUTURE DEVELOPMENT IMPACTS

7.1 INTRODUCTION

7.1.1 As set out in detail within Section 6 of this TA, the additional new trips have been calculated based on existing McDonald's Restaurant sites of similar characteristics in terms of location, size and operation, as well as the TRICS database.

7.1.2 The following scenarios have been assessed for the weekday AM and PM peak hours and the Saturday peak hour:

- 2024 Base (Figure 6);
- 2029 Future Year (Figure 7) including committed development; and
- 2029 Future Year + Proposed New Development Traffic (Figure 9).

7.1.3 The detailed modelling outputs are provided in Appendix E and the findings from the scenarios are set out in this section.

7.1.4 JUNCTIONS 9 software has been used to assess the capacity of the existing access junction from the A93 Perth Road. This comprises a standards priority junction arrangement. JUNCTIONS 9 analyses the maximum Ratio of Flow to Capacity (RFC) values for the peak hours and the maximum queue length in passenger car units (PCUs).

7.1.5 The RFC provides the primary measure of junction performance and is reported for each entry arm. An RFC of 0.85 or lower indicates that the specific arm of the junction is operating within its practical capacity; an RFC greater than 1.0 indicates that traffic demand exceeds theoretical capacity. Queue length provides an indication of how the overall junction performance may affect adjacent junctions on the road network.

7.2 ACCESS ROAD / A93

7.2.1 The results of the modelling are summarised in Table 7-1 below, with the full model outputs included at Appendix E.

Table 7-1 A93 / Site Access Capacity Assessment

Scenario	Link	AM Peak		PM Peak		Sat Peak	
		RFC	Q	RFC	Q	RFC	Q
2024 Base	Access Road	0.03	0.0	0.0	0.0	0.01	0.0
	A93 North	0.03	0.0	0.01	0.0	0.01	0.0
2029 Base	Access Road	0.03	0.0	0.00	0.0	0.01	0.0
	A93 North	0.03	0.0	0.01	0.0	0.02	0.0
2029 With Development	Access Road	0.12	0.1	0.27	0.4	0.29	0.4
	A93 North	0.10	0.2	0.21	0.5	0.23	0.6

7.2.2 The assessment demonstrates that, regardless of the future development scenario, the junction would operate with a significant degree of spare capacity in the modelled assessment scenarios during the AM, PM and Saturday peak hours, with minimal queuing and delay.

7.3 SUMMARY

7.3.1 In summary, it can be concluded the site access junction will operate effectively in the base year, and will continue to do so in the future, when background growth and the proposed net development flows are considered.

7.3.2 The trips associated with the proposed development are not expected to lead to an unacceptable impact on operational performance and would thus mee the NPF4 policy test.

8 SUMMARY

8.1.1 Andrew Moseley Associates has been commissioned by McDonald's Restaurants Ltd to prepare this Transport Assessment and an Interim Travel Plan to accompany a planning application for a McDonald's restaurant with a drive-thru off the A93 Perth Road in Blairgowrie.

8.1.2 The Local Planning Authority and the Local Roads Authority is Perth and Kinross Council.

8.1.3 The proposed site is located approximately 1.4km south of the centre of Blairgowrie and would form part of the wider West Park Retail Park. Currently the site comprises undeveloped land which is bound to the north and west by further undeveloped land, to the east by the A93 Perth Road, and to the south by an unnamed access road associated with the retail park.

8.1.4 Access to the external road network will be from an existing priority junction with the A93. Access into the site will be created with a new priority junction on the northern side off an existing access road.

8.1.5 The current bellmouth serving the development plot will be stopped up. The existing footway to the south of the site will continue into the site, providing safe pedestrian access fronting the site.

8.1.6 The report has shown that the development proposals will be accessible by a range of travel modes and have been developed to accord with current national and local transport policies, including those set out within National Planning Framework 4, Planning Advice Note 75 and the Perth and Kinross Local Development Plan,

8.1.7 It is concluded that the site is accessible on foot and cycle from residential areas that surround the site and benefits from being located adjacent to bus stops and a toucan crossing of the A93.

8.1.8 A review of existing road safety data within the study area returned one slight collision on the A93 to the north of the site. It is therefore concluded there are no extant safety issues on the road network that would be exacerbated by the development proposals.

8.1.9 The development proposals are forecast to generate around 80, 195 and 215 two-way vehicle trips during the AM, PM and Saturday peak hours respectively. However, the proposals only result in 13% to 16% of trips being new additional traffic in the weekday and Saturday network peak periods respectively. The remainder of trips will comprise either 'pass-by' trips already on the local road network or shared trips associated with adjacent land uses at the retail park. Therefore, the development would result in a maximum of 34 'new' trips onto the local road network in the Saturday peak period.

8.1.10 A Travel Plan has also been prepared which sets out measures to encourage sustainable travel patterns and reduce the reliance on private car use.

8.1.11 Junction modelling has been undertaken of the existing priority junction with the A93 and demonstrates this would continue to operate with a significant level of spare capacity with the addition of development traffic.

8.1.12 The development proposals are not expected to lead to an unacceptable impact on operational performance of the local road network and would thus meet the NPF4 policy test. Therefore, there are no overriding traffic and transportation reasons preventing the local roads authority from recognising that the proposals are acceptable nor why planning permission could not be granted.

FIGURES

Figure 1 – Indicative Site Location Plan

Figure 2 – 2km Walking Isochrone

Figure 3 – Public Rights of Way Map

Figure 4 – 5km Cycling Isochrone

Figure 5 – Bus Stop Location Plan

Figure 6 – 2024 Survey Flows

Figure 7 – 2029 Traffic Flows

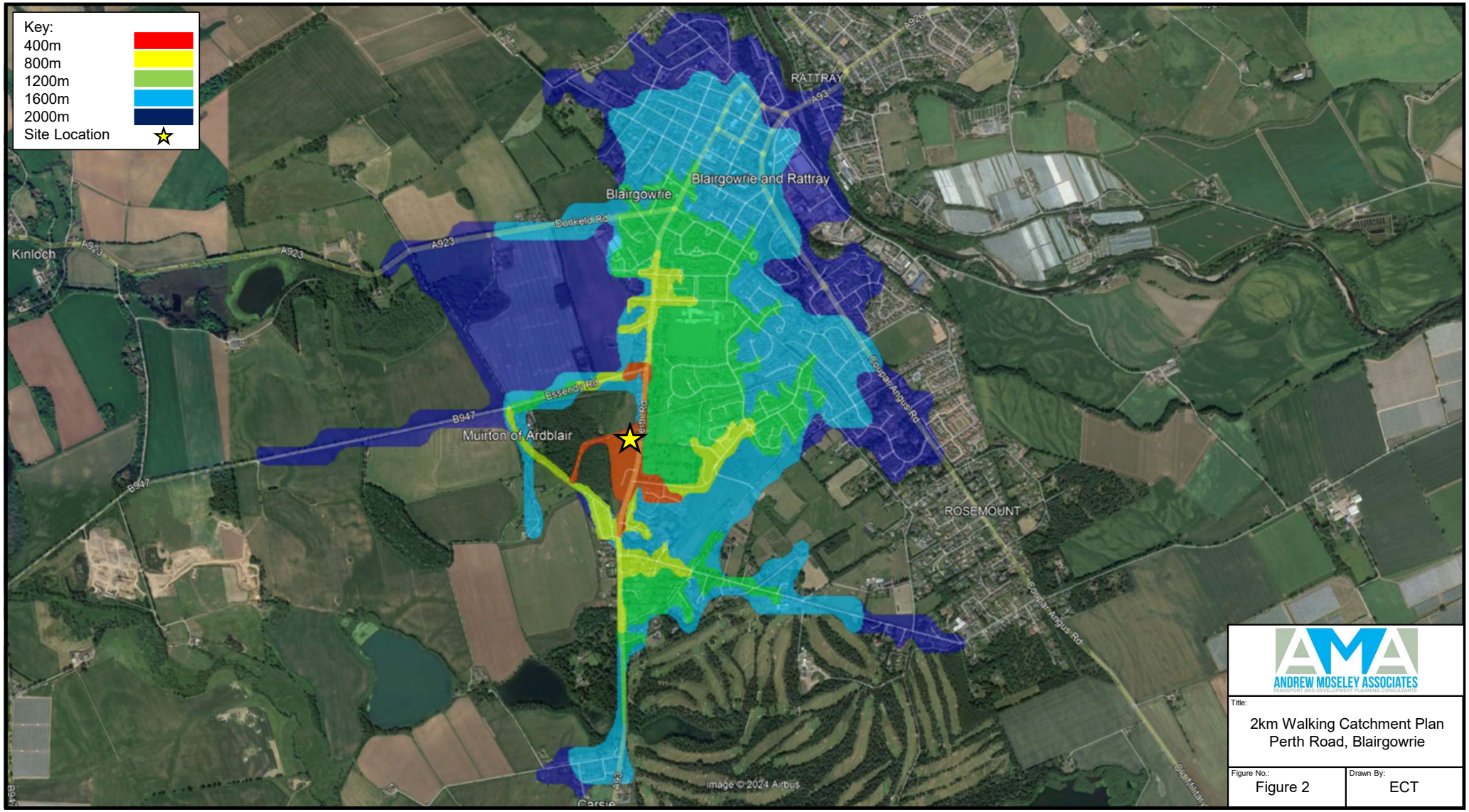
Figure 8 – Development Flows

Figure 9 – Committed Development Flows

Figure 10 – Additional Trip Distribution (%)

Figure 11 – 2029 Do Something Flows

Key:
Site Location
Blairgowrie
Blairgowrie and Rattray
Dunkeld Rd
A923
Perth St
Jessie St
Arthur St
Hamish Row
Emma St
Perth Rd
Queens Ave
Park Dr
Beeches Rd
Welton Rd
Ashgrove Rd
River Ericht
Golf Course Rd
Essendy Rd
B947
Muirton of Ardblair
Perth Rd
Ferntower Rd
Ferntower Rd
Eastern Ave
Woodlands Rd
Woodlands Rd
Woodlands Rd
Woodlands Rd
ROSEMOUNT
A93
Golf Course Rd
Golf Course Rd
Image © 2024 Airbus
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
Site Location Plan
Perth Road, Blairgowrie
Figure No.:
Figure 1
Drawn By:
ECT



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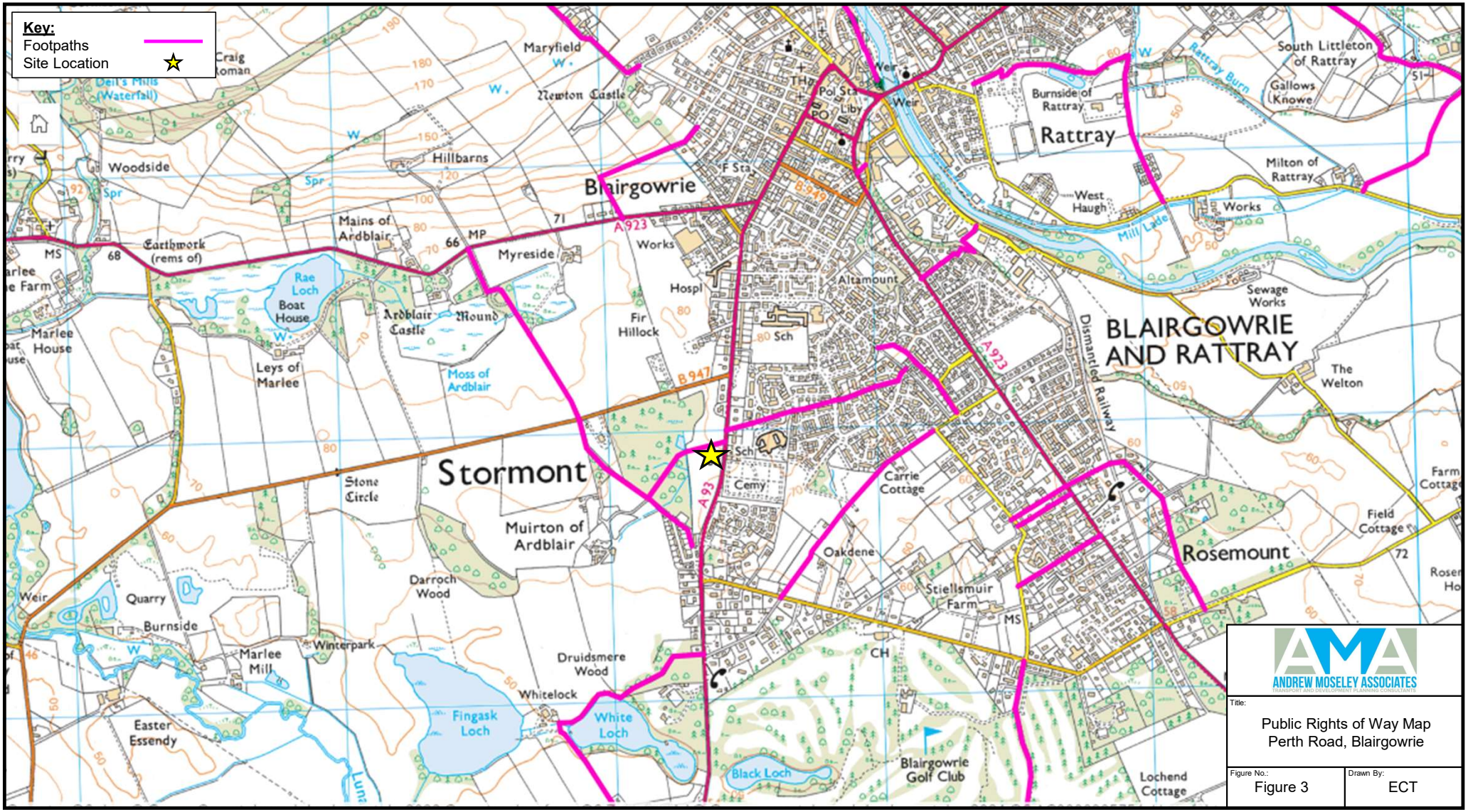
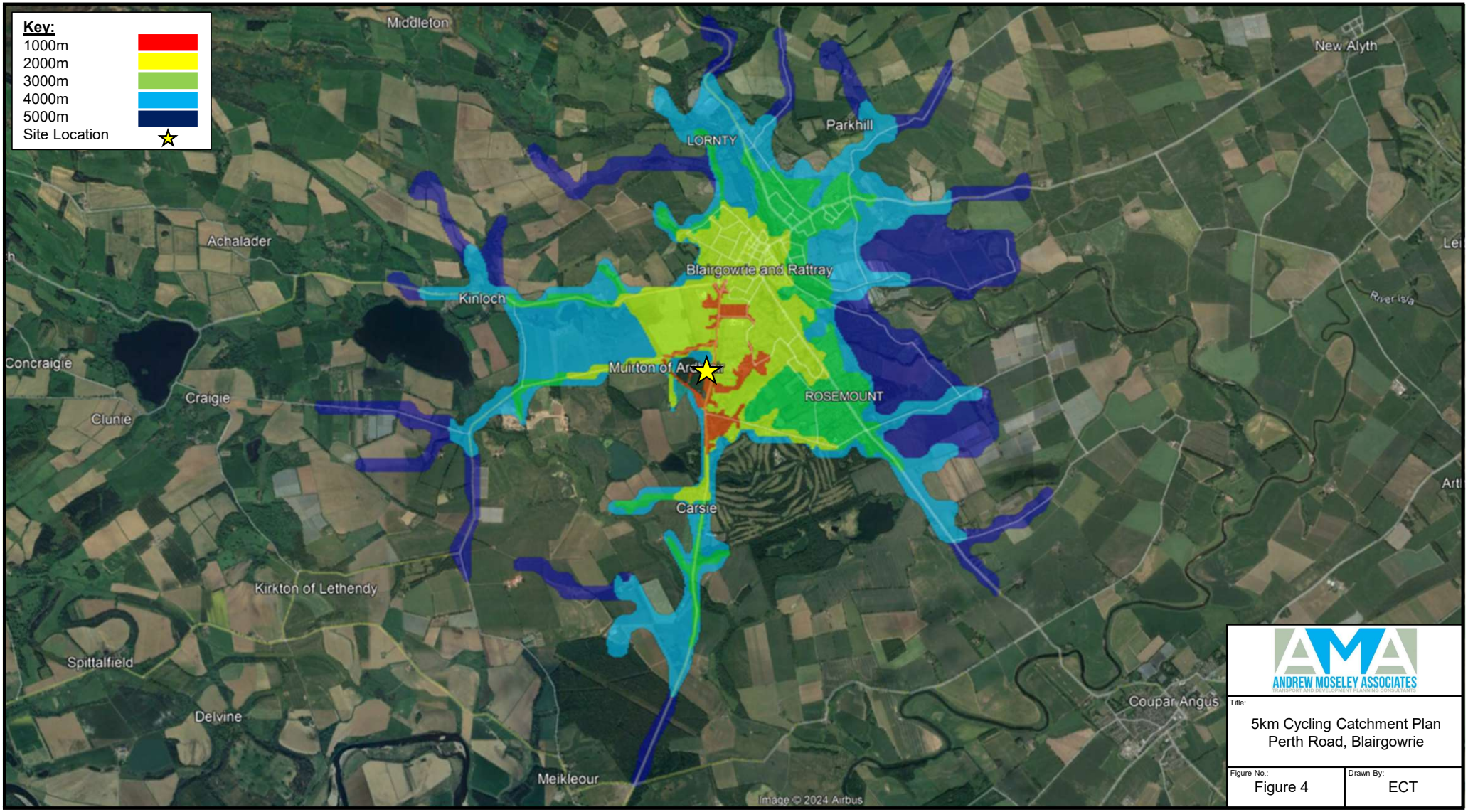
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Title:
2km Walking Catchment Plan
Perth Road, Blairgowrie

Figure No.:	Drawn By:
Figure 2	ECT


Key:
Footpaths
Site Location
Blairgowrie
Rattray
BLAIRGOWRIE AND RATTRAY
Stormont
Rosemount
Newton Castle
Maryfield
Hillbarns
Woodside
Mains of Ardblair
Earthwork (rems of)
Myreside
Rae Loch
Boat House
Ardblair Castle
Mound
Leys of Marlee
Moss of Ardblair
Marlee House
Fir Hillock
Hospl
Altamount
Sch
Cemy
Carrie Cottage
Oakdene
Stiellsmuir Farm
Dismantled Railway
Rattray Burn
Mill Lade
Burnside of Rattray
South Littleton of Rattray
Gallows (Knowe
Milton of Rattray
West Haugh
Works
Sewage Works
The Welton
Field Cottage
Farm Cottage
Stone Circle
Muirton of Ardblair
Darroch Wood
Druidsmere Wood
Whitelock
Fingask Loch
White Loch
Black Loch
Blairgowrie Golf Club
Lochend Cottage
Marlee Mill
Winterpark
Burnside
Quarry
Weir
Easter Essendy
A923
A93
B947
B9449
Pol Sta
PO
Liby
THs
F Sta
CH
MS
MP
Spr
W
Title:
Public Rights of Way Map
Perth Road, Blairgowrie
Figure No.:
Figure 3
Drawn By:
ECT
ANDREW MOSELEY ASSOCIATES

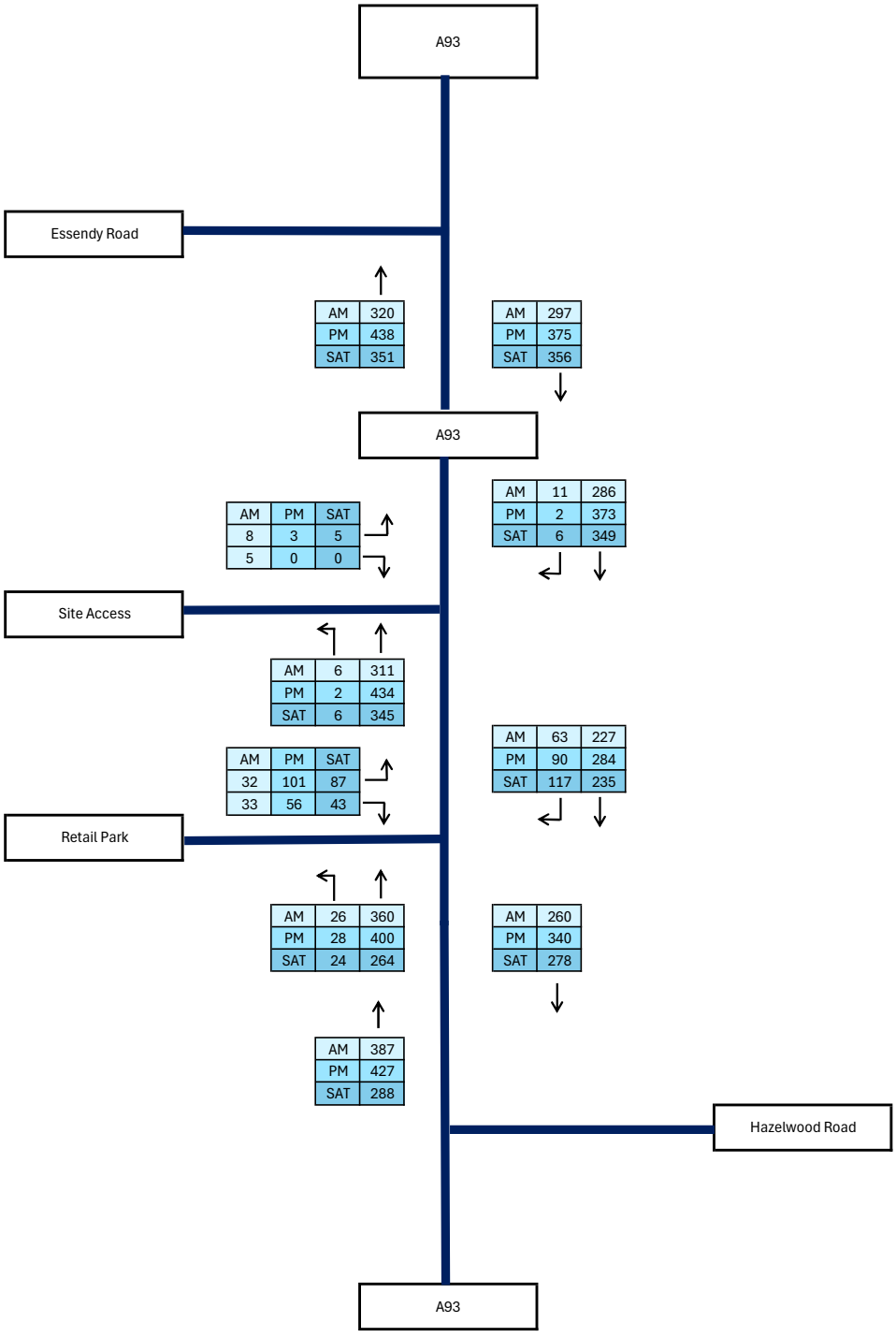

Key:
1000m
2000m
3000m
4000m
5000m
Site Location
Middleton
New Alyth
LORNTY
Parkhill
Achalader
Blairgowrie and Rattray
Kinloch
River Isla
Concraigie
Craigie
Clunie
ROSEMOUNT
Carsie
Kirkton of Lethendy
Spittalfield
Delvine
Coupar Angus
Meikleour
Image © 2024 Airbus
ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS
Title:
5km Cycling Catchment Plan
Perth Road, Blairgowrie
Figure No.:
Figure 4
Drawn By:
ECT

ANDREW MOSELEY ASSOCIATES
TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Title:

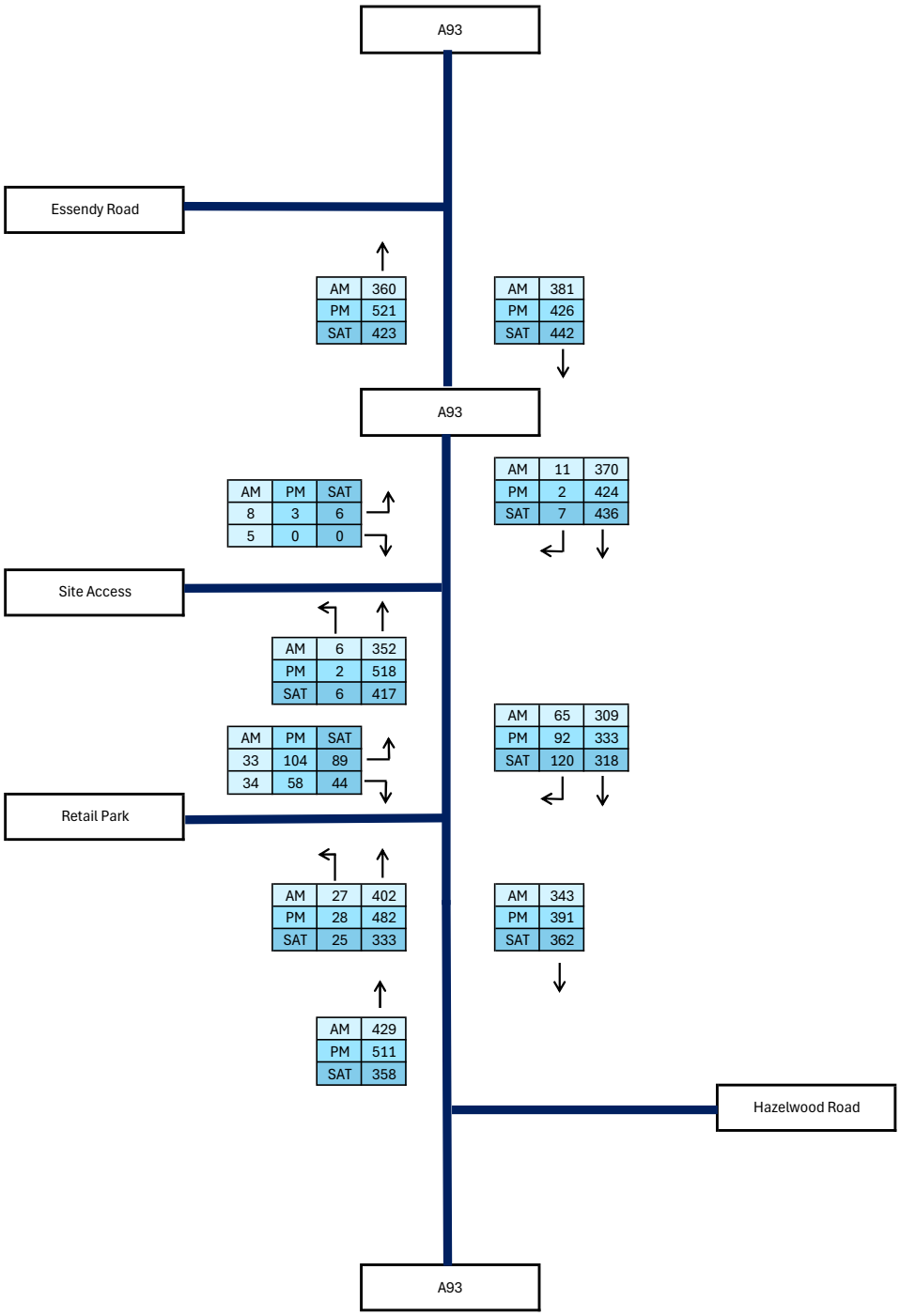
Bus Stop Locations Plan
Perth Road, Blairgowrie

Figure No.:	Drawn By:
Figure 5	ECT

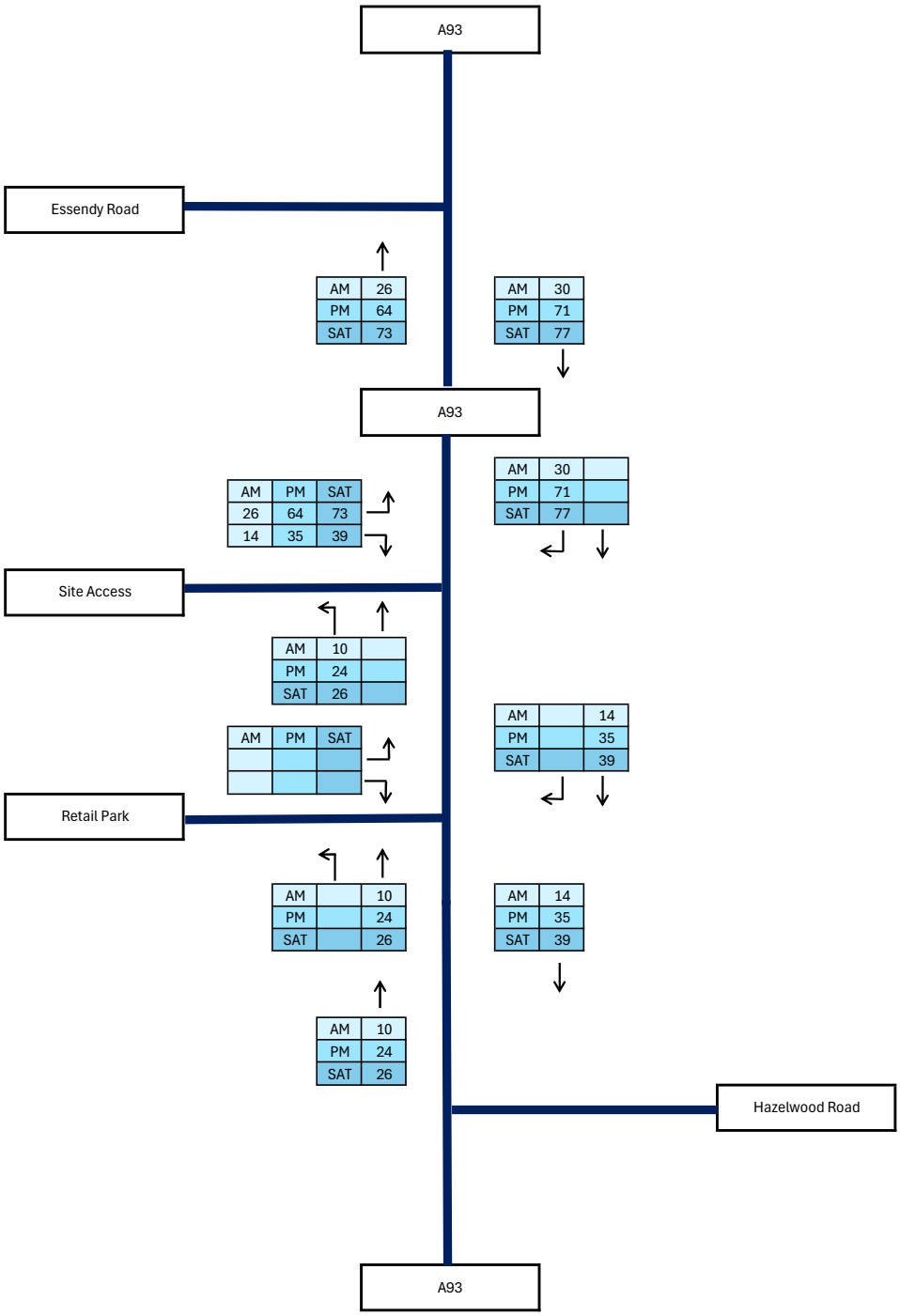


ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS	25/11/2024	55002 Blairgowrie	In PCU's	AM	08:00-09:00
	AMA/55002		Drawn by: CF	PM	16:00-17:00
	Figure 6	2024 Survey Flows	Checked: JH	SAT	11:00-12:00

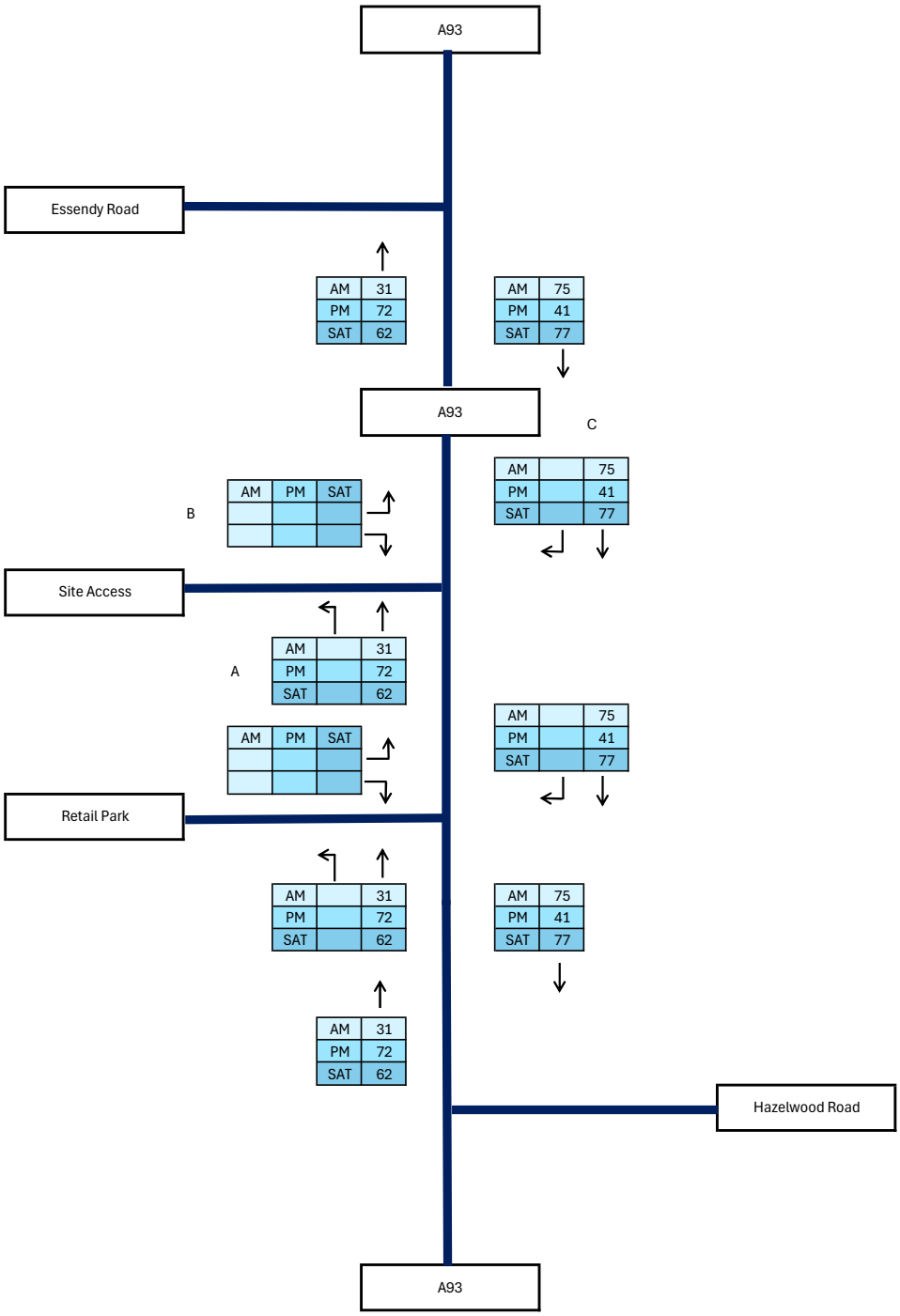
AM	1.031
PM	1.027
Saturday	1.028



ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS	25/11/2024	55002 Blairgowrie	In PCU's	AM 08:00-09:00
	AMA/55002		Drawn by: CF	PM 16:00-17:00
	Figure 7	2029 Base	Checked: JH	SAT 11:00-12:00



ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS	25/11/2024	55002 Blairgowrie	In PCU's	AM	08:00-09:00
	AMA/55002		Drawn by: CF	PM	16:00-17:00
	Figure 8	Development Flows	Checked: JH	SAT	11:00-12:00



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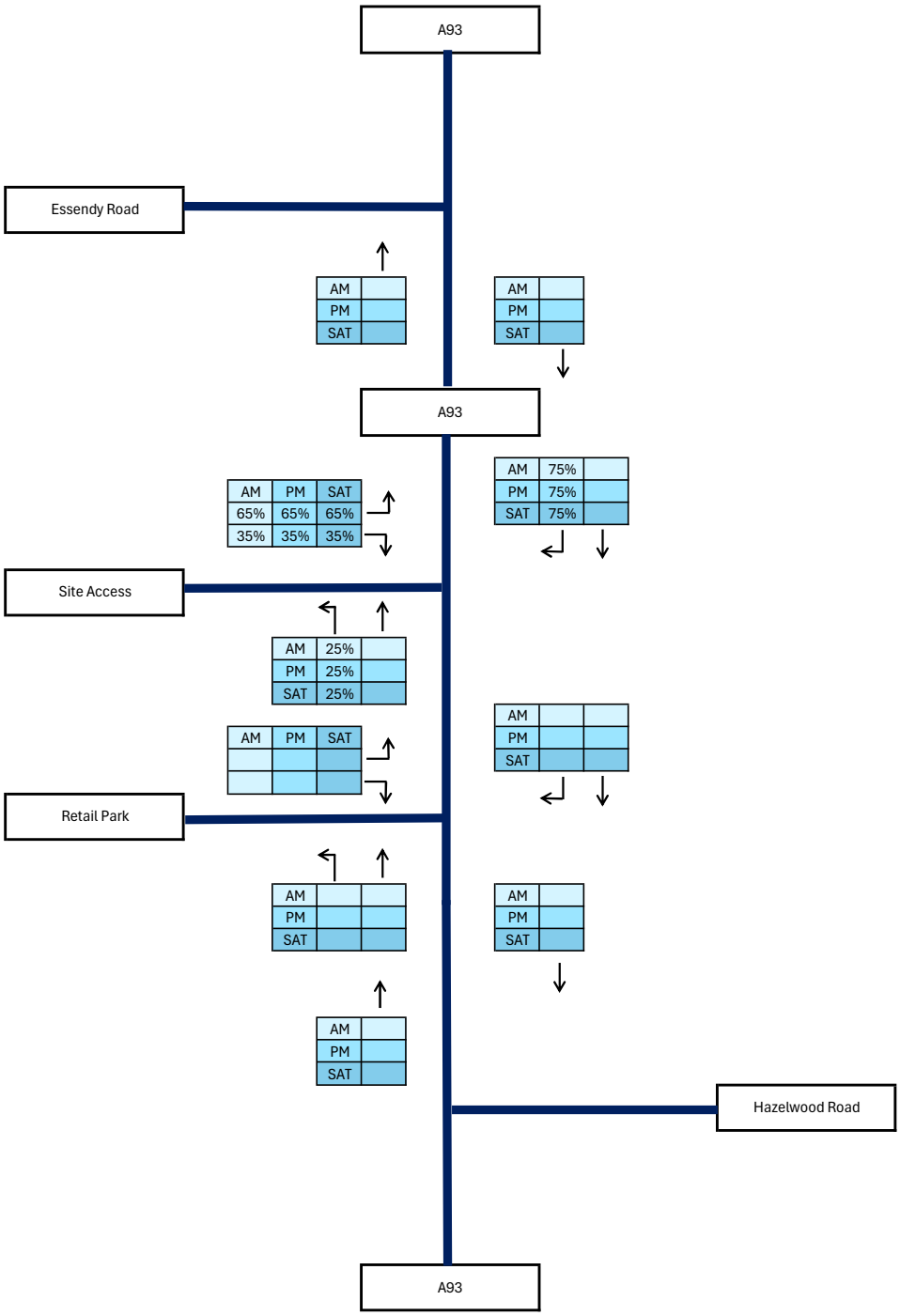
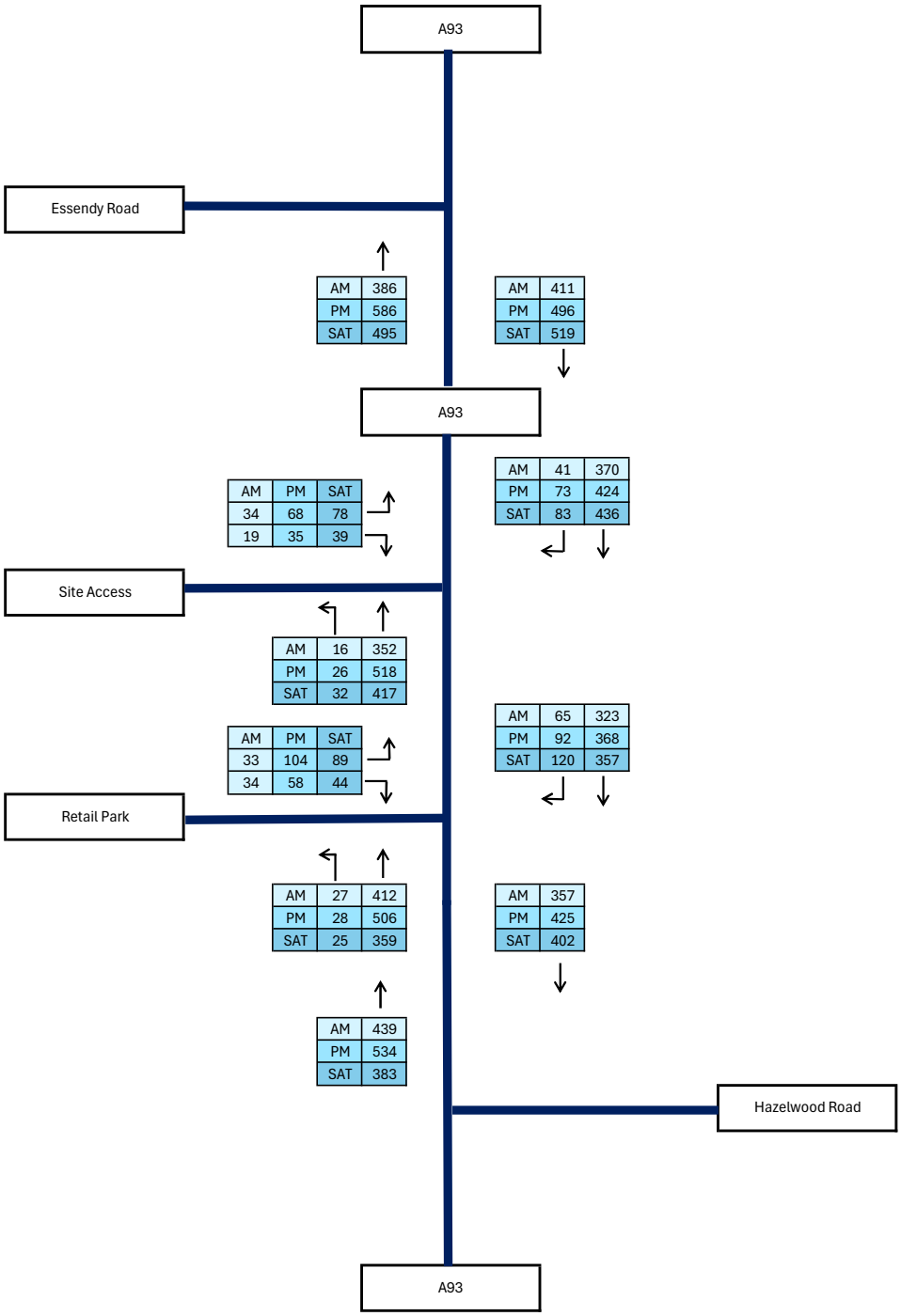
	AMA/55002		Drawn by: CF	PM	16:00-17:00
	Figure 9	Committed Development Flows	Checked: JH	SAT	11:00-12:00



ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS	25/11/2024	55002 Blairgowrie	In PCU's	
	AMA/55002		Drawn by: CF	
	Figure 10	Trip Distribution	Checked: JH	



ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS	25/11/2024	55002 Blairgowrie	In PCU's	AM	08:00-09:00
	AMA/55002		Drawn by: CF	PM	16:00-17:00
	Figure 11	2029 Do Something	Checked: JH	SAT	11:00-12:00

APPENDICES

Appendix A - Proposed Site Layout

Appendix B – Swept Path Analysis

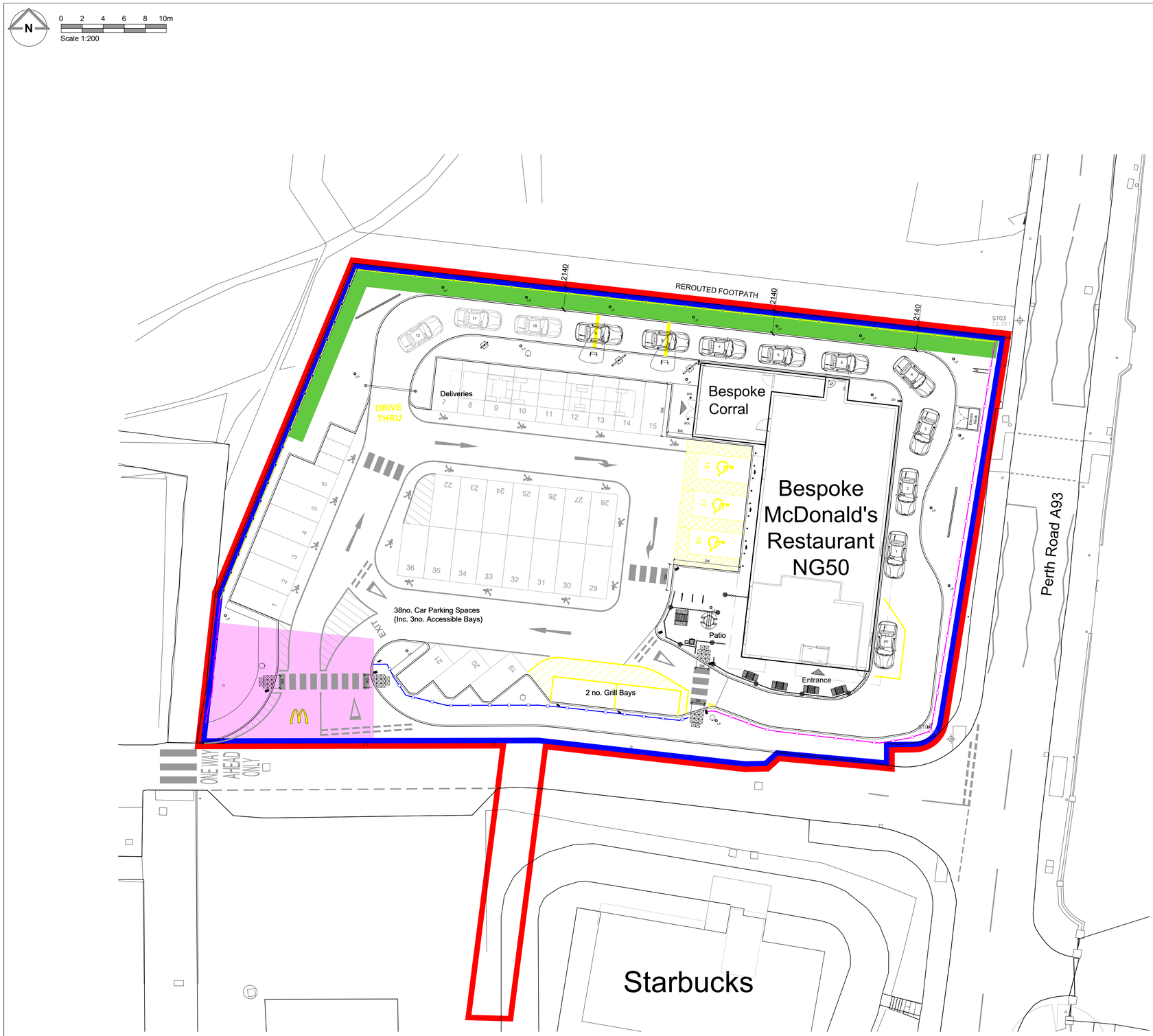
Appendix C – Site Access Junction and Visibility Splay

Appendix D – TRICS Outputs

Appendix E – Capacity Modelling Outputs

APPENDIX A

PROPOSED SITE LAYOUT



Site Plan
Scale 1:200

Proposed Site Plan

General Site Proposal Notes:

'DOT' denotes Department of Transport Signs installed in accordance will all Approved Documents and British Standards.

'DK' denotes location of drop kerbs to be installed.
Drop kerbs to be installed:
- Along delivery routes
- Around Accessible Parking Bays in accordance with AD M
- At Pedestrian crossing point

Yellow Thermoplastic Material to:
- All Drive Thru related road markings
- Accessible parking bays in accordance with AD M
- Parked order bays

White Thermoplastic Material to:
- Car park related road markings to be in white thermoplastic material
- Standard parking bays to be finished in white thermoplastic material
- All junction road markings
- All pedestrian crossings

Parking Schedule	
Bay Type	Proposed
Accessible Bays	3
Grill Bays	2
General Bays	33
EVC Bays	0
Total Car Bays	38
Cycle Spaces	6
Motorcycle Spaces	3

Schedule of Areas	
	Proposed
Site Area (Hectares)	0.2885
Building GEA (m²) (exc. Corral)	314.4
Building GEA (m²) (inc. Corral)	373.5
Building GIA (m²)	291.7

NOTES

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- Whilst information on this sheet is issued to scale, scaling directly from this drawing may result in inaccuracies. For precise measurements, refer to the stated dimensions or contact the Architect.
- This drawing shall not be reproduced without express written permission from AEW.
- Title overlay drawings and ownership boundaries are produced using all reasonable endeavours. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

Project Notes

- All drawings to be read in conjunction with all other drawings as noted on issue sheet.

Drawing based:

- Glanvilles Topographical Survey drawing 4240368/4101 Dated:01/07/24
- Ordnance Survey (c) Crown Copyright 2023. All rights reserved. Licence number 100022432
- Westpark, Blaigowrie Draft Site 7 Disposition drawing DISPOSITION - PLAN 1(30560098.2) (1) Dated: 12/08/24
- LAUK Lighting Layout drawing no. 6279826_CALC_McDonalds Blairgowrie (R1), Dated: 18/06/25
- Existing below ground utilities/services unknown, Intrusive surveys required

McDonald's Demise Boundary Indicated:

McDonald's Application Boundary Indicated:

Extent of No Build Zone:

Extent of Landscaping Buffer Zone:

Site Features Key	
150mm Diameter stainless steel protective bollard	BOL
Cranked bollards Painted Black	CB
Tactile Blister Paving	
Target Bin	
"LP" Denotes Lamppost	LP
Proposed 600mm high Timber Knee Rail Fence	
Proposed 1500mm high Close Boarded Timber Fence (Subject to Acoustic Specialist Design)	
Proposed 1100mm high Close Boarded Timber Fence	

REV	Date	Drawn by: -	Checked by: -
D	10/06/2025	WJB	BSC
Acoustic fence line added. LAUK Lighting layout added.			
C	06/06/2025	WJB	BSC
Building footprint updated, cash booth relocated. Site, drive thru, patio and corral layout updated to suit new building footprint			
B	09/05/2025	WJB	BSC
Building footprint moved south, corral enlarged and patio, drive thru and site reworked to accommodate change.			
A	20/03/2025	WJB	BSC
Building moved slightly north and squared off to the south. Patio, Drive Thru and Parking reworked to accommodate change.			
-	13/03/2025	AG	BSC
Initial Issue			

Purpose of Issue
For Information

drawing stage **Planning**

client
McDonald's Restaurants Ltd

project **Blairgowrie Perth Road**

store **2473**

drawing title
Proposed Site Plan

date **13/03/2025** drawn **AG**
scale@A1 **1:200** checked **BSC**

Planning

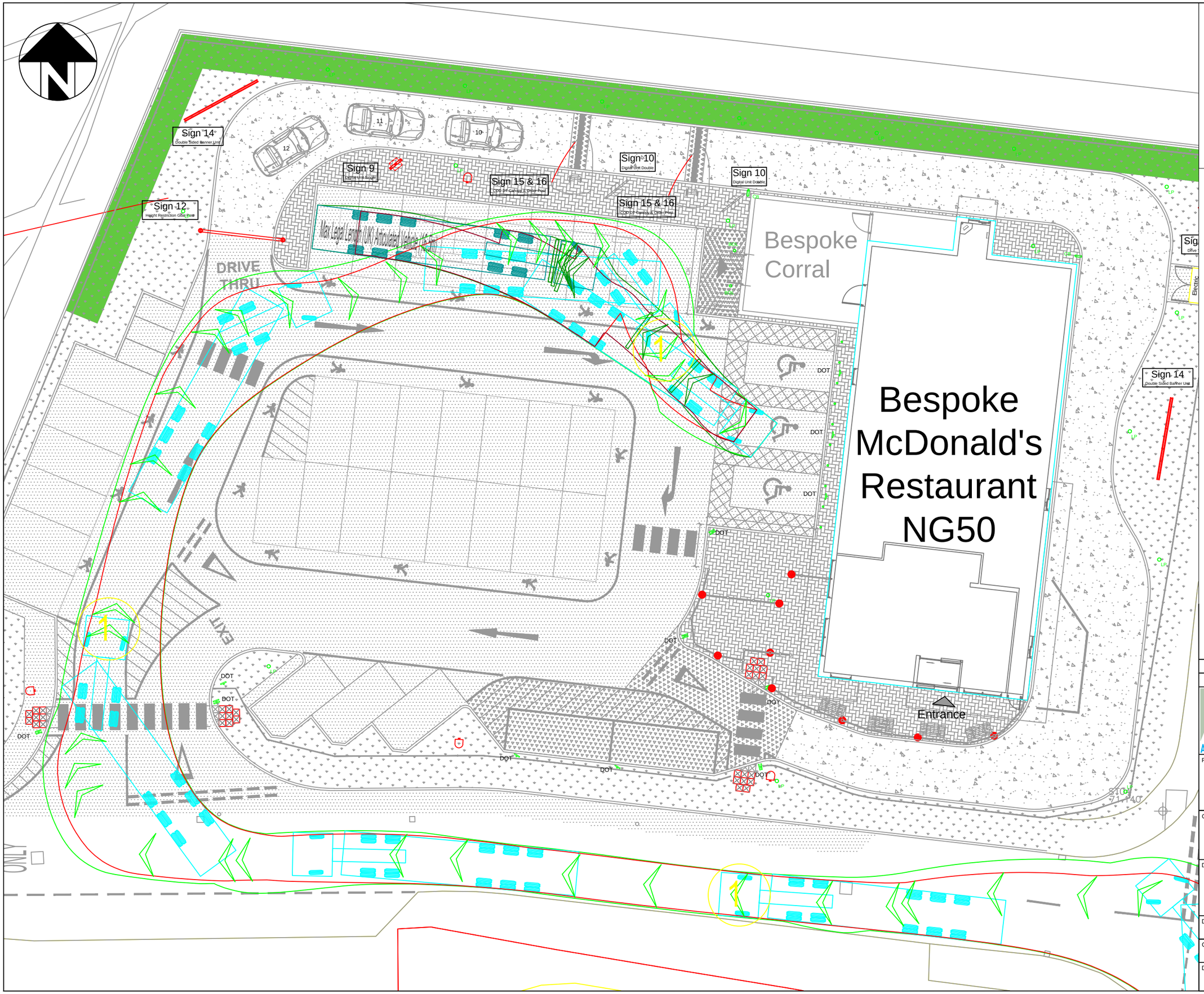
Rev **D**

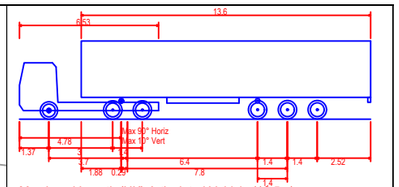
Job No **13638_AEW_2473_1004**

aew architects
0161 214 4370
www.aewarchitects.com

APPENDIX B

SWEPT PATH ANALYSIS





Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

P02	Updated Site Layout	26.06.25	CF
P01	Preliminary Issue	27.05.25	OHJ

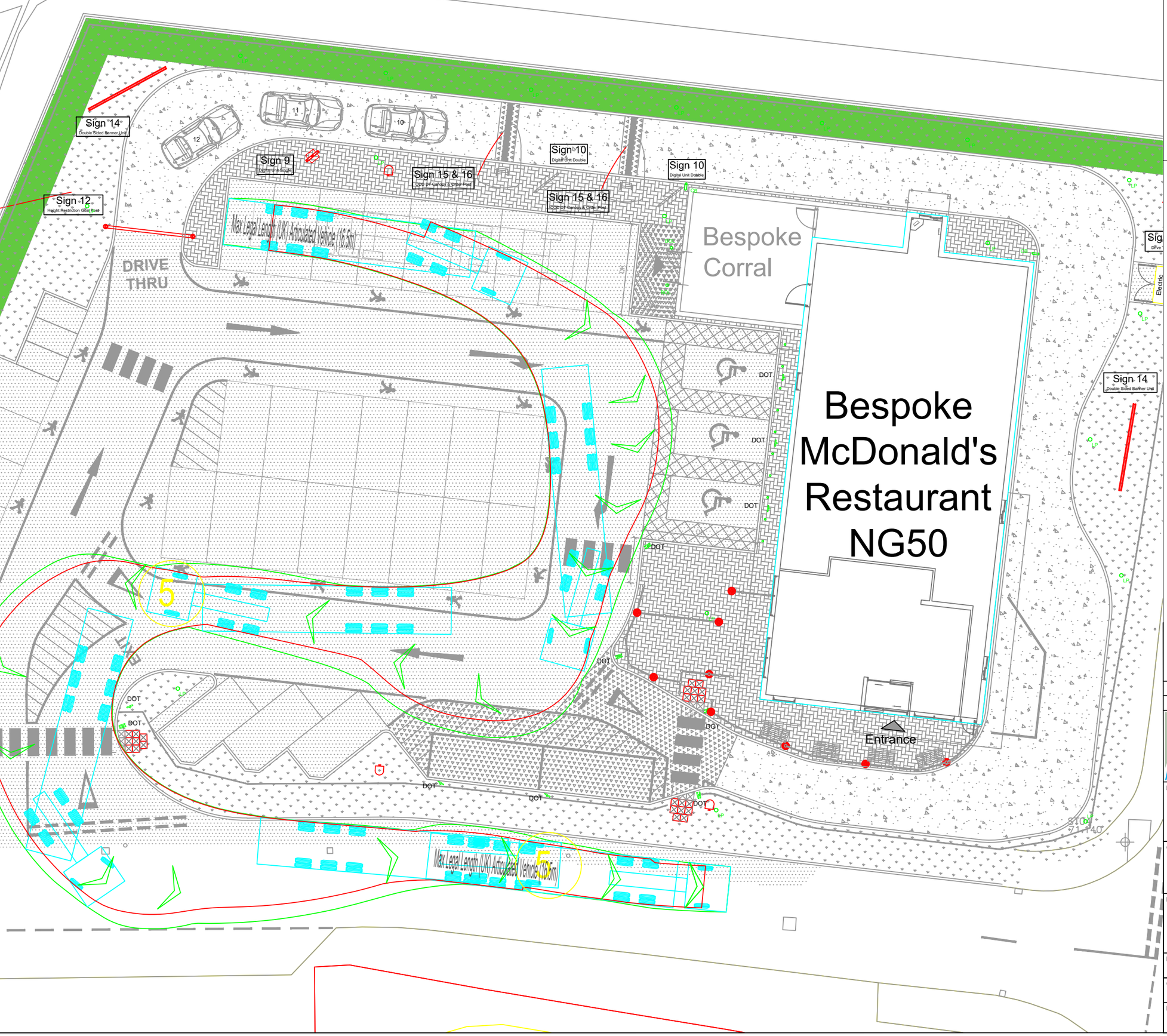
ANDREW MOSELEY ASSOCIATES
Transport & Infrastructure Consultants
15 St Paul's Street
Second Floor
Leeds
LS1 2JG
www.amatp.co.uk

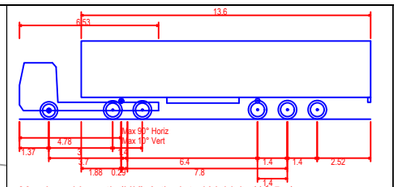
Project:
PERTH ROAD, BLAIRGOWRIE

Client:
MCDONALDS RESTAURANTS

Drawing:
MB ARTICULATED VEHICLE SWEPT PATH ANALYSIS ACCESS

Drawn By: CF	Date: 26.06.2025	
Checked: JH	Scale: 1:500	Paper: A3
Drawing No. AMA-55002-ATR-001 2.6		Rev. P02





Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

P02	Updated Site Layout	26.06.25	CF
P01	Preliminary Issue	27.05.25	OHJ

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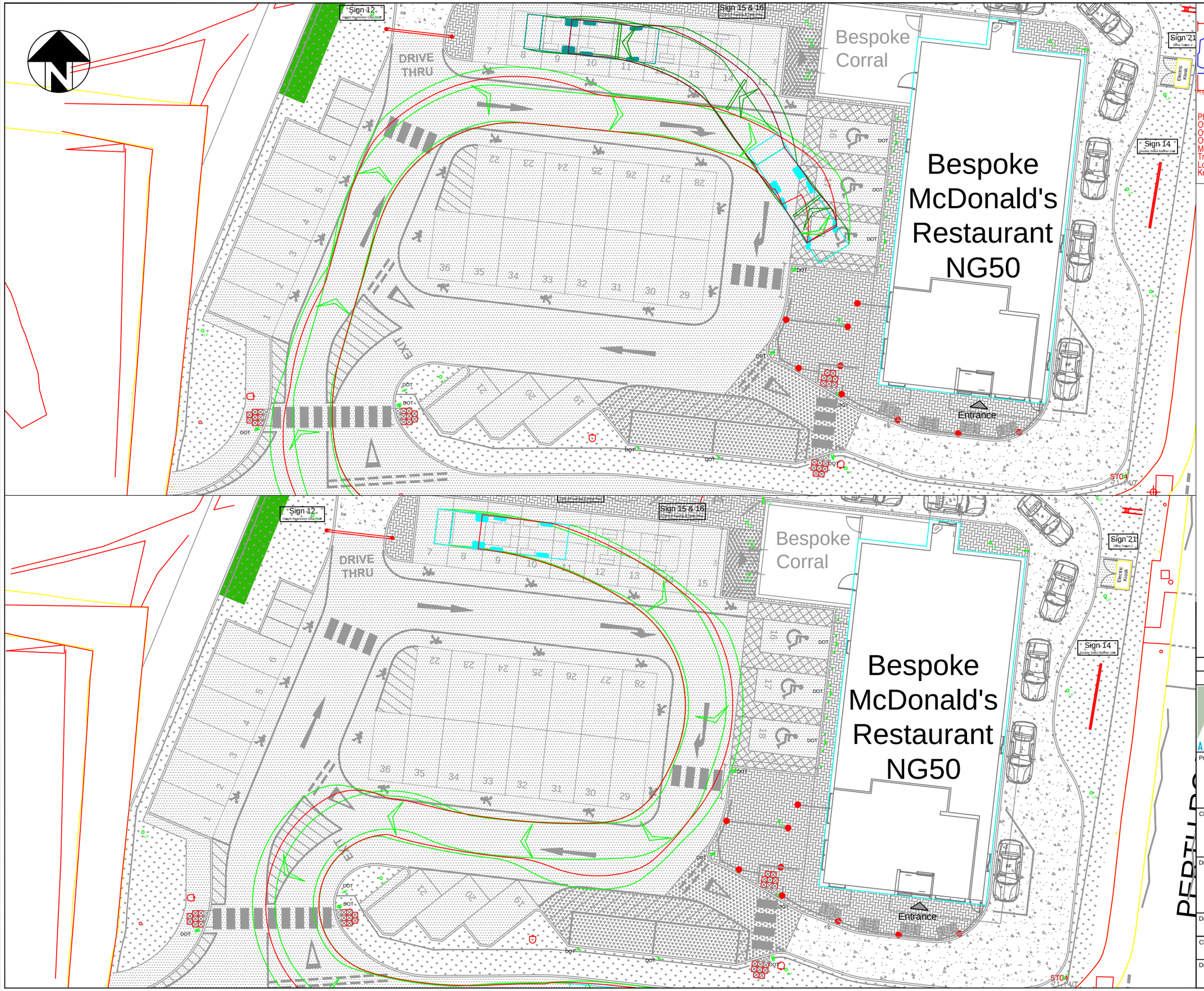
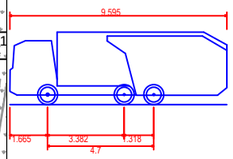
Project:
PERTH ROAD, BLAIRGOWRIE

Client:
MCDONALDS RESTAURANTS

Drawing:
MB ARTICULATED VEHICLE SWEPT PATH ANALYSIS

Drawn By: CF	Date: 26.06.2025	
Checked: JH	Scale: 1:500	Paper: A3
Drawing No. AMA-55002-ATR-001 1.6		Rev. P02





Phoenix 2-18W (with Elite 2 6x2MS chassis)

Overall Length	9.595m
Overall Width	2.530m
Overall Body Height	3.205m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	8.950m

P02	Updated Site Layout	26.06.25	CF
P01	Preliminary Issue	13.06.25	JH

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www.amatp.co.uk

Project:
PERTH ROAD, BLAIRGOWRIE

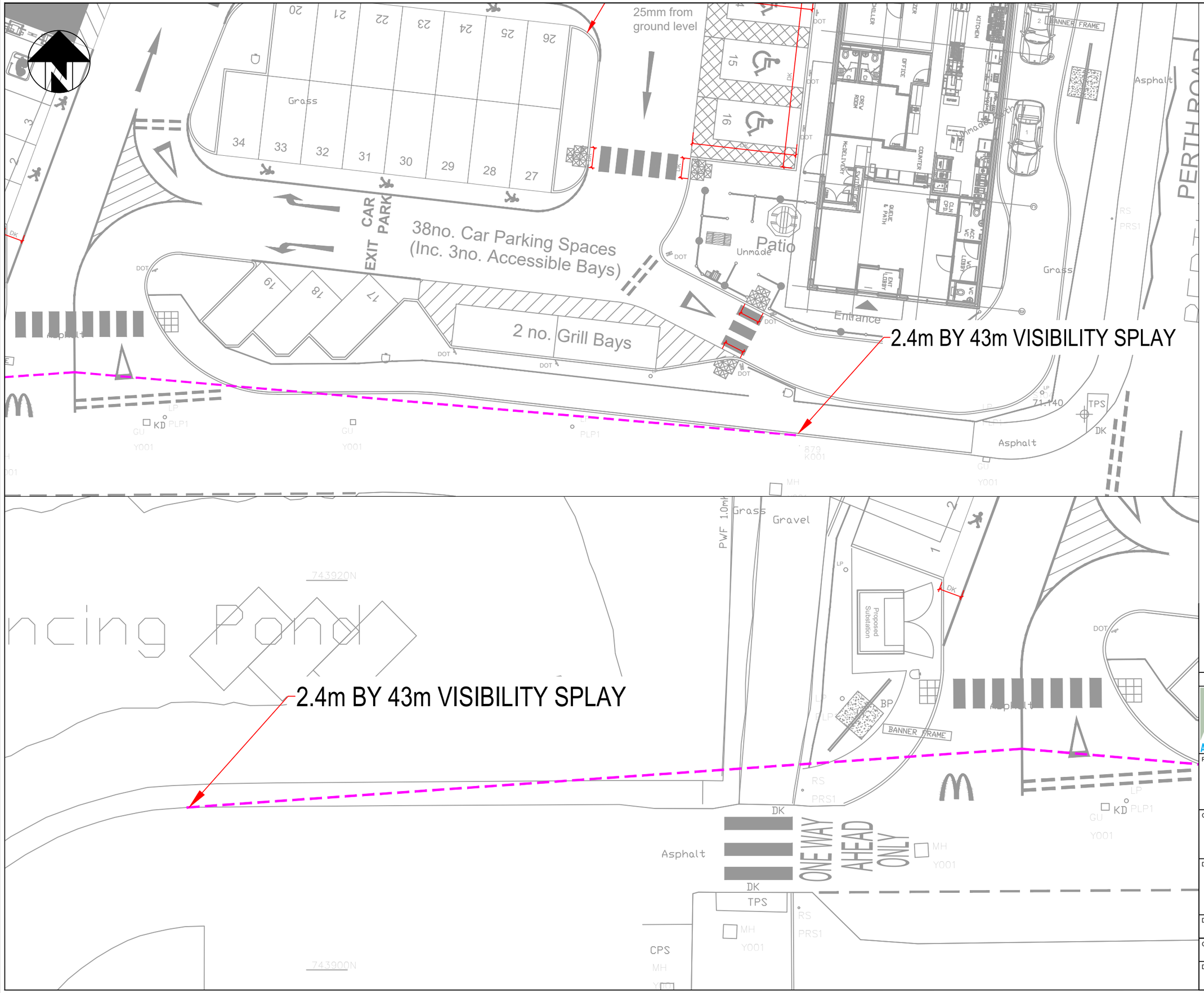
Client:
MCDONALD'S RESTAURANT LTD

Drawing:
9.595m REFUSE VEHICLE SWEPT PATH ANALYSIS

Drawn By: CF	Date: 26.06.2025	
Checked: JH	Scale: 1:250	Paper: A3
Drawing No. AMA-55002-ATR005-2.5		Rev. P02

APPENDIX C

SITE ACCESS JUNCTION AND VISIBILITY SPLAY



P01	Preliminary Issue	10.02.2025	EP

ANDREW MOSELEY ASSOCIATES

Transport & Infrastructure Consultants

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Leeds
LS1 2JG
www.amatp.co.uk

Project:
PERTH ROAD, BLAIRGOWRIE

Client:
MCDONALD'S RESTAURANT LTD

Drawing:
SITE ACCESS VISIBILITY SPLAY

Drawn By:	Date:	
EP	10.02.2025	
Checked: JH	Scale: 1:250	Paper: A3
Drawing No.: AMA-55002-SK003		Rev.: P01

APPENDIX D

TRICS OUTPUTS

AMA - Leeds Licence No: 710001

Calculation Reference: AUDIT-710001-240816-0842

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : D - FAST FOOD - DRIVE THROUGH
TOTAL VEHICLES

Selected regions and areas:

04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	2 days
	NN	NORTH NORTHAMPTONSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	BY	BARNSLEY	1 days
08	NORTH WEST		
	MS	MERSEYSIDE	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
10	WALES		
	VG	VALE OF GLAMORGAN	1 days
11	SCOTLAND		
	AD	ABERDEEN CITY	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	Gross floor area
Actual Range:	230 to 690 (units: sqm)
Range Selected by User:	182 to 800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 25/05/23

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	3 days
Wednesday	1 days
Thursday	2 days
Friday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town Centre	4
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	3

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	2
Development Zone	1
Residential Zone	1
Retail Zone	2
Built-Up Zone	2
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	7 days - Selected
Servicing vehicles Excluded	10 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	9 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 100,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

50,001 to 75,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	6 days
1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	9 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	9 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 AD-06-D-01 MCDONALD ' S ABERDEEN CITY
BEDFORD ROAD
ABERDEEN
KITTYBREWSTER RET. PK
Edge of Town Centre
Retail Zone
Total Gross floor area: 472 sqm
Survey date: TUESDAY *19/11/19* *Survey Type: MANUAL*

2 BY-06-D-02 MCDONALD'S BARNSLEY
UPPER NEW STREET
BARNSLEY

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 415 sqm
Survey date: TUESDAY *08/09/20* *Survey Type: MANUAL*

3 CA-06-D-02 MCDONALD'S CAMBRIDGESHIRE
NEWMARKET ROAD
CAMBRIDGE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 435 sqm
Survey date: TUESDAY *19/09/17* *Survey Type: MANUAL*

4 LN-06-D-01 MCDONALD'S LINCOLNSHIRE
RUSTON WAY
LINCOLN

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 435 sqm
Survey date: FRIDAY *28/06/19* *Survey Type: MANUAL*

5 LN-06-D-02 MCDONALD'S LINCOLNSHIRE
RYHALL ROAD
STAMFORD

Edge of Town
Retail Zone
Total Gross floor area: 490 sqm
Survey date: WEDNESDAY *13/10/21* *Survey Type: MANUAL*

6 MS-06-D-01 MCDONALD'S MERSEYSIDE
SAINT HELENS LINKWAY
SAINT HELENS

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 463 sqm
Survey date: FRIDAY *16/04/21* *Survey Type: MANUAL*

7 NN-06-D-01 MCDONALD'S NORTH NORTHAMPTONSHIRE
LITTLE COLLIERS FIELD
CORBY
GREAT OAKLEY
Edge of Town
Development Zone
Total Gross floor area: 690 sqm
Survey date: THURSDAY *16/06/22* *Survey Type: MANUAL*

8 TV-06-D-01 MCDONALD'S TEES VALLEY
BURN ROAD
HARTLEPOOL

Edge of Town Centre
Industrial Zone
Total Gross floor area: 400 sqm
Survey date: FRIDAY *04/09/20* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 VG-06-D-01 MCDONALD'S VALE OF GLAMORGAN
CARDIFF ROAD
BARRY

Edge of Town
Industrial Zone
Total Gross floor area: 405 sqm
Survey date: THURSDAY *24/09/20* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
AD-06-D-02	22/11/19	Not McDonalds
FI-06-D-02	22/03/16	Not McDonalds
HC-06-D-03	23/05/23	Not McDonalds
IW-06-D-01	22/05/23	Not McDonalds
NS-06-D-01	15/09/22	Not McDonalds
WM-06-D-04	19/10/22	Not McDonalds
WO-06-D-01	02/10/20	Not McDonalds
WS-06-D-02	25/05/23	Not McDonalds

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	490	0.204	1	490	0.000	1	490	0.204
06:00 - 07:00	7	476	5.997	7	476	5.217	7	476	11.214
07:00 - 08:00	8	471	11.777	8	471	10.398	8	471	22.175
08:00 - 09:00	8	471	14.297	8	471	13.501	8	471	27.798
09:00 - 10:00	8	471	15.252	8	471	15.146	8	471	30.398
10:00 - 11:00	9	467	16.005	9	467	15.743	9	467	31.748
11:00 - 12:00	9	467	15.767	9	467	15.006	9	467	30.773
12:00 - 13:00	9	467	20.690	9	467	20.095	9	467	40.785
13:00 - 14:00	9	467	20.166	9	467	20.690	9	467	40.856
14:00 - 15:00	9	467	15.553	9	467	15.981	9	467	31.534
15:00 - 16:00	9	467	18.716	9	467	17.836	9	467	36.552
16:00 - 17:00	9	467	19.049	9	467	19.881	9	467	38.930
17:00 - 18:00	9	467	20.927	9	467	20.951	9	467	41.878
18:00 - 19:00	9	467	20.904	9	467	21.879	9	467	42.783
19:00 - 20:00	9	467	16.528	9	467	17.551	9	467	34.079
20:00 - 21:00	9	467	14.625	9	467	15.458	9	467	30.083
21:00 - 22:00	9	467	11.986	9	467	12.152	9	467	24.138
22:00 - 23:00	7	471	10.552	7	471	11.128	7	471	21.680
23:00 - 24:00	7	471	5.397	7	471	6.155	7	471	11.552
Total Rates:			274.392			274.768			549.160

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

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Parameter summary

Trip rate parameter range selected:	230 - 690 (units: sqm)
Survey date date range:	01/01/16 - 25/05/23
Number of weekdays (Monday-Friday):	17
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	8
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Calculation Reference: AUDIT-710001-240816-0845

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : D - FAST FOOD - DRIVE THROUGH
TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	GS	GLOUCESTERSHIRE	1 days
	TB	TORBAY	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 225 to 447 (units: sqm)
Range Selected by User: 182 to 800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 25/05/23

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Saturday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Retail Zone	1
Out of Town	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	X days - Selected
Servicing vehicles Excluded	2 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included
Population within 1 mile:

1,001 to 5,000	1 days
20,001 to 25,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Secondary Filtering selection (Cont.):

Population within 5 miles:
125,001 to 250,000 2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
1.1 to 1.5 2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:
No 2 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
No PTAL Present 2 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 GS-06-D-01 MCDONALD'S GLOUCESTERSHIRE
BRISTOL ROAD
GLOUCESTER
HARDWICKE
Edge of Town
Out of Town
Total Gross floor area: 225 sqm
Survey date: SATURDAY *24/04/21* *Survey Type: MANUAL*

2 TB-06-D-01 MCDONALD'S TORBAY
HELE ROAD
TORQUAY

Suburban Area (PPS6 Out of Centre)
Retail Zone
Total Gross floor area: 447 sqm
Survey date: SATURDAY *30/03/19* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	225	19.111	1	225	17.778	1	225	36.889
07:00 - 08:00	2	336	21.875	2	336	21.280	2	336	43.155
08:00 - 09:00	2	336	25.000	2	336	23.363	2	336	48.363
09:00 - 10:00	2	336	32.292	2	336	30.060	2	336	62.352
10:00 - 11:00	2	336	27.083	2	336	29.464	2	336	56.547
11:00 - 12:00	2	336	27.232	2	336	24.256	2	336	51.488
12:00 - 13:00	2	336	37.946	2	336	36.905	2	336	74.851
13:00 - 14:00	2	336	34.970	2	336	35.119	2	336	70.089
14:00 - 15:00	2	336	32.292	2	336	34.673	2	336	66.965
15:00 - 16:00	2	336	28.423	2	336	29.911	2	336	58.334
16:00 - 17:00	2	336	30.208	2	336	28.869	2	336	59.077
17:00 - 18:00	2	336	32.589	2	336	33.036	2	336	65.625
18:00 - 19:00	2	336	33.333	2	336	33.631	2	336	66.964
19:00 - 20:00	2	336	28.274	2	336	31.845	2	336	60.119
20:00 - 21:00	2	336	24.107	2	336	23.363	2	336	47.470
21:00 - 22:00	2	336	20.238	2	336	20.238	2	336	40.476
22:00 - 23:00	2	336	16.071	2	336	15.327	2	336	31.398
23:00 - 24:00	2	336	13.542	2	336	13.393	2	336	26.935
Total Rates:			484.586			482.511			967.097

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

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Parameter summary

Trip rate parameter range selected:	225 - 447 (units: sqm)
Survey date date range:	01/01/16 - 25/05/23
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	2
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

APPENDIX E

MODELLING OUTPUTS

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: A93 North Access Junction.j9
Path: C:\AMA\AMA\AMA - McDonald's\003 - North\55002 - Perth Road, Blairgowie\D Models and Drawings\PICADY
Report generation date: 22/11/2024 13:48:33

»2024, AM
»2024, PM
»2024 , Saturday IP
»2029, AM
»2029, PM
»2029, Saturday IP
»2029 Do Something, AM
»2029 Do Something, PM
»2029 Do Something, Saturday IP

Summary of junction performance

	AM					PM					Saturday IP				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2024														
Stream B-AC	D1	0.0	7.59	0.03	A	D2	0.0	0.00	0.00	A	D3	0.0	6.23	0.01	A
Stream C-AB		0.0	5.08	0.03	A		0.0	4.86	0.01	A		0.0	4.88	0.01	A
	2029														
Stream B-AC	D4	0.0	7.92	0.03	A	D5	0.0	0.00	0.00	A	D6	0.0	6.46	0.01	A
Stream C-AB		0.0	4.85	0.03	A		0.0	4.77	0.01	A		0.0	4.68	0.02	A
	2029 Do Something														
Stream B-AC	D7	0.1	8.77	0.12	A	D8	0.4	11.91	0.27	B	D9	0.4	11.50	0.29	B
Stream C-AB		0.2	5.10	0.10	A		0.5	5.57	0.21	A		0.6	5.53	0.23	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	20/08/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\Modellinglaptop
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM	ONE HOUR	09:45	11:15	15
D2	2024	PM	ONE HOUR	16:45	18:15	15
D3	2024	Saturday IP	ONE HOUR	11:45	13:15	15
D4	2029	AM	ONE HOUR	09:45	11:15	15
D5	2029	PM	ONE HOUR	16:45	18:15	15
D6	2029	Saturday IP	ONE HOUR	11:45	13:15	15
D7	2029 Do Something	AM	ONE HOUR	09:45	11:15	15
D8	2029 Do Something	PM	ONE HOUR	16:45	18:15	15
D9	2029 Do Something	Saturday IP	ONE HOUR	11:45	13:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		0.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A93 South		Major
B	North Access		Minor
C	A93 North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.11			160.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.80	50	110

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	537	0.093	0.235	0.148	0.336
B-C	679	0.099	0.250	-	-
C-B	667	0.246	0.246	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024	AM	ONE HOUR	09:45	11:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	317	100.000
B		✓	13	100.000
C		✓	297	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	6	311
	B	5	0	8
	C	286	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	7.59	0.0	A
C-AB	0.03	5.08	0.0	A
C-A				
A-B				
A-C				

2024, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2024	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	436	100.000
B		✓	3	100.000
C		✓	375	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	2	434
	B	0	0	3
	C	373	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.01	4.86	0.0	A
C-A				
A-B				
A-C				

2024 , Saturday IP

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		0.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2024	Saturday IP	ONE HOUR	11:45	13:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	351	100.000
B		✓	5	100.000
C		✓	355	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	6	345
	B	0	0	5
	C	349	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	6.23	0.0	A
C-AB	0.01	4.88	0.0	A
C-A				
A-B				
A-C				

2029, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		0.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2029	AM	ONE HOUR	09:45	11:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	358	100.000
B		✓	13	100.000
C		✓	381	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	6	352
	B	5	0	8
	C	370	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	7.92	0.0	A
C-AB	0.03	4.85	0.0	A
C-A				
A-B				
A-C				

2029, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2029	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	520	100.000
B		✓	3	100.000
C		✓	426	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	2	518
	B	0	0	3
	C	424	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.01	4.77	0.0	A
C-A				
A-B				
A-C				

2029, Saturday IP

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		0.12	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2029	Saturday IP	ONE HOUR	11:45	13:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	423	100.000
B		✓	6	100.000
C		✓	443	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	6	417
	B	0	0	6
	C	436	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.01	6.46	0.0	A
C-AB	0.02	4.68	0.0	A
C-A				
A-B				
A-C				

2029 Do Something, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		1.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2029 Do Something	AM	ONE HOUR	09:45	11:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	368	100.000
B		✓	53	100.000
C		✓	411	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	16	352
	B	19	0	34
	C	370	41	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	8.77	0.1	A
C-AB	0.10	5.10	0.2	A
C-A				
A-B				
A-C				

2029 Do Something, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		1.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2029 Do Something	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	544	100.000
B		✓	103	100.000
C		✓	497	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	26	518
	B	35	0	68
	C	424	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.27	11.91	0.4	B
C-AB	0.21	5.57	0.5	A
C-A				
A-B				
A-C				

2029 Do Something, Saturday IP

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A93 Perth Road / North Access	T-Junction	Two-way		2.07	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2029 Do Something	Saturday IP	ONE HOUR	11:45	13:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	449	100.000
B		✓	117	100.000
C		✓	519	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	32	417
	B	39	0	78
	C	436	83	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	9	0	0
	C	3	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.29	11.50	0.4	B
C-AB	0.23	5.53	0.6	A
C-A				
A-B				
A-C				

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PROPOSED MCDONALD'S DRIVE-THRU, PERTH ROAD, BLAIRGOWRIE

INTERIM TRAVEL PLAN

JUNE 2025

REPORT NO 55002-002

PROPOSED MCDONALD'S DRIVE-THRU, PERTH ROAD, BLAIRGOWRIE

INTERIM TRAVEL PLAN

McDonald's Restaurants Ltd

Final Issue

Project no: 55002-002

Date: June 2025

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QUALITY MANAGEMENT

	First Issue	Revision 1	Revision 2	Revision 3
Remarks	First Issue			
Date	23.06.25			
Prepared	ECT			
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PRODUCTION TEAM

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Table 7-1 - Interim Targets

FIGURES

Figure 1 – Site Location Plan

Figure 2 – 2km Walking Isochrone

Figure 3 – Public Rights of Way Map

Figure 4 – 5km Cycling Isochrone

Figure 5 - Bus Stop Location Plan

APPENDICES

Appendix A – Proposed Site Layout

Appendix B – TRICS Output

FOREWORD

1.1.1 “If we all can modify our travel habits, even slightly, we can start to make a difference"

1.1.2 We are all aware of the stress that traffic congestion can cause in our everyday personal and working lives. Poor air quality and noise problems caused by road traffic, affect our living environment. Research says it will get worse.

1.1.3 The Government has set clear aims for sustainable development. As McDonald’s Restaurants Ltd continue to develop new and refurbish existing stores, it is an opportunity for a fresh look at the reasons and travel choices behind the journeys we make.

1.1.4 The proposals in our Travel Plan will help us all to make more informed choices about how we travel to work. These ideas should help to reduce the strain associated with traveling as well as helping to encourage a healthier workforce and improving the immediate environment around us.

1.1.5 The key focus of this Travel Plan is to reduce the number of single occupancy car trips made by our staff, whilst increasing awareness of alternative modes of travel that are available.

1.1.6 As part of the preparation for this Travel Plan, we have undertaken surveys of almost 700 staff from across the UK in order to learn about their travel habits, and to determine how we can encourage a shift away from use of the private car.

1.1.7 In order for this Travel Plan to work, it is important to have the commitment of all staff. In most cases, the Travel Plan for each store will be promoted and maintained by the Restaurant Manager and they have the full support of McDonald’s Head Office or their Franchisee. All staff are encouraged to enter fully into the spirit of the Travel Plan so that they can be seen to be making a valuable contribution to the local area. If we all can modify our travel habits, even slightly, we can start to make a difference.

1 INTRODUCTION

1.1 OVERVIEW

1.1.1 Andrew Moseley Associates (AMA) has been commissioned by McDonald's Restaurants Ltd to prepare a Transport Assessment (TA) and Interim Travel Plan (ITP) to accompany a planning application for the development of a McDonald's restaurant with a drive-thru off the A93 Perth Road in Blairgowrie.

1.1.2 The purpose of this document is to set out McDonald's Restaurants Ltd intention to encourage and implement proposals, which will result in a reduction in the need for staff to travel by private car to the McDonald's restaurant.

1.2 SITE LOCATION

1.2.1 The proposed site is located approximately 1km south of the centre of Blairgowrie and currently comprises undeveloped land which is bound to the north and west by further undeveloped land, to the east by the A93 Perth Road, and to the south by an unnamed access road which leads to a small retail park. The location of the site is illustrated indicatively at Figure 1.

1.3 PROPOSED DEVELOPMENT

1.3.1 The development proposals are for a 292sqm Gross Internal Area (GIA) McDonald's restaurant drive-thru facility, including associated site access, servicing arrangements and parking. It is expected that the restaurant would operate between 06:00 to 24:00 Monday to Sunday. The proposed site layout is attached at Appendix A.

1.3.2 It is expected there would be approximately 55-75 direct full-time equivalent staff employed by the restaurant. Staff work shifts and the number of staff expected to be on shift at any one time would be 20 people. McDonald's staff work varying shift patterns depending on their needs and the requirements of the restaurant. The minimum core time is four hours.

1.4 AIMS AND OBJECTIVES

1.4.1 The aim of the McDonald's staff Travel Plan is to make staff aware of the alternative means of transport available to them to reduce the number of journeys that are made by private car.

1.4.2 The objectives of the Travel Plan are outlined below:

- Reduce staff journeys made by private car;
- Reduce staff demand for parking spaces;
- Provide clear information on the alternate modes of transport to and from the site;
- Increase travel choice for staff; and
- Increase use of walking, cycling and public transport.

REPORT STRUCTURE

1.4.3 The structure of the report is set out as follows;

- Section 2 – provides details on staff travel information and patterns;
- Section 3 - provides the details of the Travel Plan Co-ordinator and the responsibilities of this role;
- Section 4 - examines the accessibility of the site by sustainable modes of travel and also considers the accessibility of a range of key services and facilities;
- Section 5 - describes the measures proposed by the TP and an action plan;
- Section 6 - provides evidence on attitudes to travel change;
- Section 7 - sets out the monitoring and review process; and
- Section 8 - provides a summary of the TP.

2 STAFF TRAVEL INFORMATION

2.1.1 McDonald's Restaurants Limited organised a series of staff questionnaires at the following types of restaurants:

- Roadside
  - Typically located on "A" classification roads, these restaurants cater for the needs of passing motorists.
- Retail Park
  - Located in retail parks of all scales, these provide a facility for shoppers to purchase a meal whilst they are on an existing shopping trip.
- Suburban
  - Sited in or near local shopping centres, to complement the existing retail uses serving a predominantly residential area.

2.1.2 The surveys have been analysed to produce a database, showing how staff at McDonald's restaurants already utilise a wide range of modes of transport to travel to and from work. For the purposes of this Travel Plan the proposed development has been assessed as a Retail Park restaurant.

2.1.3 Table 2-1 shows an extract from the database outlining the modal split of staff at restaurants located in retail parks.

Table 2-1 – Survey Travel Modes to Food Store or Retail Park Restaurants

Mode	%	Requires Car Parking	Public Transport, Pedestrian or Cycle
Foot	11%	-	11%
Car Driver (Park at McDonalds)	33%	33%	-
Bus	25%	-	25%
Dropped Off	14%	-	-
Cycle (Park at McDonalds)	8%	-	8%
Motorcycle (Park at McDonalds)	2%	-	-
Car Passenger (Share with another employee)	2%	-	-
Taxi	2%	-	2%
Train	3%	-	3%
	100%	33%	49%

2.1.4 As shown in Table 2-1, McDonald's staff already have a low level of car travel at the restaurants surveyed, with just at 33% driving a car and 2% riding a motorcycle. Whilst it is accepted that there may be some minor differences from one site to another, it is reasonable to suggest that around only a third of McDonald's staff travel to work by car.

2.1.5 47% travel by public transport, foot or bicycle. 18% arrive as a passenger in a car, with the majority (14%) being dropped off, which is likely to form part of a linked trip, rather than a specific visit to drop a friend or colleague at work.

2.1.6 Based upon a daily workforce of 20 people on site would amount to around 7 employees who would drive to work.

3 TRAVEL PLAN CO-ORDINATOR

3.1.1 The Travel Plan (TP) Co-ordinator at Perth Road, Blairgowrie will be the Assistant Restaurant Manager and will be appointed upon occupation of the restaurant. They are the most senior member of staff and therefore have sufficient influence amongst other employees to promote the measures within this Travel Plan.

3.1.2 The Travel Plan Co-ordinator retains a copy of this Travel Plan as well as contact details for Andrew Moseley Associates (AMA) Limited to assist in the implementation and monitoring of this Travel Plan.

3.1.3 The TP Co-ordinator will provide staff information on the following:

- Walking
  - Approximate distances to and from the site from nearby residential areas; and
  - The health, financial and environmental benefits associated with walking.
- Cycling
  - A map detailing key cycle infrastructure in the local area;
  - Approximate distances to and from the site from nearby residential areas; and
  - The health, financial and environmental benefits associated with cycling.
- Public Transport
  - A map identifying the location of local bus stops and the services that operate;
  - Links to up-to-date bus timetables including relevant bus apps; and
  - Information on Corporate Travel Schemes such as https://www.stagecoachbus.com/promos-and-offers/national/corporate-travel-scheme.
- Car Sharing
  - Staff will be made aware of the opportunity for car sharing.

3.1.4 All travel information will be updated annually.

3.1.5 Contact details for the Travel Plan Co-ordinator will be forwarded to Perth and Kinross Council one month prior to first occupation.

4 EXISTING SUSTAINABLE TRANSPORT PROVISION

4.1 INTRODUCTION

4.1.1 NPF4 states that new developments should be provided in sustainable locations, where the need to travel is minimised and the use of sustainable modes can be maximised.

4.1.2 The site has a good level of accessibility and access to sustainable modes of transport within a reasonable distance of the site. Travel by non-car modes will be encouraged, and the proposals include pedestrian and cycle infrastructure within the site.

4.1.3 This section outlines the existing walking, cycling and public transport facilities within the vicinity of the development site and describes the accessibility of the site in terms of its proximity to key services and destinations.

4.2 PEDESTRIAN ACCESSIBILITY

4.2.1 Walking is considered to be the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under two kilometres.

4.2.2 Figure 2 shows a 2km walking catchment area from the centre of the site. This demonstrates that the entirety of Blairgowrie town centre can be accessed within 2km as well as residential areas to the south and east of the site.

4.2.3 Good quality pedestrian infrastructure surrounds the site. In particular, a lit footway is provided along both sides of the A93 Perth Road carriageway towards Blairgowrie town centre. A toucan crossing is provided across the A93 in the vicinity of the site for access to residential areas to the east.

4.2.4 It is considered that customers and staff residing or working in the local area have good opportunities to travel to the site on foot.

4.3 CYCLING ACCESSIBILITY

4.3.1 In addition to walking, cycling also has potential to substitute for short car trips, particularly those under 5 kilometres, and to form part of a longer journey by public transport.

4.3.2 Figure 4 shows a 5km cycling catchment area from the centre of the site. This shows that the entirety of Blairgowrie and Rattray can be accessed as well as surrounding residential areas to the north, south and east. The areas of Rosemount and Carsie can also be accessed to the east and south of the site respectively.

4.3.3 Cycle parking will be provided to further encourage and facilitate cycling to and from the site in the form of three Sheffield stands which can accommodated six cycles.

4.4 PUBLIC TRANSPORT

Bus Facilities

4.4.1 The site well located for access by bus as the closest bus stops are located on the A93 Perth Road to approximately 70m walking distance from the development entrance offering northbound services towards Blairgowrie and Rattray and southbound services towards Perth. These bus stops are provided with a shelter and timetable information. The southbound bus stop benefits from an existing toucan crossing of the A93.

4.4.2 The bus stops located within the vicinity of the site are shown in Figure 5 and details of the buses which serve them are provided in Table 4-1.

Table 4-1 Local Bus Services

Service	Route	Approximate Frequency		
		Monday – Friday	Saturday	Sunday
58	Blairgowrie - Perth	Up to 6 services per day	Up to 6 services per day	Every 30 minutes
63	Carsie - Rattray	Every 30 minutes	Every 30 minutes	No service

4.4.3 The services set out within Table 4-1 provide travel to a range of local destinations. Whilst it is less likely that customers will travel to the site by bus, this forms a reasonable travel mode for employees.

4.5 SUMMARY

4.5.1 This section has shown that it is feasible for employees to walk, cycle and possibly use public transport from the surrounding residential areas. Given the nature of the proposed use, it is considered that the location of the site is consistent with national and local policy objectives.

5 TRAVEL PLAN MEASURES AND ACTION PLAN

5.1 TRAVEL PLAN MEASURES

Promotional Strategy 1: Sustainable Travel Noticeboards

5.1.1 Given the nature of the development, staff are unlikely to be desk based or have regular access to emails. It is, therefore, important to provide information that is readily accessible to encourage employees to commute to work by means other than the private car. To this end, the TPC will provide noticeboards within staff areas, which display up to date travel information including key walking, cycling, public transport and sustainable car use information.

Promotional Strategy 2: Offer Personal Journey Plans to Staff

5.1.2 The TPC will offer a 'personal journey plan' to all staff to inform them of the journey options available for their commute to and from work.

Walking and Cycling

5.1.3 In addition to the measures set out above, a number of initiatives could be implemented to encourage walking and cycling, including:

- Ensure cycle parking is regularly inspected and maintained;
- Consider the provision of a bike pump and bike repair kit for use by all staff;
- The changing rooms will be provided with coat hooks and a seat to enable staff to get changed;
- Lockers will be provided in the staff room / changing rooms;
- Promote local / national walking and cycling initiatives via the aforementioned methods of communication;
- Consider offering staff the cycle to work scheme, allowing them to buy a bike / bike related equipment through a salary sacrifice arrangement via https://www.cycle2work.info/ or similar;
- Develop walking and cycling user groups if demand arises; and
- Consider the provision of cycle training through local providers.

Public Transport

5.1.4 As set out in previous sections of this TP, travel to the site by bus is both practical and convenient, with regular services operating within a short walk from the site. Travel by rail is less likely but will be promoted as part of a multi-modal journey. The following measures could be implemented to promote travel by public transport:

- Promote relevant public transport services, timetables, ticketing options and journey planning software (including relevant travel apps);
- Provision of personalised journey planning; and
- Consideration of a salary sacrifice scheme for the purchase of bus / rail season tickets.

Lifts Home in Emergency Situations

5.1.5 Employees who walk, cycle or use public transport to travel to work will be provided with a free ride home in the event of an emergency at the discretion of the Restaurant Manager.

Car Sharing

5.1.6 It is recognised that travelling by car is sometimes the only realistic option for certain journeys, or for those who live in rural locations.

5.1.7 For staff, lift sharing represents a practical and convenient alternative form of travel. As previously mentioned, there would be 75 staff employed at the restaurant. Staff work shifts and the number of staff expected to be on shift at any one time would be 20 people. McDonald's staff work varying shift patterns depending on their needs and the requirements of the restaurant.

5.1.8 To encourage lift sharing amongst employees, the following measures could be employed at the site:

- Promote the Liftshare website via liftshare.com/uk, which provides details on car sharing in the region;
- Provide practical advice on lift sharing via the aforementioned methods of communication;
- Generate an internal database using staff post code data, which could be used to identify where car sharing may be a feasible option; and
- Consider allocating the most convenient spaces in the car park for use by those lift sharing.

Free Meals

5.1.9 Staff are offered free meals, which reduces the need to undertake car trips during staff breaks to obtain food. Staff also benefit from a crew room to relax in during breaks, which also reduces the need to travel off site during rest periods.

Deliveries, Refuse Collection and Recycling

5.1.10 Goods are delivered by articulated lorry, typically 16.5m in length. Larger vehicles are used to enable more stores to be serviced in a single trip, reducing the frequency of returns to the supply centre, distance travelled and carbon emissions.

5.1.11 Multi-temperature vehicles are used, which allows all of the restaurants requirements of frozen, chilled and ambient products to be delivered in one visit, reducing the overall number of deliveries each restaurant receives and further reducing carbon emissions.

Waste minimisation and recycling are promoted.

5.1.12 Waste minimisation has been achieved through the redesign of bin tray liners and specifying the use of light-weight bin liners. Food wastage is minimised using a computer system which monitors the amount of food served at given times of day, resulting in more accurate preparation and ordering of stock. This, therefore, reduces the quantum of waste and frequency of collection required.

5.1.13 Service vehicles also collect empty delivery trays and crates which are returned to suppliers for re-use.

5.1.14 Cooking oil from restaurants is recycled into bio diesel and is collected by the delivery vehicle. The bio diesel is used as fuel by all McDonald's delivery vehicles and results in a carbon saving of 8,200 tonnes per annum.

5.2 ACTION PLAN

5.2.1 An Action Plan for the implementation of the measures outlined in the Travel Plan is summarised in Table 5-1.

Table 5-1 Action Plan for Proposed Travel Plan Measures

Proposed Measures	Responsible Party	Timescale for Implementation
Appointment of Travel Plan Co-ordinator	McDonalds Restaurants Ltd	Within 3 months of occupation
Cycle discount for staff universal cycles	McDonalds Restaurants Ltd	On-going
Cycle parking provision	McDonalds Restaurants Ltd	From first occupation
Changing facilities for staff	McDonalds Restaurants Ltd	From first occupation
Staff travel information	Assistant Restaurant Manager	Within 3 months of occupation
Free meals for staff	McDonalds Restaurants Ltd	From first occupation
Free ride home in emergencies	Assistant Restaurant Manager	From first occupation
Cooking oil to biofuel	McDonalds Restaurants Ltd	From first occupation
Monitoring programme	Assistant Restaurant Manager / AMA	From first occupation

6 ATTITUDES TO TRAVEL CHANGE

6.1.1 The travel survey's that McDonald's undertake at other sites around the country sought to understand staff attitudes towards making a modal change to:

- Walking;
- Cycling;
- Car sharing with another employee; and
- Using public transport.

6.1.2 The results of the survey for restaurants in retail park environments are summarised in Table 6-1.

Table 6-1 Staff Attitudes Survey Results

Mode	Positive	Negative	Reason for Negative	%
Walk	45%	55%	Too Far	87%
			Inconvenient	5%
			Too dark or dangerous	4%
			Need car for school run/childcare etc	3%
			Prefer to drive	1%
Cycle	45%	55%	Too far or too tiring	47%
			Don't have a bike	40%
			Dangerous or unsuitable roads	3%
			Don't like cycling in dark/bad weather	3%
			Don't like cycling	3%
			Prefer to drive	2%
			Need car for school run/childcare etc	2%
Car Share	74%	26%	Shift clashes / no-one to share with	39%
			Too far	22%
			Interferes with other commitments	16%
			No car or license	11%
			Prefer driving than being a passenger	6%
			Lives too close to be worthwhile	6%
Public Transport	62%	38%	Too expensive	26%
			Dislike buses	20%
			Unreliable or inconvenient services	20%
			No services at all	17%
			Not considered a viable travel option	11%
			Health or disability	3%
			Need car for school run/childcare etc	3%

6.1.3 The survey results show that the primary reason preventing active travel mode choices is distance, although a lack of cycle ownership is clearly also a key barrier to cycling. Cost was a key barrier to staff travelling by public transport, as well as the perceived inconvenience / unreliability of services.

6.1.4 This may be due to retail park restaurants being located further away from residential centres, meaning they will only be served by limited bus routes. If staff need to catch multiple buses, then the perceived (and actual) inconvenience of changing service will considerably affect their willingness to use this mode.

6.1.5 However, as has been demonstrated in Section 4, the proposed restaurant at Perth Road, Blairgowrie is located close to bus stops with services of a reasonable frequency, therefore staff at this restaurant may have more positive attitudes to public transport than typically occurs at retail park restaurants.

7 MONITORING AND REVIEW

7.1 MONITORING

7.1.1 Ongoing monitoring and reporting is necessary for ensuring the continued effectiveness of this Travel Plan.

7.1.2 A sample copy of the staff travel questionnaire is included in Appendix B.

7.1.3 The TPC will provide survey forms, one for each employee, and will be responsible for printing and distributing the surveys to staff as well as collecting the completed questionnaires. These would then be supplied to AMA for review.

7.1.4 Surveys would be undertaken to inform the review in:

- Year 1 (baseline) – within 6 months of opening;
- Year 3; and
- Year 5 (final survey).

7.2 TARGETS

7.2.1 All targets must be SMART (Specific, Measurable, Achievable, Realistic and Timebound).

7.2.2 The targets will relate to staff only. In terms of customer trips, it is known that the majority of trips to the store are likely to be made using a car. McDonald's will promote the use of sustainable modes but in reality, they will only be able to have a limited effect on how people travel. For this reason, it is not proposed to set a target for the mode share of customer trips.

7.2.3 Interim targets for years 1, 3 and 5 are set out in Table 7-1. These targets will be subject to review following the results of the baseline survey.

Table 7-1 Interim Targets

Proposed Measures	Year 1 (Baseline Estimate)	Year 3	Year 5
Car Driver (Alone)	33%	31% (-2%)	28% (-5%)
Alternative Modes	67%	69% (+2%)	72% (+5%)

7.2.4 The process of further periodic monitoring, target evaluation and review would be undertaken for the period of five years from first occupation. Should the targets in year five be met then it is considered that no further assessment will be required.

7.3 REVIEW DEFINITION

7.3.1 A Review shall be a report prepared by Andrew Moseley Associates Limited on behalf of the TPC. The Review will examine the results of the travel surveys and comprehensively assess the effectiveness of the Travel Plan in:

- Implementing the measures contained within Section 5 of this Travel Plan; and
- Achieving its aims, objectives and targets.

7.3.2 It should also (if necessary) propose further reasonable measures which would improve the effectiveness of the Travel Plan.

7.3.3 The review should validate and suggest adjustments, if necessary, to the targets in the Travel Plan.

7.4 REVIEW TIMETABLE

7.4.1 The timetable for submission of Reviews is as follows:

- Year 1 review (within 6 months of opening);
- Year 3 review; and
- Year 5 final review.

7.5 REVIEW PROCEDURE

7.5.1 The reviews shall be submitted in writing by the TPC / AMA to the Council.

7.5.2 The TPC / AMA shall consult the Council on the content of each Review.

7.5.3 The Council shall respond to the submission within one month of receipt, either recommending approval, or in the event that the submissions are unacceptable the Council will forward the reasons for this, and AMA will address through a revised submission within one month of receipt.

7.5.4 The recommendations of the Review shall be implemented immediately or as soon as possible (as appropriate dependent upon the type of measures) upon completion of an approved review.

7.5.5 Should any meetings between the parties be necessary, to discuss the contents of the submissions, then this shall be arranged.

8 SUMMARY OF TRAVEL PLAN

8.1.1 The aim of the McDonald's staff Travel Plan is to make staff aware of the alternative means of transport that are available in order to travel to and from their place of work and in particular, reduce the number of journeys to work that are made by car.

8.1.2 Travel surveys will be undertaken in years 1, 3 and 5 and the results used to inform the Review process.

8.1.3 New staff will be appraised of the Travel Plan as part of their staff induction so that good practice in terms of modal choice is encouraged from the outset.

FIGURES

Figure 1 – Site Location Plan

Figure 2 – 2km Walking Isochrone

Figure 3 – Public Rights of Way Map

Figure 4 – 5km Cycling Isochrone

Figure 5 – Bus Stop Location Plan

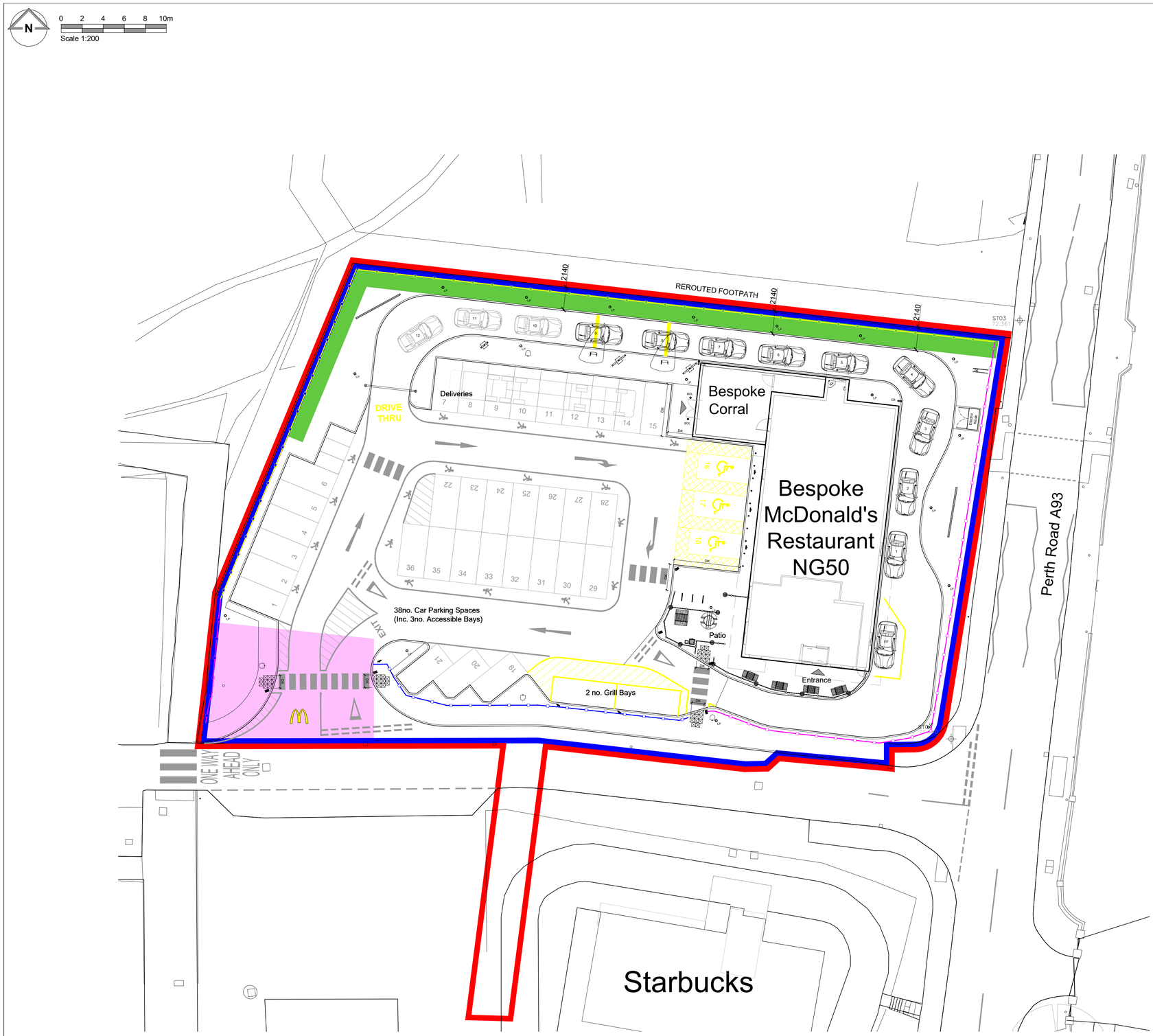
APPENDICES

Appendix A – Proposed Site Layout

Appendix B – Sample Staff Travel Questionnaire

Appendix A

PROPOSED SITE LAYOUT



Site Plan
Scale 1:200

Proposed Site Plan

General Site Proposal Notes:

'DOT' denotes Department of Transport Signs installed in accordance will all Approved Documents and British Standards.

'DK' denotes location of drop kerbs to be installed.
Drop kerbs to be installed:
- Along delivery routes
- Around Accessible Parking Bays in accordance with AD M
- At Pedestrian crossing point

Yellow Thermoplastic Material to:
- All Drive Thru related road markings
- Accessible parking bays in accordance with AD M
- Parked order bays

White Thermoplastic Material to:
- Car park related road markings to be in white thermoplastic material
- Standard parking bays to be finished in white thermoplastic material
- All junction road markings
- All pedestrian crossings

Parking Schedule	
Bay Type	Proposed
Accessible Bays	3
Grill Bays	2
General Bays	33
EVC Bays	0
Total Car Bays	38
Cycle Spaces	6
Motorcycle Spaces	3

Schedule of Areas	
	Proposed
Site Area (Hectares)	0.2885
Building GEA (m²) (exc. Corral)	314.4
Building GEA (m²) (inc. Corral)	373.5
Building GIA (m²)	291.7

NOTES

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- Whilst information on this sheet is issued to scale, scaling directly from this drawing may result in inaccuracies. For precise measurements, refer to the stated dimensions or contact the Architect.
- This drawing shall not be reproduced without express written permission from AEW.
- Title overlay drawings and ownership boundaries are produced using all reasonable endeavours. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

Project Notes

- All drawings to be read in conjunction with all other drawings as noted on issue sheet.

Drawing based:

- Glanvilles Topographical Survey drawing 4240368/4101 Dated:01/07/24
- Ordnance Survey (c) Crown Copyright 2023. All rights reserved. Licence number 100022432
- Westpark, Blaigowrie Draft Site 7 Disposition drawing DISPOSITION - PLAN 1(30560098.2) (1) Dated: 12/08/24
- LAUK Lighting Layout drawing no. 6279826_CALC_McDonalds Blairgowrie (R1), Dated: 18/06/25
- Existing below ground utilities/services unknown, Intrusive surveys required

McDonald's Demise Boundary Indicated:

McDonald's Application Boundary Indicated:

Extent of No Build Zone:

Extent of Landscaping Buffer Zone:

Site Features Key	
150mm Diameter stainless steel protective bollard	BOL
Cranked bollards Painted Black	CB
Tactile Blister Paving	
Target Bin	
"LP" Denotes Lamppost	LP
Proposed 600mm high Timber Knee Rail Fence	
Proposed 1500mm high Close Boarded Timber Fence (Subject to Acoustic Specialist Design)	
Proposed 1100mm high Close Boarded Timber Fence	

REV	Date	Drawn by: -	Checked by: -
D	10/06/2025	WJB	BSC
Acoustic fence line added. LAUK Lighting layout added.			
C	06/06/2025	WJB	BSC
Building footprint updated, cash booth relocated. Site, drive thru, patio and corral layout updated to suit new building footprint			
B	09/05/2025	WJB	BSC
Building footprint moved south, corral enlarged and patio, drive thru and site reworked to accommodate change.			
A	20/03/2025	WJB	BSC
Building moved slightly north and squared off to the south. Patio, Drive Thru and Parking reworked to accommodate change.			
-	13/03/2025	AG	BSC
Initial Issue			

Purpose of Issue
For Information

drawing stage **Planning**

client
McDonald's Restaurants Ltd

project **Blairgowrie Perth Road**

store **2473**

drawing title
Proposed Site Plan

date **13/03/2025** drawn **AG**
scale@A1 **1:200** checked **BSC**

Planning

Rev **D**

Job No **13638_AEW_2473_1004**

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Appendix B

SAMPLE STAFF TRAVEL QUESTIONNAIRE

STAFF TRAVEL QUESTIONNAIRE

RESTAURANT NO: _____ **CONFIDENTIAL**

The following information is required to produce a Travel Plan for McDonald's Restaurants.

Please complete all the sections as accurately as possible – there is no right or wrong answer.

Surname	**Initials**
Job Title	**Home postcode** *e.g. NW10 1NE*
Gender Male ❑ Female ❑	
Age Under 25 ❑ 25-34 ❑ 35-44 ❑ 45-54 ❑ Over 55 ❑	

Do you work full/part time? *(please tick)*		**What are your normal working hours? *e.g. 8am – 5pm***						
		Mon	**Tues**	**Wed**	**Thurs**	**Fri**	**Sat**	**Sun**
Part time ❑	Full time ❑							

Which mode of transport do you use most often when travelling to or from work? *(please tick one option only)*	
1. Car ❑	6. Train/Tram ❑
2. Car passenger (shared with another McDonald's employee) ❑	7. Bus (Numbers if available ……..) ❑
3. Car passenger (dropped off by friend/relative) ❑	8. Cycle ❑
4. Motorcycle (parked in McDonald's car park) ❑	9. Walk ❑
5. Taxi ❑	Other *(please state)* ……

Do you use a car as part of your job?	Yes ❑	No ❑	Not applicable ❑

How long does your journey take *(please tick box)*	0-5 mins ❑	5-10 mins ❑	10-20 mins ❑	>20 mins ❑

How far do you travel? *(please tick box)*	0-1 miles ❑	1-3 miles ❑	3-5 miles ❑	>5 miles ❑

Would you be prepared to:	Yes	No	If No, Please State Reason
Walk	❑	❑	
Cycle	❑	❑	
Car Share with another employee (as either driver or passenger)	❑	❑	
Use Public Transport	❑	❑	

Survey completed – Thank-you!

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Ecological Appraisal

Proposed Construction of a New Drive-Thru Restaurant

Perth Road, Blairgowrie

30th October 2024

Revision C – 13th June 2025

ENVIRONMENTAL AND SUSTAINABILITY CONSULTANTS

encon associates

Report Reference Number: A6760

Document Control

Date of first Issue	Revision	Date of Revision	Issued By	Checked by
30th October 2024	-	-	LR	MJB
	A	19th November 2024	AW	MJB
	B	14th February 2025	AW	MJB
	C	13th June 2025	AW	MJB

Executive Summary

This ecological appraisal report details the potential ecological effects of the proposed construction of a new drive-through restaurant at Perth Road, Blairgowrie.

The site currently comprises an area of previously disturbed grassland habitats, located within a wider development site. Habitats on the site are considered to be of ecological value within the zone of influence only and are unlikely to be used by protected species.

The loss of habitats on the site would not have a significant ecological impact. A wildlife-friendly lighting scheme is recommended.

The development presents opportunities for ecological enhancements and native shrub, tree and hedgerow planting, nectar-rich planting and wildflower grassland is recommended to benefit birds and urban pollinators.

Provided all of the recommended mitigation measures and some of the recommended ecological enhancement measures are implemented, the development would comply with relevant nature conservation legislation and planning policy regarding the protection of biodiversity and the provision of ecological enhancements.

1.0 Introduction

1.1 *Background*

This document details the ecological effects of the proposed construction of a proposed new drive-through restaurant on land at Perth Road, Blairgowrie (see Figure 1.1 for the site location). In August 2024, Encon Associates were instructed by McDonald's to undertake an ecological survey of the site in order to provide information regarding the ecology of the site and inform plans for its development. The proposed site lies within a larger site which has an existing planning permission for a neighbourhood centre incorporating a number of retail units (planning ref: 19/00163/AMM).

1.2 *Brief Description of the Proposed Works*

The proposals entail clearance of the site, followed by the construction of a new McDonald's drive-through restaurant, with associated car parking, access and landscaping.

1.3 *Scope*

This document aims to assess the likely ecological effects of the proposed development. The scope of this Ecological Assessment is to:

- Identify any potential biophysical changes as a result of the proposed development.
- Identify and provide a valuation of features of ecological interest on a site (such as habitats and protected species) and recommend further surveys should they be necessary.
- Assess the likely ecological effects of the development against relevant legislation and policy.
- Recommend avoidance and/or mitigation measures that are likely to be required to reduce the ecological impact of the proposals.

If no further surveys are recommended, this report can serve as full assessment of the ecological effects of the development in support of any planning application.

1.4 *Legislation and Policy Context*

1.4.1 *Relevant Legislation*

The Wildlife & Countryside Act 1981 (as amended) (1) is the primary piece of legislation by which biodiversity in the UK is protected. The most relevant areas of the Act to development related activities are:

- The identification and subsequent protection of Sites of Special Scientific Interest (SSSIs), which prohibits damaging activities
- The protection of certain species listed in Schedule 5, which prohibits killing, injury, disturbance, damage and/or destruction of breeding sites and/or resting places and sale (it should be noted that all parts of this protection do not apply to all Scheduled species)
- The protection of wild birds and their nests, which prohibits damage or destruction of nests whilst in use. Species listed in Schedule 1 of the act receive additional protection from disturbance whilst they are building a nest or are near a nest containing eggs or young. It also prohibits the disturbance of dependent young.
- Measures to prevent the spread of invasive plant species.

The Conservation (Natural Habitats &c) Regulations 1994 as amended (known as the 'Habitats Regulations') (2), pass two EEC Directives into UK law. The Regulations protect sites and species deemed to be of conservation importance across Europe. The most relevant parts of the Regulations to development related activities are:

- The protection of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs)

- The protection of species listed within Schedule 2 of the Regulations, which prohibits killing, injury, disturbance, damage and/or destruction of breeding sites and/or resting places and sale, this confers some level of habitat protection.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from NatureScot.

The Protection of Badgers Act 1992 (3), deals solely with the protection of badgers *Meles meles* in the UK. It prohibits killing, injuring or taking badgers, damaging, destroying or otherwise interfering with a badger sett, disturbing an occupied badger sett and sale of badgers.

Within Scotland, the Wildlife and Natural Environment (Scotland) Act 2011 (4) amends several pieces of wildlife legislation, including the Wildlife & Countryside Act. However, most of the amendments are of limited relevance to development activities.

The Nature Conservation (Scotland) Act 2004 (5) requires that public bodies to have regard to the conservation of biodiversity. This means that Planning Authorities must consider biodiversity when reaching planning decisions. This legislation includes the Scottish Biodiversity List (SBL), which identifies habitats and species considered to be principal importance in Scotland.

1.4.2 *Planning Policy*

Scottish Government policy with respect to the protection of biodiversity is laid out in the National Planning Framework 4 (NPF4) (6). This includes the following policies relevant to the protection of and enhancement of ecology in relation to development:

- Policy 1 *Tackling the climate and nature crises* requires LDPs to consider the impact of their development plans on climate and biodiversity.
- Policy 3 *Biodiversity* requires development proposals to contribute to the enhancement, restoration and conservation of biodiversity and to minimise any potential adverse impacts.
- Policy 4 *Natural places* protects a variety of identified places and sites, including those designated for biodiversity.
- Policy 6 *Forestry, woodland and trees* gives support to development proposals that enhance, expand and improve woodland and tree cover will be supported.

Local planning policy is contained within the *Perth & Kinross Local Development Plan 2* (7), which contains policies directly relevant to the protection of the natural environment. Directly relevant policies to ecology and biodiversity include:

- Policy 38: *Environment and Conservation* protects international, national and local designated sites.
- Policy 40: *Forestry, Woodland and Trees* protects trees across Perth & Kinross, including on development sites.
- Policy 41: *Biodiversity* habitats and species of ecological value including EPS and other protected species, as well as priority habitats and species within the Tayside Biodiversity Action Plan.
- Policy 42*: Green Infrastructure* requires development to contribute to green infrastructure.

The full text of relevant policies is provided in Appendix I.

1.4.3 *Other nature conservation policy*

Biodiversity Action Plans (BAPs) are the UK's response to the 1992 Convention on Biological Diversity. The UKBAP described the biodiversity of the UK and contains Action Plans for the most threatened habitats and species. It is implemented at a local level through regional and local BAPs. The *UK Post 2010 Biodiversity Framework* has now superseded the UKBAP (implemented in Scotland via the Scottish Biodiversity Strategy (8), and through Local Biodiversity Partnerships a more local level). Perth & Kinross is covered by the *Tayside Local Biodiversity Action Plan 2nd Edition 2016-2026* (TBAP, 9).

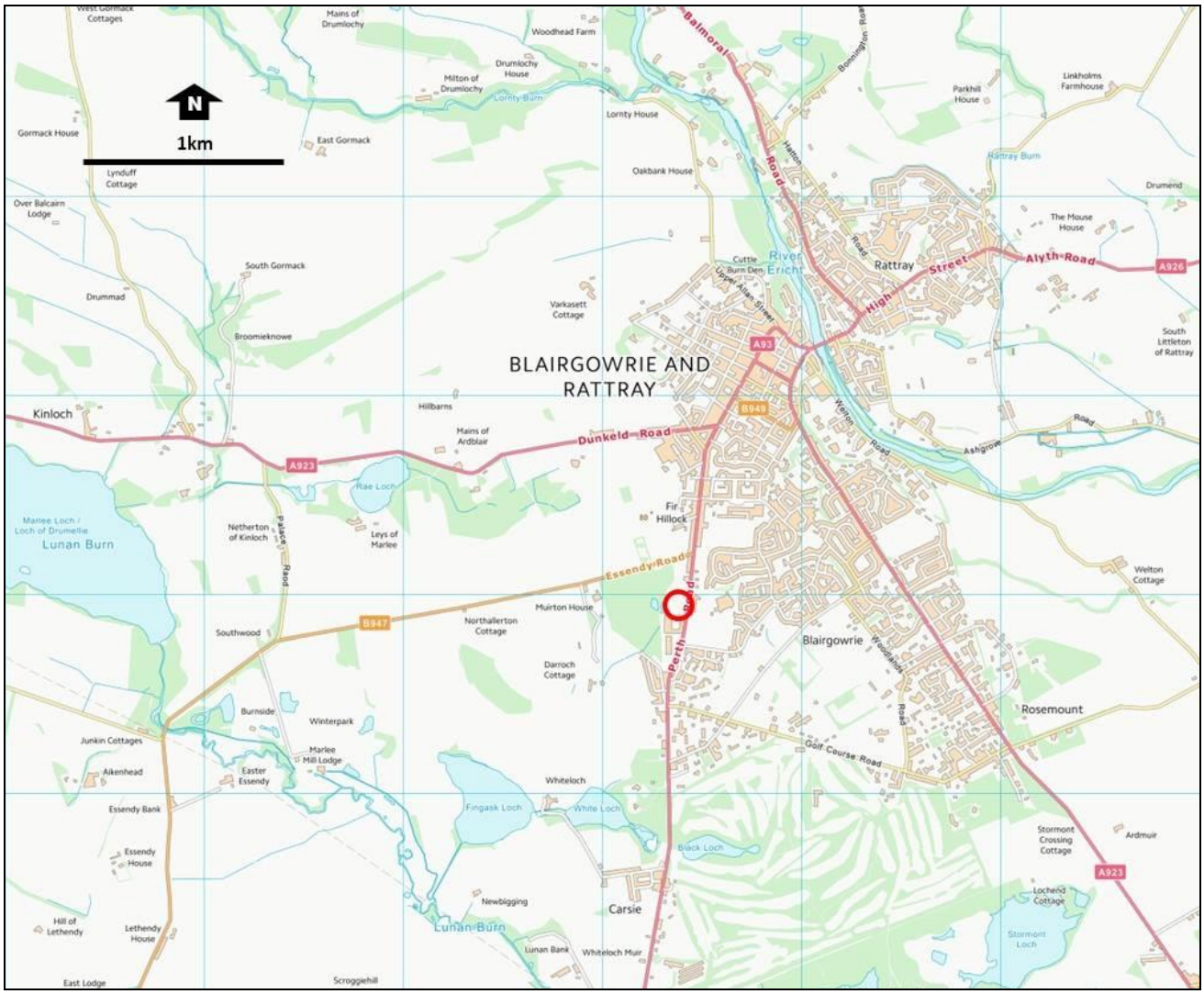

Figure 1.1: ***Site location.*** *Contains Ordnance Survey data © Crown copyright and database right 2024.*

2.0 Methodology

2.1 *Desk Study Methodology*

Available online resources such as the MAGIC (Multi-Agency Geographical Information for the Countryside), Sitelink (NatureScot's mapping system) NBN Scotland (National Biodiversity Network) websites and Perth & Kinross Council's Local Development Plan map were interrogated for relevant information, including statutory designated sites within 5km of the site. In addition, an Ecological Appraisal covering the existing planning permission was consulted for relevant regarding to the site prior to the adjacent development (10).

2.2 *Field Survey Methodology*

2.2.1 *Ecological Appraisal*

The Ecological Appraisal survey was carried out by Dr Liam Russell CEcol MCIEEM for and on behalf of Encon Associates Ltd on 29 October 2024. The survey followed the Chartered Institute of Ecology and Environmental Management (CIEEM) Preliminary Ecological Appraisal guidance (11). The survey consisted of a site walkover (loosely based on the "Phase 1" methodology (12), modified to suit the situation) with all accessible areas of the site and adjacent land (where relevant) covered. Habitats are classified and described in accordance with UKHabs descriptions (13), with attention paid to their potential to support protected species. A general search for evidence of protected species was also undertaken.

2.3 *Assessment Methodology*

2.3.1 *Introduction*

The methodology for the assessment of the likely ecological effects of the proposed development is based on the principles of CIEEM's *Guidelines for Ecological Assessment in the UK, 2nd Edition* (14). Although this assessment does not constitute a formal Ecological/ Environmental Impact Assessment, the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

2.3.2 *Valuation*

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

2.3.3 *Identification of Potential Ecological Impacts in Absence of Mitigation*

A development may have ecological effects beyond its site boundaries, therefore the CIEEM guidelines require that the 'zone of influence' be identified. Due to the relatively small size of this development, for the majority of ecological features, the zone of influence is considered unlikely to extend beyond the footprint of the works and immediately adjacent habitat.

Without mitigation, the proposed development may result in the following biophysical changes during construction and/or operation:

- Loss of and damage to habitats within or adjacent to the footprint of the development and construction zone.
- Any loss or damage of habitats could result in death and/or injury to protected species should they be present.

- Disturbance of immediately adjacent habitats and any wildlife using them during construction.

2.4 *Limitations*

This survey comprised a single walkover. As such it is only possible to gain a snapshot of the ecology of the site and it is possible that some seasonal species could be missed, particularly given the timing of the survey. However, given the habitat types present on the site it is considered highly unlikely that any species or features of ecological significance would be missed.

The ecology of a site can change quickly over time. Therefore, this survey is considered valid for two years from the date of the report.

3.0 Ecological Baseline

3.1 *Site Context*

The proposed development site is located in the southwest of Blairgowrie approximately 1.4km from the town centre (see figure 1.1 for the site location). It lies within an urban fringe area with a mixture of developed and undeveloped land including agricultural land, small woodlands, recreational open space, housing and retail development.

The site is part of a former agricultural field within the wider Westpark development site. It is bounded by the A93 Perth Road to the east, beyond which lies a cemetery and areas or residential development. The area to the south is recently developed with retail and food units. Surface water balancing ponds were created as part of the new development and lie immediately to the west of the site. The remainder of the original agricultural field is present to the north and comprises currently unmanaged grassland. An area of broadleaved ancient woodland is present approximately 70m to the west.

3.2 *Protected Sites*

3.2.1 *Statutory sites*

There are two internationally designated sites within the vicinity of the site:

- The River Tay SAC lies approximately 1.25km northeast of the site at its closest point as it passes through Blairgowrie and Rattray. It is designated for its population of Atlantic salmon *Salmo salar*, with populations of sea lamprey *Petromyzon marinus*, brook lamprey *Lampetra planeri*, river lamprey *Lampetra fluviatilis* and otter *Lutra lutra* present, as well as standing water habitats with aquatic vegetation.

- Dunkeld – Blairgowrie Lochs SAC lies approximately 2.5km west of the site and is designated for its oligotrophic to mesotrophic standing water habitat and population of slender naiad *Najas flexilis*, an aquatic plant. It also supports important bog habitats and a population of otters. The part of the SAC nearest the site is also designated as Lochs Clunie and Marlee SSSI.

In addition to the SSSIs also designated as SAC, one further SSSI is present with 2km of the site:

- Ardblair and Myreside Fens SSSI lies approximately 700m to the northwest of the site and is designated for its fen habitats.

3.2.2 *Non-statutory sites*

No non-statutory sites were identified within the vicinity of the site.

3.2.3 *Protected sites within the Zone of Influence*

It is possible for ecologically sensitive sites to be affected by development within their vicinity. However, the sites identified here are considered to be outside of the zone of influence of the proposed development. They do not fall within the development site or directly adjacent to it and therefore no direct impacts in terms of habitat loss, damage or disturbance will occur.

3.3 *Description of Habitats Within the Zone of Influence*

3.3.1 *Habitats*

A map of the habitats on the site with target notes is provided in figure 3.1.

The site comprises a small section of a former agricultural field. The previous Ecological Assessment covering the site (11) identified this an abandoned pasture containing species-poor grassland, and noted that it had been in continual agricultural use since at least the mid-1800s. Since this survey was undertaken in 2019, the site was almost entirely cleared and used a storage/parking area during the development of the site to the south and online ariel imagery dated July 2021 shows the site as largely bare ground. The habitats present on the site have mostly developed since this time.

Most of the site comprises unmanaged grassland dominated by agricultural and coarse grass species (target note 1, photos 1 and 2), such as Yorkshire fog *Holcus lanatus,* cock's-foot *Dactylis glomerata,* common bent *Agrostis capillaris* and timothy *Phleum pratense.* A few herb and ruderal species are present in the sward including broad-leaved dock *Rumex obtusifolius,* hogweed *Heracleum sphondylium,* cow parsley *Anthriscus sylvestris,* smooth sow-thistle *Sonchus oleraceus,* creeping thistle *Cirsium arvense,* ox-eye daisy *Leucanthemum vulgare* and creeping buttercup *Ranunculus repens.* Well-trodden paths cross the site (target note 2), and the disturbance has allowed species such as white clover *Trifolium repens,* ribwort plantain *Plantago lanceolata* and dandelion *Taraxacum officianale* agg. to become established. Due to its low number of species, its agricultural history and recent disturbance, this is classified as g4 *Modified grassland*.

A section of the site was surfaced with crushed aggregate when the site was used as a storage area (target note 3). Part of the area is still used for informal parking and is largely devoid of vegetation (photo 3), however, in other areas is being recolonised by vegetation (photo 4) including grasses such as creeping bent *Agrostis stolonifera* and common couch *Elymus repens*, and flowering species such as white clover, creeping buttercup, ribwort plantain, greater plantain *Plantago major*, spear thistle *Cirsium*

vulgare and hairy bittercress *Cardamine hirsuta*. This habitat is classified as u1 *Built-up areas and gardens* (82 *Vacant or derelict land*).

Small areas of new tarmac and block paving have been created on the southern edge of the site (target note 4). This is classified as u1b *Developed land; sealed surface*.

Two balancing ponds are present to the west of the site (photos 5 and 6). These were created in 2021 to manage surface water from the large, paved areas of the new development to the south. Since their creation they have become vegetated and area largely covered with reedmace *Typha latifolia*, although the southern pond had an area of flote-grass *Glyceria fluitans* in the centre. Very little open water was visible at the time of the survey and the level of water on the southern pond appeared very low despite recent high rainfall.

The woodland to the west of the site is considered to be outside of the zone of influence of the development and therefore was not included in the survey. However, the previous Ecological Assessment (11) identified it as broad-leaved ancient woodland of moderate local value. Some mapping sources show a small pond present within woodland, approximately 90m northwest of the site, and the previous Ecological Assessment identified this as a curling pond. This has now largely been lost to succession, overtaken by willow *Salix* spp. and sedges *Carex* spp., with open water no longer present.

3.4 *Protected or Notable Species*

3.4.1 *Introduction*

A large number of protected and/or notable species have been recorded from within the vicinity of the site (information primarily sourced from NBN Scotland). A high proportion of

these were for species which would not be found in the habitats present within the zone of influence. For example, many were for otter and beaver *Castor fiber* from the River Tay and other aquatic habitats within the vicinity, and several were of red squirrel *Sciurus vulgaris* from the nearby woodland and other wooded areas. Due to the habitats present on the site, it is of generally low suitability for protected species, however, species which could occur within the zone of influence are considered in greater detail below.

3.4.2 *Amphibians*

NBN held over 12 records of amphibians within 2km of the site including common frog *Rana temporaria*, common toad *Bufo bufo*, palmate newt *Lissotriton helveticus* and great crested newt *Triturus cristatus*. The two records for great crested newts were both over 1km from the site and the most recent dated from 1960.

The small curling pond in the wood is suitable breeding habitat for common frog and palmate newt, but due to habitat succession is unlikely to be suitable for common toad or great crested newt. The new balancing ponds may be suitable for a variety of species, although it is possible they may not hold water for a sufficient period to allow successful breeding. Parts of the site could be used by amphibians during the terrestrial phase of their lifecycle, but this is restricted to the small area of undisturbed grassland on the northern edge of the site, and this is of relatively low suitability.

The previous Ecological Assessment (11) concluded that great crested newts were not present across the whole Westpark site was and no mitigation was implemented during the recent construction, including previous clearance of this site. Although the balancing ponds may be suitable, the lack of great crested newts in the wider landscape means that

their colonisation is unlikely. Therefore, the likelihood of great crested newts being present on the site remains low.

3.4.3 *Bats*

There are no structures or trees on the site that could be used by roosting bats. The previous ecological report (11) suggested the woodland edges of the wider Westpark site could be used for foraging, however this is some distance from the site. The site itself is relatively exposed and brightly lit due to the adjacent development and busy road. There were very few existing records of bats close to the site, limited to soprano pipistrelle *Pipistrellus pygmaeus* and brown long-eared bat *Plecotus auritus*.

3.4.4 *Other terrestrial mammals*

Hedgehogs *Erinaceous europaeus* have been recorded several times within the vicinity of the site and the habitats there are suitable for their use. Only one record of a badger *Meles meles* were found within 2km of the site. No evidence of badgers using the site was noted during the survey, or the previous ecological survey (11).

3.5 *Ecological Valuation*

Habitats on the site are of limited ecological value. They are heavily modified, do not support any particularly notable plant species and are commonplace within the local area. It is unlikely to support protected or notable species. Therefore, the site is considered to be of ecological value within the zone of influence only.

Figure 3.1: ***Habitats present on the site****. See main text for target note descriptions.*

Photo 1: *Most of the site comprises recently re-established grassland.*

Photo 2: *A small area of the grassland on the northern edge of the site retains the original agricultural vegetation.*

Photo 3: *Part of the site was surfaced with aggregate. The eastern site of this area is used for informal parking and is largely devoid of vegetation.*

Photo 4: *Where it is less disturbed, the aggregate-surfaced area is beginning to revegetate.*

Photo 5: *Two balancing ponds are present to the west of the site.*

Photo 6: *Water levels in the ponds were low despite recent heavy rainfall.*

4.0 Assessment of Likely Impacts in Absence of Mitigation

4.1 *Introduction*

The CIEEM guidelines (13) require that the potential impacts of the proposals should be considered in absence of mitigation. In order for a significant adverse effect to occur, the feature being affected must be at least of local value. However, in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment. Although significant effects may be identified at this stage of the assessment, it is often possible to provide appropriate mitigation.

4.2 *Site Preparation and Construction Activities*

4.2.1 *Habitats*

The proposals will result in the loss of areas of low value grassland and other disturbed habitats. These are not considered to be of significant ecological value and therefore there would be no significant impact as a result of this loss.

4.3 *Site Operation*

The proposals would result in an increase in external lighting and human activity around the site at night. This is likely to disrupt the behaviour of nocturnal wildlife such as hedgehogs.

Although great crested newts are unlikely to occur on the site, other amphibians, notably palmate newt, common frog and common toad, have been recorded within the vicinity. The new balancing ponds to the west of the development are suitable for these species, and if they have not already been colonised there is a high likelihood of them being colonised in the future. Kerbs and gully pots on the new development have the potential

to trap amphibians should they use the site, with amphibians being funnelled into drains when following kerbs. Given the availability of higher quality woodland terrestrial habitat immediately adjacent to the ponds and the historical unsuitability of the site for amphibians, this impact is unlikely to be ecologically significant. However, there is a potential animal welfare issue due to the risk of trapping amphibians in drains.

5.0 Mitigation, Compensation and Enhancements

5.1 *Introduction*

This chapter contains recommendations for further works needed to fully assess the ecological impacts of the proposals and to mitigate any potential adverse effects. In addition, recommendations for the enhancement of nature conservation and biodiversity on the site are included.

5.2 *Further Survey*

No further surveys are recommended.

5.3 *Mitigation Measures*

5.3.1 *Sensitive lighting*

New lighting associated with the proposals must be designed to minimse the effects on nocturnal wildlife, particularly bats, and should follow best practice guidance (15). The following principles will minimise the impact of lighting on nocturnal wildlife and should be applied to the lighting design across the site:

- Use of low-level bollard lighting to minimise light spill.
- Directing lights away from the edges of the site and the use of hoods or similar measures to direct light away from important habitats.
- Restriction of UV light frequencies through selection of suitable lighting elements or the use of filters.
- Use of warm white spectrum lighting elements.

5.3.2 *Amphibian protection*

In order to prevent trapping amphibians in drains on the site, 45° angled kerbs should be used throughout the development. Where this is not possible, recessed wildlife kerbs should be installed adjacent to all gully pots/drains. In addition, gully pot ladders (16) should be installed in all gully pots on the site[1].

5.4 *Recommendations for Ecological Enhancements*

5.4.1 *Introduction*

Due to the nature of the site and the type of development proposed, opportunities for ecological enhancements are limited. However, the following measures would provide some ecological benefit.

5.4.2 *Planting to benefit pollinators*

There is potential to provide ecological enhancements by planting beneficial plant species within landscaped areas of the development itself. Nectar-rich shrub species should be planted which will provide a food source for a variety of pollinator species including bees. Native species are preferred as they will benefit the widest range of species. Species such as heathers *Calluna* and *Erica* spp. would be particularly beneficial. However, due to the semi-urban nature of the site, other beneficial species, that provide a nectar source but are not likely to spread into neighbouring areas, such as lavenders *Lavendula* spp., would also be appropriate.

5.4.3 *Native trees and hedgerow*

Native specimen trees and a native species hedgerow should be planted within the new development. These should reflect species found within the nearby woodland where

[1] https://www.thebhs.org/the-bhs-amphibian-gully-pot-ladder

possible. Additional species which bear fruit or seeds would enhance the value of the site for a variety of bird species, particularly those found in suburban habitats including song thrush *Turdus philomelos*, dunnock *Prunella modularis* and house sparrow *Passer domesticus* which are all DBAP Priority Species and have been recorded within the vicinity of the site. Native tree species would provide the most benefit. Suitable species include willows *Salix* spp., hazel *Corylus avellana,* rowan *Sorbus aucuparia*, wild service tree *Sorbus torminalis,* wayfaring tree *Viburnum lantana,* holly *Ilex aquifolium*, silver birch *Betula pendula* and downy birch *Betula pubescens,* dogwood *Cornus sanguinea* and spindle *Euonymus europeaus.* Native hedgerows should also be planted at the edges of the site to provide an additional resource for wildlife.

5.4.3 *Grassland seeding to benefit wildlife*

The development includes grass verges within the landscaped areas. These will be sown with a grass mix containing wildflowers that are tolerant of mowing, and these areas will be managed with a reduce mowing frequency. Given the level of disturbance likely and the need to maintain them to a degree, it is unrealistic to create g3c *Other neutral grassland* (or similar). However, g4 *Modified grassland* in moderate condition is achievable and this would provide a benefit for urban pollinators. Scotia Seeds *Flowering Lawn Mix*[2] is a suitable locally sourced seed mix.

[2] https://www.scotiaseeds.co.uk/shop/flowering-lawn-mix/

6.0 Summary and Conclusions

6.1 *Summary*

The site currently contains grassland habitats of low ecological value. Due to the low value of these habitats, site clearance would not have a significant ecological impact. Protected or notable species are unlikely to be present on the site.

In order to mitigate the ecological effects of the proposals, a wildlife-friendly lighting design is recommended.

There are opportunities to enhance the ecological value of the site post-development, through planting trees shrubs, hedgerows and wildflower grassland which will benefit pollinators, birds and other urban wildlife.

6.2 *Residual Impacts*

In the absence of mitigation, the proposed development is unlikely to result in an adverse ecological impact. Therefore, the proposals would comply with relevant legislation and planning policies that protect biodiversity.

Provided the recommended ecological enhancement measures are implemented, the development would comply with relevant planning policy regarding ecological enhancements. Consequently, there would be no residual impacts.

7.0 References

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Appendix 1

Relevant planning policy from the *Perth & Kinross Local Development Plan 2*.

Policy 38: Environment and Conservation

Policy 38A: International Nature Conservation

Sites Development which could have a significant effect on a site designated or proposed under the Habitats or Birds Directive (Special Areas of Conservation and Special Protection Areas) or Ramsar site, will only be permitted where:

a) an appropriate assessment has demonstrated that it will not adversely affect the integrity of the site; or

b) there are no alternative solutions; and

c) there are imperative reasons of overriding public interest, including those of social or economic nature; and

d) compensatory measures are provided to ensure that the overall coherence of the Natura network is protected.

Policy 38B: National Designations

Development which would affect a National Park, National Scenic Area, Site of Special Scientific Interest or National Nature Reserve, will only be permitted where the Council as Planning Authority is satisfied that:

a) the proposed development will not adversely affect the integrity of the area or the qualities for which it has been designated; or

b) any such adverse effects are clearly outweighed by social, environmental or economic benefits of national importance.

Policy 38C: Local Designations

Development which would affect an area designated by the Council as being of local conservation or geological interest will not normally be permitted, except where the Council as Planning Authority is satisfied that:

a) the objectives of designation and the overall integrity of the designated area would not be compromised; or

b) any locally significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social and economic benefits.

Policy 40: Forestry, Woodland and Trees

Policy 40A: Forest and Woodland Strategy

The Council will support proposals which:

a) deliver woodlands that meet local priorities as well as maximising benefits for the local economy, communities, sport and recreation and environment;

b) protect existing trees/woodland including orchards, especially those with high natural, historic and cultural heritage value;

c) seek to expand woodland cover in line with the guidance contained in the Perth and Kinross Forest and Woodland Strategy Supplementary Guidance;

d) encourage the protection and good management of amenity trees, or groups of trees, important for visual amenity, sport and recreation or because of their cultural or heritage interest;

e) ensure the protection and good management of amenity trees, safeguard trees in Conservation Areas and trees on development sites in accordance with BS5837 'Trees in Relation to Construction';

f) seek to secure establishment of new woodland in advance of major developments where practicable and secure new tree planting in line with the guidance contained in the Perth and Kinross Forest and Woodland Strategy. The planting of native trees and woodland will be sought where it is appropriate.

40B: Trees, Woodland and Development

Tree surveys, undertaken by a suitably qualified professional, should accompany all applications for planning permission where there are existing trees on a site. The scope and nature of such surveys will reflect the known or potential amenity, nature conservation and/or recreational value of the trees in question and should be agreed in advance with the Council.

The Council will follow the principles of the Scottish Government Policy on Control of Woodland Removal and developers are expected to fully accord with its requirements. In accordance with that document, there will be a presumption in favour of protecting woodland resources except where the works proposed involve the temporary removal of tree cover in a plantation, which is associated with clear felling and restocking.

In exceptional cases where the loss of individual trees or woodland cover is unavoidable, the Council will require mitigation measures to be provided.

Policy 41: Biodiversity

The Council will seek to protect and enhance all wildlife and wildlife habitats, whether formally designated/protected or not, taking into account the ecosystems and natural processes in the area.

The Council will apply the principles of the Planning for Nature: Development Management and Wildlife Guide and will take account of the Tayside Local Biodiversity Action Plan (LBAP) and relevant national and European legislation relating to protected species when making decisions about applications for development.

Proposals that have a detrimental impact on the ability to achieve the guidelines and actions identified in these documents will not be supported unless clear evidence can be provided that the ecological impacts can be satisfactorily mitigated. In particular, developers may be required to:

a) ensure a detailed survey is undertaken by a qualified specialist where one or more protected or priority species is known or suspected. In accordance with the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017, development proposals that could have a significant impact on the environment may require an Environmental Impact Assessment;

b) demonstrate all adverse effects on species and habitats have been avoided wherever possible. A Landscape Plan may be required to demonstrate the impact of the development and how good design and site layout can enhance the existing biodiversity;

c) include mitigation measures and implementation strategies where adverse effects are unavoidable;

d) enter into a Planning Obligation or similar to secure the preparation and implementation of a suitable long-term management plan or a site Biodiversity Action Plan, together with long-term monitoring.

European Protected Species

Planning permission will not be granted for development that would, either individually or cumulatively, be likely to have an adverse effect upon European protected species (listed in Annex IV of the Habitats Directive (Directive 92/43/EEC)) unless the Council as Planning Authority is satisfied that:

a) there is no satisfactory alternative; and

b) the development is required for preserving public health or public safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.

In no circumstances can a development be approved which would be detrimental to the maintenance of the population of a European protected species at a favourable conservation status in its natural range.

Other Protected Species

Planning permission will not be granted for development that would be likely to have an adverse effect on protected species unless it can be justified in accordance with the relevant protected species legislation (Wildlife and Countryside Act 1981 (as amended) and the Protection of Badgers Act (1992))

Policy 42: Green Infrastructure

The Council will require all new development to contribute to green infrastructure by:

a) creating new multifunctional green infrastructure, particularly where it can be used to mitigate any negative environmental impacts of the development, and/or create linkages to wider green and blue networks;

b) incorporating high standards of environmental design;

c) ensuring that development does not lead to the fragmentation of existing green and blue networks;

d) the protection, enhancement and management of existing green infrastructure within and linked to the site and the incorporation of these into development proposals:

   i) open spaces and linkages for active travel or recreation, including links between open spaces and the wider countryside and the provision of new connections where required;

   ii) existing species and habitats and the creation of new habitats and wildlife corridors, including trees, hedgerows and woodlands where appropriate;

   iii) the water environment which is an important contributor to the network of blue and green corridors for the alleviation of flood risk, wildlife, recreation and the amenity needs of the community.

The temporary use of unused or underused land as green infrastructure will be encouraged. The use of a site for temporary green infrastructure will not prevent it from being developed in the longer term.

KEY TO LANDSCAPE PROPOSALS

Proposed Planting Details

All areas of new landscaping to have the existing topsoil and subsoil decompacted by hand digging or rotorvator. If any imported topsoil is required it should be placed to a depth of 450mm minimum in shrub beds and be free of weeds or any detritus/stones larger than 50mm.

Planting should take place during the dormant planting season ie 1st October to 28th February. Tree planting shall be implemented as per British Standard 8545 (Trees: from nursery to independence in the landscape - Recommendations.

Grassland Verges

Areas of grassland to be established in landscaped verges around the site. Cultivate and grade soil, bring top 150mm to a fine tilth, rake and bring to given levels, remove all stones and debris over 50mm, lay turf in stretcher bond, firm turves using wooden turf beater.

Species Rich Grass Verges (327m²)

New areas of grass verge to be established using Scotia Seeds SCM6 flowering lawn mix which is a local Scottish seed house, to increase biodiversity.

Contains plants which are either low growing or can be cut low. Should be cut to 10cm through out the growing season and left to grow and flower between July and August. Contains 25 wildflower and 4 grass species.

Ornamental Shrub Planting

Areas of shrub planting for ecological enhancement to be planted in groups around the perimeter of the site. Cultivate and grade soil, bring top 150mm to a fine tilth prior to planting.

Shrubs (90m²)

Shrubs to be pit planted 4 per m². Planted to provide colourful, groundcover with ecological value. All plants to be 5 litre pot grown stock, planted in random groups of 5, 7 or 9 plants of same species throughout the planting bed. 360 plants in total

Euonymus fortunei 'Emerald Gaiety' x 72no.
Brachyglottis 'Sunshine' (Senecio) x 72no.
Ceanothus 'Blue Mound' (Californian lilac) x 72no.
Lavendula angustifolia 'Hidcote' (Lavender) x 72no.
Pachysandra terminalis (Green Carpet) x 72no.

Native Hedge Planting

A new native hedgerow to be established and maintained at 1.5m high. Native species selected to provide ecological enhancement and seasonal interest.

Hedge Planting (76 linear metres)

60-80cm high, bareroot transplants, pit planted in double staggered row including organic compost to backfill pits at 5 plants per linear metre. Spiral rabbit guards to each plant. 380 plants in total.

40% Crateagus monogyna (Hawthorn) x 152no.
20% Corylus avellana (Hazel) x 76no.
10% Salix caprea (Goat Willow) x 38no.
10% Cornus sanguinea (Dogwood) x 38no.
10% Sambucus nigra (Elder) x 38no.
10% Prunus spinosa (Blackthorn) x 38no.

Specimen Tree Planting

Specimen trees planted in locations indicated as per the following specification:

Excavate tree pit 900mm x 900mm x 900mm deep (or larger to suit root ball), backfill topsoil mixed with 80 litres of peat free compost and secure tree in an upright position with a single timber stake and rubber tie and spacer.

Ar

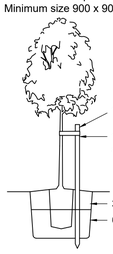
Specimen Tree Planting (14 no.)

4.5m high, 18-20 cm girth Extra Heavy Standard root balled trees (supplied by Barcham Trees or similar approved) to be pit planted as per above specification in locations shown

3 x Acer campestre (Field Maple) - Ac
4 X Acer rubrum (Red Maple) - Ar
2 x Alnus gutinosa (Alder) - Ag
2 x Betula pendula (Silver birch) - Bp
3 x Liquidamber styraciflua (Sweet Gum) - Ls

Tree Pits & Support

Diameter and depth of tree pit to be dependant on the size of the rootball. Minimum size 900 x 900 x 900 deep



Proposed Surfacing

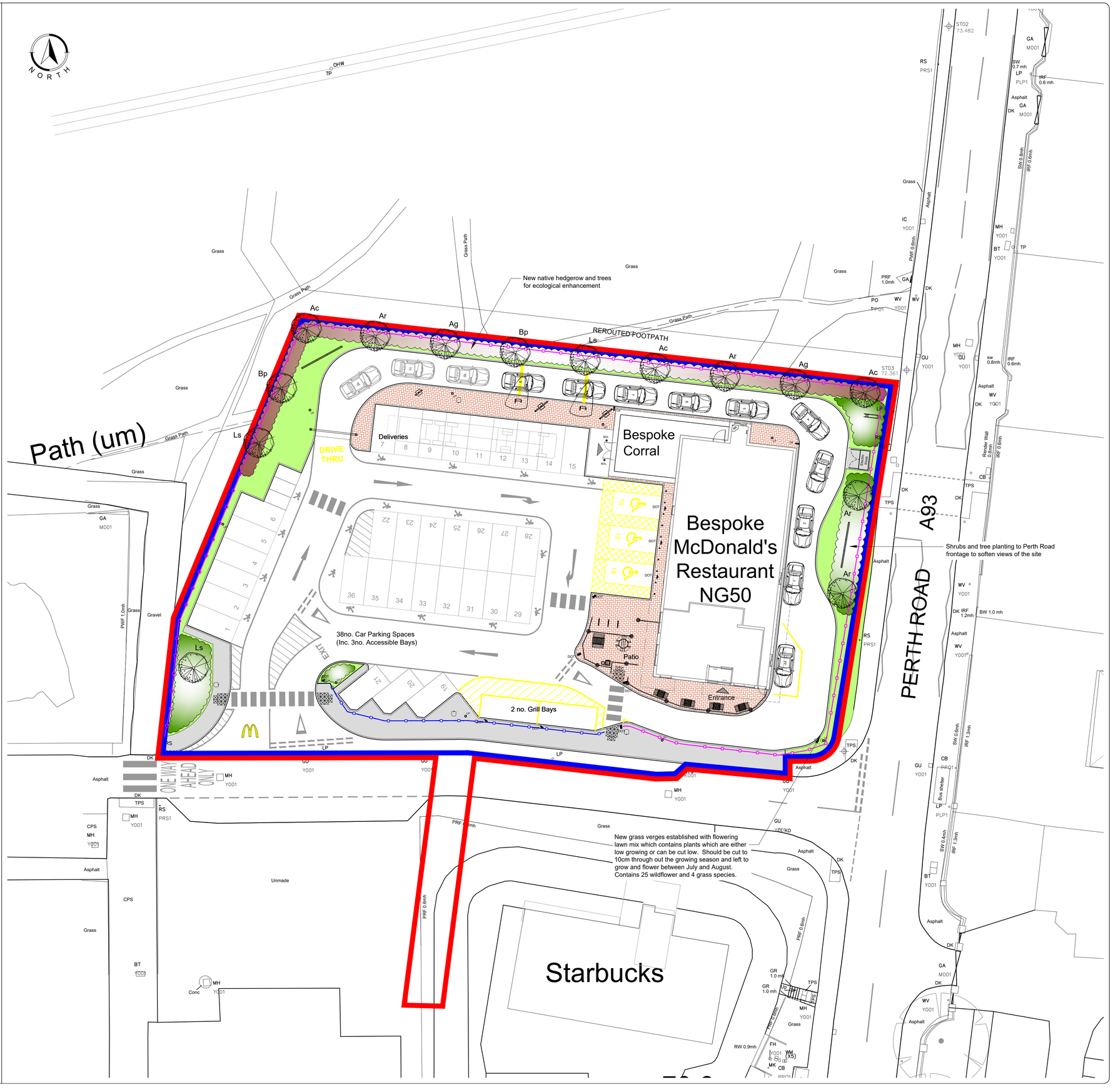
Refer to Architects drawing for full details of all new surfacing

Pedestrian Circulation

New tarmacadam surfaced footways

Pedestrian Circulation

New block paving surfaced footways



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Notes:

This drawing is based on:

- Topographical Survey, reference 4240368-4101-Blairgowrie-STTBC by Glanville dated June 2024
- 13638_AEW_2473_1004D_Proposed Site Plan by AEW dated 10.06.25
- Ecological Appraisal by Encon Associates dated October 2024

Rev	Date	Description	Drawn	Checked
D	27.0625	Updated site plan D plus additional planting	MJB	GM
C	13.06.25	Updated in line with site plan 1004C	MJB	GM
B	25.02.25	Updated in line with Rev E site plan	MJB	GM
A	30.10.24	Updated in line with ecology recommedations	MJB	GM

Client
McDonald's

Project
Proposed New Drive Thru
Perth Road
Blairgowrie PH10 6FW

Title
Landscaping Scheme

Drawing Status
FOR PLANNING APPROVAL

Drawn	MB	Checked	LB
Date	23.10.24	Scale (A1)	1:200

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Job Number	Drawing Number	Rev
A6760	01	D

Landscape Management Plan

Proposed Construction of a New McDonald's Drive Thru Restaurant at:

Perth Road, Blairgowrie PH10 6FW

29th October 2024

Revision A – 13th June 2025

ENVIRONMENTAL AND SUSTAINABILITY CONSULTANTS

encon associates

Report Reference Number: A6760

Document Control

Date of first Issue	Revision	Date of Revision	Author	Checked by
29th October 2024	-	-	MJB	LB
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Executive Summary

This Landscape Management Plan has been produced for the development of a new McDonald's Drive Thru restaurant at Perth Road, Blairgowrie, in respect to the application for planning consent to the local authority.

This document corresponds directly to the landscaping scheme as detailed on the drawing reference A6760-01 (see separate drawing). The plan should also be read in conjunction with the separate Preliminary Ecological Appraisal.

The development proposes the construction of a new McDonald's Drive Thru Restaurant, including the construction of the restaurant, car parking, landscaping and associated works.

The landscaping scheme incudes the planting of new trees, new grass verges and a new native hedgerow. Nectar-rich shrubs will be planted to provide a food source for a variety of pollinator species.

The aim of the report is to provide appropriate prescriptive management and recommendations to achieve the objective of the landscaping scheme and on-going maintenance.

This includes management actions and an annual work schedule for the initial 12 month defects liability period and a further 4 years thereafter.

1 Introduction

1.1 This management plan has been prepared in respect to the application for planning permission submitted to the local authority for a new McDonald's Drive Thru Restaurant at Perth Road, Blairgowrie.

1.2 This Landscape Management Plan corresponds directly to the landscaping scheme as detailed on the drawing reference A6760-01 (see separate drawing). The plan should also be read in conjunction with the separate Preliminary Ecological Appraisal.

1.3 The Plan is in accordance with BS8545:2014 Trees: from nursery to independence in the landscape – Recommendations. This British Standard gives recommendations for transplanting young trees successfully from the nursery, through to achieving their eventual independence in the landscape, specifically covering the issues of planning, design, production, planting and management.

This British Standard applies to trees where a distinct crown has been prepared in the nursery. It does not apply to whips, transplants and seedlings or to other woody material.

1.4 **Principles of the Maintenance Schedule**

This document sets out the principles and quality standards required for the installation of planting and ecological enhancement for the long term management operations.

It includes:

- Design Intentions
- Aims of the management plan
- Detailed installation specification
- Management objectives
- Detailed maintenance specification
- Annual schedule of operations

1.5 The report should be read alongside the approved landscaping scheme and used by the maintenance team to produce a detailed priced programme of work for the client. It should also form the basis for annual reviews and evaluation of maintenance works to ensure they continue to meet the needs of the site.

1.6 Long Term Landscape Design Objective

The design intention for the landscape and ecological enhancement at this site is to create a coherent environment and attractive setting, not only for the customers of the restaurant but also for the ecological enhancement of the site as a whole. The scheme is sympathetic to the current landscape setting which includes areas of commercial and residential use, as well as a large cemetery, and aims to provide an enhanced external environment and biodiversity.

1.7 Aims of the Landscape Proposals

The landscape and its relationship with the new building is important to the success of the scheme. The design successfully integrates the new building into a cohesive external environment within the existing landscape. The overall design aim is for the new building and landscape to be logically linked, mainly influenced by the need for efficient circulation routes and a welcoming frontage.

1.8 For the purposes of management and maintenance of the landscape and biodiversity there are the following main areas:

1) Trees
2) Grass Verges
3) Ornamental Shrubs
4) Native Hedge

2 Landscape Maintenance Objectives

2.1 The Maintenance Period

Maintenance is to be undertaken for the next 5 years as a minimum, including the initial 12 months defects liability period which should be built into the implementation contract to cover post-installation maintenance requirements for the whole of the landscape works. During this period the contractor is responsible for all horticultural maintenance operations, including the replacing of planting which has failed to flourish. At the end of the initial one-year aftercare period any defects in soft landscape materials due to materials or workmanship will be rectified and future responsibility will be handed over to the person responsible for grounds maintenance at the site thereafter and any trees or plants which die, are removed or become seriously damaged or diseased, shall be replaced in the next planting season with others, of similar size and species.

2.2 Access

For landscape maintenance purposes, vehicular access will be from the access road into the new development linked to Perth Road (A93).

2.3 Facilities

The grounds maintenance contractor shall liaise with the site management directly regarding permissions for parking, storage, use of water and any other resources.

2.4 Maintenance Objectives for Soft Landscape

- apply good horticultural and ecological practice to all operations
- promote healthy growth and establishment of all plants and trees
- regularly cut grass areas to maintain a neat, short sward
- ensure consistent control of invasive weeds
- promote optimum display and flowering periods and stem colour
- ensure development of optimum plant form, shape, and planting density provide protection against pests and diseases
- promote wildlife value and species diversity where appropriate
- ensure long term commitment to replacement of defective plant material

3 Components with Specific Management Objectives

3.1 Grass Verges: Turfed with species rich turf

- Ensure sward is maintained so as to create an optimum functional surface
- Review requirements for whole or part sward refurbishment
- Establish an annual programme of aeration and feeding
- Review requirements for whole or part sward refurbishment
- Employ cultural techniques which use organic fertilisers and minimize the use of chemicals wherever possible

3.2 Shrub Planting: Ornamental shrubs planted in groups

Refer to drawing reference A6760-01 (see separate drawing) for full species list to determine correct management approach to create functioning habitats, for example dense blocks of ground cover species will not require pruning.

- Species selected for ecological enhancement including colourful, flowering groundcover to attract bees and invertebrates
- Ensure that good horticultural practice is employed to encourage long term health and vitality of all shrub planted areas to ensure they establish
- Allow shrubs to establish to provide a dense block of groundcover with a variety of species and various heights for biodiversity

3.3 Tree Planting: Planted as individual specimens

- Ensure that good horticultural practice is employed to encourage long term health and vitality of all trees
- Ensure well-balanced crowns and natural shape
- Remove rubber ties and supporting stakes once the trees area well established enough to support themselves

3.4 Native Hedgerow Planting: Species rich native hedge

- Native species selected to provide ecological enhancement including Hawthorn and Hazel (see landscape drawing A6760-01 for exact species list)
- The native hedge should be managed for its wildlife interest with only 50% cut annually on rotation, to allow fruits and shelter for birds and insects through the winter

- The hedge should be cut to form an A-frame shape to avoid it becoming leggy and diminishing its biodiversity value
- Hedges should be pruned in late winter (February) to prevent destroying berries and seeds vital food for birds, as well as the eggs of overwintering insects
- Cutting should not take place during the bird nesting season (March to August)
- Good horticultural practice should be employed to encourage long term health and vitality of all hedge planting
- Allow shrubs to establish to provide a dense hedge line maintained at 1.5m high

4 Maintenance Specification

4.1 Maintenance Details

The following specification items are to be addressed within the long term landscape maintenance contract. Included are performance specifications, quality standards and some detailed operational descriptions. The landscape maintenance contractor will be required to apply their expertise in relating these to the Management Objectives above in producing annual programmes of work.

4.2 Maintenance to accord with requirements of BS 7370:1991

- Duration: Carry out the operations in the following clauses from completion of planting and continue in perpetuity (unless otherwise agreed by the Local Planning Authority)
- Frequency of maintenance visits: Monthly during growing season and as per schedule in clause 5.3

4.3 Tree Planting: trees planted as individual specimens

Specification for Specimen Tree Planting:

- Refer to the landscaping drawing reference A6760-01(see separate drawing) for species and planting locations.
- For trees in closer proximity to adjacent paving where the risk of damage caused by future root growth could be an issue, the trees should be planted within a "root deflection" system to be utilised to divert roots downwards to a level where they can safely establish without surface damage.
- All trees to be supplied in accordance with Section 8.4 "Root system development and management" within BS8545:2014 Trees: from nursery to independence in the landscape – Recommendations
- Specimen trees to be pit planted in accordance with Section 10 "Planting" within BS8545:2014 Trees: from nursery to independence in the landscape - Recommendations.
- All trees to be "Extra Heavy Standard" root balled trees, 18-20cm girth, 4.5m high (supplied by Barcham Trees or similar approved)

4.4 Native Hedge Planting: a new native hedgerow to be established to provided ecological enhancement and seasonal interest

Specification for Native Hedge Planting:

- Plants to be 60-80cm bareroot transplants, pit planted at 5 plants per linear metre in a double staggered row with organic compost
- Spiral rabbit guards for each plant with bark mulching between plants to suppress weed growth
- Maintain at 1.5m high

4.5 Shrub Planting: Ornamental Shrubs

Specification for Shrub Beds:

- Refer to the landscaping drawings A6760-01 (see separate drawing) document for species and planting locations.
- All plants to be 5 litre pot grown stock, planted in random groups of 5, 7 or 9 plants of same species throughout the planting bed.
- Cultivate and grade soil, bring top 150mm to a fine tilth prior to planting
- Shrubs to be pit planted at 4 per m^2

4.6 Tree, Hedge & Shrub Maintenance:

- Trees, hedges and shrubs to be maintained by the landscape contractor appointed by the developer in accordance with Section 11 "Post-planting management and maintenance" within BS8545:2014 Trees: from nursery to independence in the landscape - Recommendations.

Watering:

- The timing and frequency of irrigation should take into account the prevailing weather conditions, soil moisture release characteristics and the response of the tree species to water deficits or periods of prolonged soil saturation.
- Ensure sufficient water is applied to maintain healthy growth; taking into account published meteorological data on rainfall for any given period, in particular in periods of spring and summer drought (April to August)

Quantity:

- Standard trees: a general guide would be10 gallons per tree per application. However, the frequency of irrigation is more important than the volume of water given at any one time
- Shrubs: Wet soil to full rooting depth
- Monitoring should take place if there are 10 consecutive days during the growing season at >25^{0}C

Weed control:

- All planting areas shall be kept clear of weed growth for the first 3 growing seasons during the establishment period
- After 3 years, a herb layer can be allowed to return to all planting except the ornamental planting which should be kept weed free
- Achieve by a combination of herbicide applications and hand-weeding/hoeing
- Ensure that the methods used will cause a minimum of damage to adjacent planted areas

Tree and plant stems:

- Do not allow nylon filament rotary cutters or other mechanical tools closer than 200mm to the stem of any tree or plant
- Maintain a grass & weed-free area around the base of each tree, min diameter 500mm during the first 3 growing seasons during the establishment period
- Carry out operations close to stems using hand tools

Herbicide application:

- A foliar acting translocated or contact herbicide shall be applied to emergent weeds

Hand weeding:

- Hoe and loosen the soil throughout the planting areas, taking care to avoid disturbance of roots of planted material
- Remove weeds entirely, including roots
- Remove the minimum of soil and minimise disturbance to plants, bulbs and mulched surfaces

- On completion, rake areas to a neat condition

Mulch:

- All mulches should be replenished to their original depth of 75mm
- The mulched area around the tree should be enlarged, if practicable, as the tree develops to the canopy drip line
- Mulch spill on adjacent surfaces to be removed to avoid a build up of mulch around the root flare and the base of the stem
- Any weeds and debris to be taken out of the spilled mulch before returning to planted areas
- Melcourt 'Forest BioMulch' or similar approved to be used
- After 5 years any compost created on site should be used if possible

Re-firming, check/tidy:

- Trees and shrubs shall be maintained in a firm position in the ground and all stakes and ties shall be checked regularly, particularly after strong winds, frost heave and other disturbances
- The soil around newly planted trees should be regularly inspected for soil capping or compaction.
- All trees should be checked on a regular basis for mammal, human and other external damage
- All trees should be checked on a regular basis for pests and diseases
- Any significant failures should be reported and remedial action should be taken as necessary

Tree stakes and ties:

- Inspect all trees twice a year to ensure that the root system remains stable and firm in the ground and that ties are still effective and not causing damage
- Adjust fixing to suit stem growth and provide correct and uniform tension. Any stakes and ties that are found to be not fit for purpose should be adjusted, replaced or removed.
- If growth is sufficient for tree to be self-supporting, remove fixing and fill holes with lightly compacted soil
- Check stakes for looseness, breaks and decay and replace as necessary

- Remove stakes and ties once tree has established sufficiently to support itself or after 3 years establishment whichever is the sooner

Hedge Pruning:

- Generally to be carried out in accordance with good horticultural and arboricultural practice
- In accordance with BS 7370.4, clauses 3.6.3 to 3.6.5
- Before starting work, agree which shrubs and hedges are to be pruned.
- 50% of hedges are to be cut annually on a rotational basis, ie 50% cut in year 1, 50% left uncut and then alternated for year 2 and all subsequent years.
- Hedges to be cut to an A-frame shape
- Trim individual plant appropriate to species, location and season to leave a well-balanced natural shape
- All cutting to be done with appropriate clean sharp tools
- Clean cuts back to sound wood
- Do not use growth retardants, fungicides or sealant unless instructed

Pruning of trees:

- In accordance with BS 3998 and Forestry and Arboriculture
- During pruning protect adjacent structures, plants or trees
- Trees to be maintained with a well-balanced natural appearance
- Remove any suckers or basal growth
- Cut back level with source stem or root
- For any chain saw work, operatives must hold a certificate of competence

Timing:

- Prune between leaf fall and mid winter
- After 3 years full growing seasons, selectively thin, re-space and crown raise trees

Pruning of shrubs:

- At the end of the growing season, check all shrubs and remove all dead foliage, dead wood and broken/damaged branches and stems

- Prunings to be retained on site and either composted or woodier prunings to be utilised in the creation of habitat piles in un-obtrusive areas if possible
- Unless otherwise specified or instructed, prune shrubs flowering between March and July immediately after the flowering period and shrubs flowering between July and October back to old wood in winter;

Reinstatement:

- Remove dead plants as soon as possible and replace in the next scheduled round of replacement planting during the dormant season

Maintaining a safe, clean and secure environment:

- Litter and dog waste to be collected as necessary to maintain a clean, litter-free environment
- Include clear signage against dog fouling and litter at entrances
- Report fly tipping

4.7 Grass Verges: areas of grassland to be established in landscaped verges around the site

Specification for Grass Verges:

- Culitvate and grade the soil, bring top 150mm to a fine tilth, rake and bring to given levels. Remove all stones and debris over 50mm
- Lay turf in stretcher bond, firm turves using wooden turf beater

Watering and Feeding:

- This biodiverse turf is treated in the same way as a conventional lawn and should be regularly watered and fertilised
- Newly laid turf for grass verges and existing grass areas which have been re-seeded to be well watered at time of laying/seeding and regular watering thereafter during the first 2 growing seasons to ensure healthy establishment of the grass
- Ensure sufficient water is applied to maintain healthy growth; taking into account published meteorological data on rainfall for any given period, in particular in periods of summer drought (June, July & August)
- Slow release fertiliser to be spread over grass areas in accordance with manufacturer's instructions

- Carry out a single application between March and May for the first 3 years after laying

Weed control:

- All grass to be kept clear of weed growth for the first 3 growing seasons during the establishment period
- Achieve by a combination of herbicide applications and hand-weeding
- Ensure that the methods used will cause a minimum of damage

Mowing:

- This biodiverse turf is treated in the same way as a conventional lawn and should be regularly mown to maintain the sward to create an optimum functional surface
- Grass verges are to be cut a minimum of 15 times during the growing season usually between March and October, depending on weather conditions
- Cut grass should be removed from paved areas at the time the grass is cut
- Strimming around obstacles such as trees or furniture to be carried out early in the growing season and then herbicide applied around the base of trees and obstacles in April/May and again in September/October to prevent weed or grass growth

5 Programming of Maintenance and Management Operations

5.1 Monitoring

To protect the investment in the quality of soft and hard landscape works, the long term maintenance contractor must provide a high standard of maintenance. The long term success of the scheme is dependent on its maintenance regime. The management plan and maintenance operations included herewith will be reviewed on letting of the long term maintenance contract following the end of the initial contract works defects period and from then on a four yearly basis thereafter.

5.2 Schedule of Maintenance

The following is an indicative annual schedule of maintenance visits. This provides a reasonable frequency of the more common operations, and a good indication of the required level of intensity of management required but is not intended to be fully comprehensive or restrictive. The landscape contractor is required to construct a schedule of operations specifying operations and frequency using their own experience and horticultural knowledge. The ongoing programme of maintenance work will also include proposed frequency of visits and operations detailed in the specification, i.e. pruning. It shall also include scheduled dates for:

- Infrequent operations such as re-spacing of plants, pruning, topping up of mulch, replacement of plants/restocking of beds etc
- Planting review and refurbishment
- Monitoring and review; the effectiveness of the management operations is to be closely and continually monitored and reviewed annually against this Specification and Landscape Maintenance Plan, with any resulting changes incorporated into the subsequent years' programme.

5.3 Schedule of annual maintenance operations

The following schedules list the timings for key annual operations for the soft landscape areas as shown on the proposed landscaping plan:

Schedule 1: General Maintenance

Month	Litter pick	Remove leaf fall	Check Paving
January	1 visit		
February	1 visit		
March	1 visit		
April	1 visit		
May	1 visit		
June	1 visit		1 visit
July	1 visit		
August	1 visit		
September	1 visit		
October	1 visit	1 visit	
November	1 visit		
December	1 visit	1 visit	

Schedule 2: Specimen Trees & Hedgerows – Establishment Phase (first 3 years)

Month	Tree inspection	Replace dead	Weed control	Watering	Hedge cutting
January					
February					1 visit
March					
April			2 visits	2 visits	
May				4 visits	
June				4 visits	
July	1 visit		2 visits	4 visits	
August				4 visits	
September				4 visits	
October			2 visits	2 visits	
November					
December		1 visit			

Schedule 3: Specimen Trees & Hedgerow – Continuing Maintenance after 3 years

Month	Tree inspection	Replace dead	Weed control	Watering	Hedge cutting
January					
February					1 visit
March					
April			1 visit	2 visits	
May				2 visits	
June				2 visits	
July	1 visit		1 visit	2 visits	
August				2 visits	
September				2 visits	
October			1 visit	2 visits	
November					
December		1 visit			

Schedule 4: Ornamental Shrubs - Establishment Phase (first 3 years)

Month	Inspection for dead plants	Replace dead	Weed control	Watering	Deadhead flowering plants
January					
February					
March			1 visit		
April			1 visit	2 visits	1 visit
May			2 visits	4 visits	1 visit
June			2 visits	4 visits	1 visit
July			2 visits	4 visits	1 visit
August			2 visits	4 visits	1 visit
September	1 visit		1 visit	4 visits	1 visit
October		1 visit	1 visit	2 visits	
November					
December					

Schedule 5: Ornamental Shrubs - Continuing Maintenance after 3 years

Month	Inspection for dead plants	Replace dead	Weed control	Watering	Deadhead flowering plants
January					
February					
March			1 visit		
April			1 visit	2 visits	1 visit
May			1 visit	2 visits	1 visit
June			1 visit	2 visits	1 visit
July			1 visit	2 visits	1 visit
August			1 visit	2 visits	1 visit
September	1 visit		1 visit	2 visits	1 visit
October		1 visit	1 visit	2 visits	
November					
December					

Schedule 6: Grass Verges & Open Spaces

Month	Weed control	Fertilizer	Mowing	Trim edges	Thatch removal	Watering
January						
February						
March			3 visits		1 visit	
April		1 visit	4 visits	2 visits		
May	1 visit		4 visits	2 visits		4 visits
June			4 visits	2 visits		4 visits
July			4 visits	2 visits		4 visits
August			4 visits	2 visits		4 visits
September	1 visit	1 visit	4 visits	2 visits		
October			3 visits	2 visits		
November						
December						

6 British Standards

6.1 As well as the standards described above the soft landscape works should meet the following British Standards where appropriate:

Topsoil handling, stripping and storage:

- BS ISO 15799:2022 Soil quality - guidance on ecotoxicological characterization of soils and soil materials
- BS 3882:2015 Specification for topsoil
- BS 4428:1989 guide of practice for general landscape operations (excluding hard surfaces) AMD 6784

Quality of Trees and Shrubs:

- BS 3936-1:1992 Nursery stock specification for trees and shrubs
- BS 3936-10:1990 nursery stock specification for ground cover plants
- BS 3998:2010 recommendations for tree work and AMD 6549

Horticulture:

- BS EN 12579:2013 Soil improvers and growing media – sampling
- BS EN 13037:2011 Soil improvers and growing media - determination of pH

Odour Assessment

New McDonald's Restaurant at

Perth Road, Blairgowrie

28th October 2024

Rev D 2 July 2025

ENVIRONMENTAL AND SUSTAINABILITY CONSULTANTS

encon associates

Report Reference Number: A6760

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28th October 2024	-	-	JK	MJB
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	D	2nd July	JK	MJB

Executive Summary

Encon Associates were commissioned by McDonalds to carry out an odour assessment in connection with the proposed new McDonalds restaurant on land off Perth Road, Blairgowrie, Scotland (the 'Site').

This report has been updated with the new Proposed Site Plan, 13638_AEW_2473_1004C, dated 06.06.25.

An assessment of odour from the proposed kitchen facility has been undertaken using the EMAQ+ '*Guidance on the Control of Odours and Noise from Commercial Kitchen Exhaust Systems'*.

Based on the risk assessment criteria, the proposed kitchen facility is identified as having a High Risk of producing odour impacts at adjacent receptors. To ensure an adequate level of odour control an extraction system will be installed within the kitchen incorporating the following features:

- stainless steel extract canopy;
- Electrostatic precipitator (ESP);
- Purified Air UV-0 1000 ozone generator units;
- Unrestricted high velocity discharge flue with extract rate of 15m/s terminating at least 1m above roof level;
- Access doors within ducting system at intervals of at least 1.2m to allow easy access for cleaning.

In addition, an effective maintenance program will be implemented including regular cleaning of grill and fryer hoods, ducting, filters, ESP and Ozone units.
Based on the above extraction system and maintenance program it is considered that odour emissions will be effectively controlled, and no adverse effects will be experienced at nearby sensitive receptors.

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1 Introduction

1.1 General

Encon Associates were commissioned by McDonalds to carry out an odour assessment in connection with the proposed new McDonalds restaurant on land off Perth Road, Blairgowrie, Scotland (the 'Site').

The Site falls within the district of Perth and Kinross Council (PKC) on the western edge of the town of Blairgowrie, within the Westpark Retail Estate.

This report assesses odour impacts associated with the proposed development. Potential sources of emissions are identified and assessed in the context of the nature and location of receptors.

1.2 Scope of the Assessment

The application is for the construction of a new McDonalds restaurant with associated drive-thru facility and parking. A commercial kitchen will be included as part of the restaurant facilities. There is the potential for odour emissions to occur during opening times therefore an odour assessment has been undertaken in accordance with the EMAQ+ guidance on the '*Control of Odour and Noise* from *Commercial Kitchen Exhaust Systems*'[1] to assess the potential for odour nuisance at nearby sensitive receptors and ensure odour control measures will meet the requirements of the guidance and prevent odour at adjacent properties.

[1] Ricardo EMAQ+ (2022) Control of Odour and Noise from Commercial Kitchen Exhaust Systems, 2nd Edition, 6th May 2022

2 Site Description

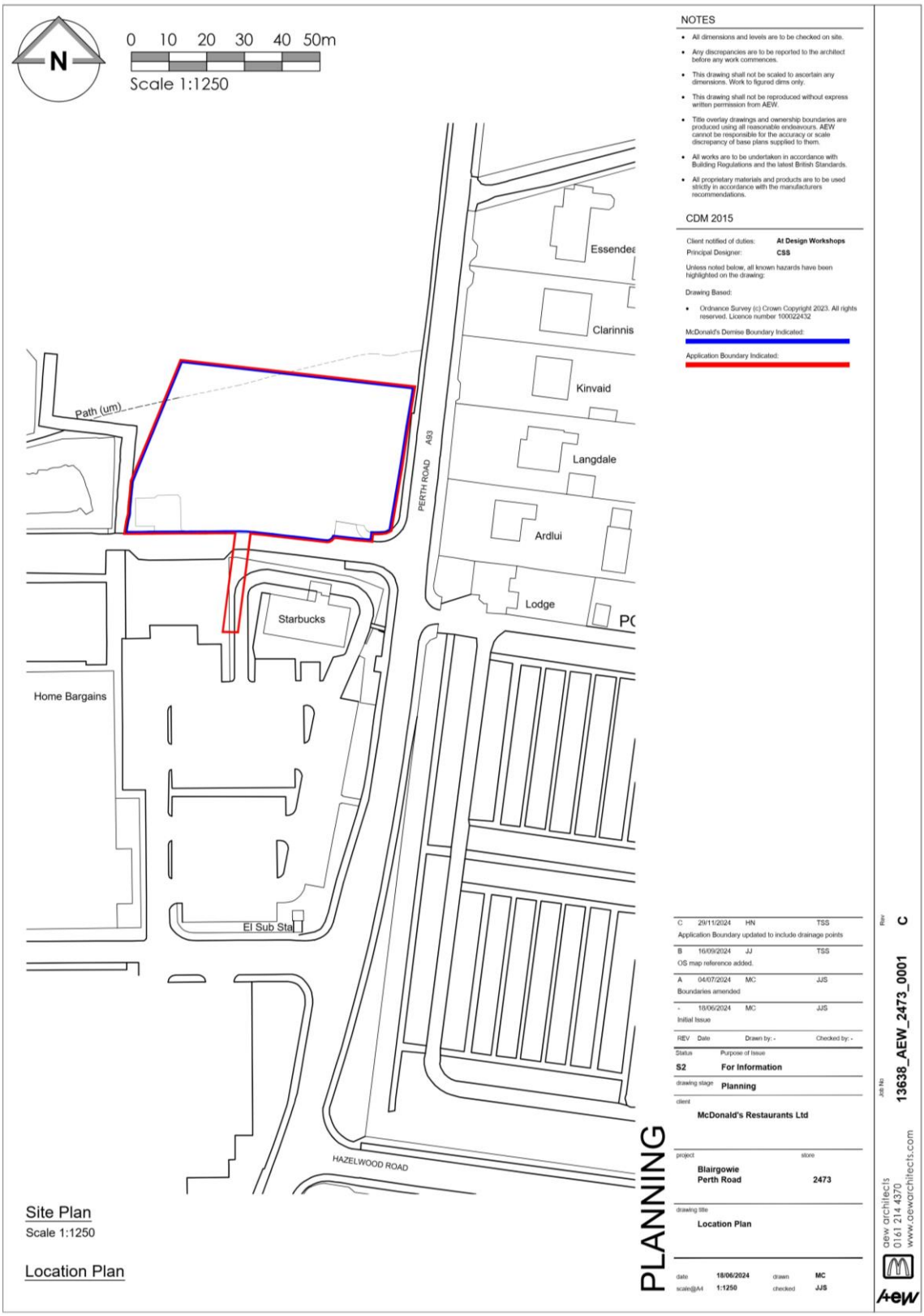
2.1 The Existing Site

The Site is located on the south- western edge of Blairgowrie, within the Westpark Retail Park, west of Perth Road. The Site lies on the northern side of the retail park opposite Starbucks Drive-thru.

The Site currently consists of an area of scrub land and is bounded by Perth Road to the east, the wider retail park to the south, scrub land to the north and west with an area of woodland beyond and a residential area to the east which includes the St Stephens RC Primary School and Blairgowrie Community Campus.

The nearest residential receptors are approximately 25 m to the east, while the school and surrounding outside space lie approximately 70 m to the east.
The location of the Site is shown, bounded in red, in Figure 2.1.

Figure 2.1: Location of proposed development site



2.2 Proposed Development

2.2.1 Site Layout

An application is being submitted for the construction of a purpose-built, drive-thru restaurant with drive-thru lane and car park area.

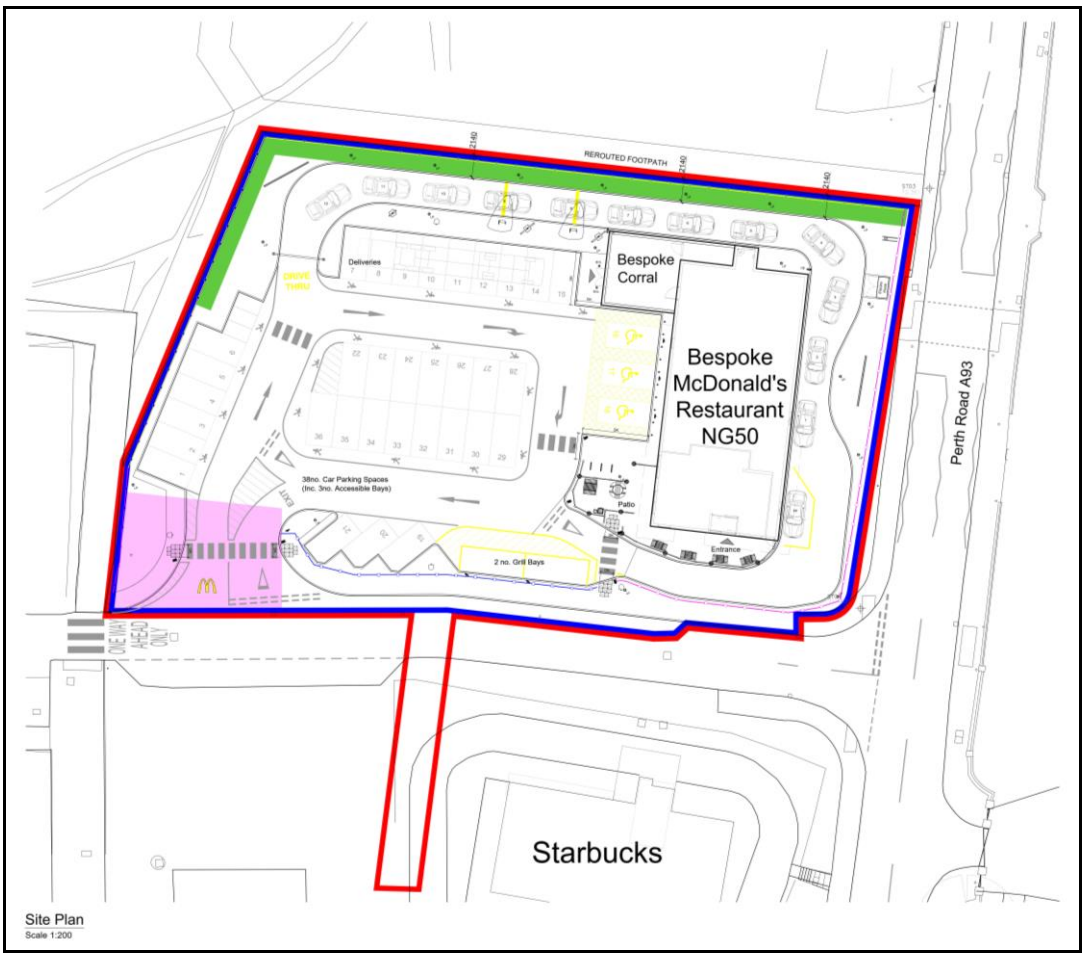
Access to the Site will be via the existing access road into the northern part of the retail park to the north of the existing Starbucks Drive-thru. A Drive-thru Lane will be provided running round the boundary of the Site in a clockwise direction and a central car park area. The restaurant building will be located on the eastern side of the Site immediately adjacent to Perth Road.

The restaurant will include a front of house seating area and commercial kitchen.

An indicative site layout of the Site is shown in Figure 2.2.

A high velocity exhaust flue connected to the ventilation and extraction system will terminate 1 m above the roof level, with the kitchen extract system being located above the kitchen area within the roof space or at roof level.

Figure 2.2: Layout of Site



2.2.2 Kitchen Facilities

The kitchen will be located on the south-western side of the building, as detailed in Figure 2.3 and will include the following equipment:

- Large kitchen store with freezer and chiller
- Commercial counter refrigerator units
- VAT friers with associated overhead VAT extraction Hood
- Dishwasher and washing machine
- Egg cooking equipment
- Single chassis grills with 2 x overhead grill hoods
- Muffin toasters, bun rack, protein steamer and hash brown trolley
- Drinks stations providing hot and cold drinks
- Ventilation and extraction system with odour control
- Rear coral providing a waste storage area.

The kitchen will be fitted with an extraction system with odour control connected to the extract flue.

3 Policy Context

3.1 Environmental Protection Act 1990

Part III of the Environmental Protection Act (1990)[2] contains the main legislation on statutory nuisance and allows local authorities and individuals to take action to prevent statutory nuisance. Section 79 of the Act defines, amongst other things, dust, steam, smell or other effluvia emitted from industrial, trade or business premises so as to be prejudicial to health or a nuisance. Statutory nuisance is defined as:

- 'fumes or gases emitted from a premises so as to be prejudicial to health or a nuisance; and
- 'any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance.

Statutory nuisance is not intended to secure a high level of amenity but rather to act as a basic safeguard standard that is intended to deal with excessive emissions. The test for considering whether a process presents a statutory nuisance relies upon considering a range of factors including the character of the locality, the frequency, duration and intensity of the impact.

Local Authority Environmental Health/Environmental Protection Officers have a duty to inspect their districts from time to time for statutory nuisance. They also have a duty to investigate any complaint of an alleged dust nuisance from the public. Once the authorised officer has formed the view that a statutory nuisance exists, the local authority has a statutory duty to serve an abatement notice on those responsible for the nuisance, requiring the nuisance to be abated.
Failure to comply with an abatement notice is an offence and if necessary, the local authority may abate the nuisance and recover expenses.

3.2 SEPA Odour Guidance

The odour guidance published by Scottish Environment Protection Agency (SEPA)[3] provides guidance on preventing, investigating and managing odours from commercial and industrial facilities. The guidance provides useful information on understanding odours, managing emissions and assessing odour effects, however the guidance has been produced specifically for SEPA officers engaged in regulating odorous activities, setting out the recommended approach to the regulation of odorous substances from activities which fall under the regulatory remit of the agency.

[2] Secretary of State, The Environment Act 1990 HMSO
[3] SEPA (2010) Odour Guidance 2010, Version 1, January 2010

Although the guidance provides useful information on understanding and assessing odours it does not provide guidance on assessing odours within the planning process.

3.3 IAQM Odour Guidance

On 20th May 2014 the Institute of Air Quality Management (IAQM) released guidance on the assessment of odour for planning[4] which was updated in 2018.

The guidance is for assessing odour impacts for planning purposes. It provides background information relating to requirements for odour impact assessments and suitable impact criteria and draws from other sources of information such as that described in Environment Agency H4 odour management guidance[5].

3.4 Guidance on the Control of Odour from Commercial Kitchen Exhaust Systems

Problems associated with nuisance odour from commercial kitchen exhausts are a common problem, particularly in urban areas where housing may be adjacent to a catering premises. The Control of Odour from Commercial Kitchens guidance document published by Ricardo EMAQ+ in May 2022 and which updates the 2005 DEFRA guidance, provides best practice techniques to minimise odour from kitchen exhaust systems.

The guidance provides a background into odour, the potential sources and effects of odour from kitchens and the regulatory roles in assessing and controlling odour. The document also sets out the best practice for the design and operation of commercial ventilation systems and the control of grease odour and noise emissions.

Appendix 3 of the Guidance sets out a risk assessment that can be used to identify the likelihood of odour nuisance occurring from a commercial kitchen facility and to assist in determining appropriate odour control requirements based on the operations carried out at the selected premises.

[4] IAQM (2018) Guidance on the Assessment of Odour for Planning

[5] Environment Agency (2011) H4 Odour Management – How to comply with your environmental permit

4 Methodology

4.1 Odour Assessment

4.1.1 Introduction

A risk assessment of the proposed activities has been carried out to identify the likely potential for odour to arise from the Site following the installation and operation of the restaurant and associated kitchen facilities.

Unlike other air pollutants, odour impacts cannot be easily monitored either at the point of emission or at the point of impact. Furthermore, odour impacts are highly subjective; a level of odour which can lead to complaints from one resident may be acceptable to a neighbouring resident. This makes it less straight forward to determine what level of emission is acceptable or what constitutes a significant impact. However, current guidance has been used to undertake the risk assessment and a level of professional judgement used to determine whether the proposed restaurant is likely to cause a significant impact at neighbouring properties.

The assessment is based on a desktop review of the proposed restaurant layout (Figure 2.3), the location of the restaurant in relation to nearby sensitive receptors (i.e. residential properties), the type of food being prepared, and any kitchen extract system being proposed.

4.1.2 Methodology

Odour Risk Assessment (EMAQ+ Guidance)

An odour risk assessment of the on-site catering facilities has been carried out according to the methodology given in the EMAQ+ guidance, as recommended within the IAQM guidance. A simple risk assessment has been undertaken using the criteria set out in Appendix 3 of the guidance, which is reproduced in Table 4.1 below. This provides an indication of the level of odour likely to occur from the on-site kitchen facilities and allows a significance score to be calculated based on the identified level of risk of odour impacts at adjacent receptors.

The significance score is used to identify the Impact Risk as set out in Table 4.2. The identified risk has been used to determine an appropriate extraction system to prevent odour effects at nearby receptors.

Table 4.1: Risk Assessment of Odour from on-site Kitchen Facilities

Criteria	Descriptive Score	Significance Score	Details
Dispersion	Very Poor	20	Low level discharge, discharge into courtyard or restriction on stack
	Poor	15	Not low level but below eaves, or discharge below 10 m/s
	Moderate	10	Discharging 1 m above eaves at 10-15 m/s
	Good	5	Discharging 1 m above ridge at 15 m/s
Proximity of receptors	Close	10	Closest sensitive receptor less than 20 m from kitchen discharge
	Medium	5	Closest sensitive receptor between 20 and 100 m from kitchen discharge
	Far	1	Closest sensitive receptor more than 100 m from kitchen discharge
Size of Kitchen	Large	5	More than 100 covers or large sized take away.
	Medium	3	Between 30 and 100 covers or medium sized take away.
	Small	1	Less than 30 covers or small take away.
Cooking type (odour and grease loading)	Very high	10	Pub (high level of fried food), fried chicken, burgers or fish & chips. Turkish, Middle Eastern or any premises cooking with solid fuel.
	High	7	Vietnamese, Thai, Indian, Japanese, Chinese, steakhouse.
	Medium	4	Cantonese, Italian, French, Pizza (gas fired)
	Low	1	Most pubs (no fried food, mainly reheating and sandwiches etc), tea rooms

Table 4.2: Odour Impact Risk and Level of Control

Impact Risk	Odour Control Requirement	Significance Score[1]
Low to Medium	Low level odour control	Less than 20
High	High level of odour control	20 to 35
Very High	Very high level of odour control	More than 35
[1] based on the sum of contributions from dispersion, proximity of receptors, size of kitchen and cooking type, as set out in Table 4.1		

5 Odour Risk Assessment

It is assumed that the proposed restaurant would provide over 100 covers per day. As shown in the plan set out in Figure 2.3, the kitchen will be located on the eastern side of the building with the extract system terminating at roof height with the discharge flue being approximately 1 m above roof level on the western side of the roof.

The nearest residential properties are located approximately 25m to the east of the kitchen area. A risk assessment of the potential for odour to occur from the proposed kitchen facilities, carried out in accordance with the EMAQ guidance, is provided below in Table 5.1.

Table 5.1: Risk Assessment for Odour from Proposed Restaurant

Criteria	Descriptive Score	Significance Score	Details
Dispersion	good	5	The kitchen extract flue would be located at least 1m above the roof level and emissions would be discharged vertically allowing for free flow of the emissions plume to disperse without disruption from adjacent structures and without undue disruption as a result of wind turbulence which can be created by an obstruction. Furthermore, the discharge velocity would be at least 15 m/s. Dispersion is therefore considered to be good based on professional judgement.
Proximity of receptors	Medium	5	The nearest sensitive receptors are 25m from the restaurant to the east of the Site. Note: There is consent for a residential development to the north of the Site which at the time of writing has yet to be built which is approximately 15m from the restaurant with a significance score of 10

Criteria	Descriptive Score	Significance Score	Details
Size of Kitchen	Large	5	Assumed that the restaurant would provide more than 100 covers per day.
Cooking type (odour and grease loading)	Very High	10	The restaurant would serve a high level of fried food (i.e. chips) plus burgers.
Total Score	**High**	**25**	**Overall score indicates a high risk of odour at adjacent receptors.**

Based on the risk assessment criteria (Table 4.1), the proposed kitchen facility is identified as having a High Risk of producing odour impacts at adjacent receptors. This is due to the size of the restaurant, type of food served and the proximity of sensitive receptors.

5.1 Mitigation of Odour

As detailed in the EMAQ+ guidance commercial kitchen ventilation systems should meet certain minimum requirements to ensure they meet best practice design. Details of these criteria are set out in Appendix A, including those relating specifically to odour control. Where a high level of odour control is required the extract system should be fitted with fine filtration or ESP followed by either carbon filtration or a UV ozone system with 0.2 – 0.4 second residence times.
A comprehensive kitchen extract system will be fitted to include a dedicated canopy fume extract system in conjunction with a general extract system.

The dedicated canopy extract system will include the following odour control as a minimum, which meets the requirements of the EMAQ+ guidance for locations requiring a high level of odour control:

- stainless steel extract canopy - local fume extraction by means of a low level built-in stainless steel extract canopy with removable and cleanable grease filters which removes 98% of airborne grease at source. The extract air volumes will be set based on tests undertaken by McDonalds to determine the effective grease removal range of the filters.
- Electrostatic Precipitator –will be fitted to provide fine filtration for further removal of grease particles.
- Ozone Injection – a Purified Air UV-0 1000 ozone generator unit will be fitted immediately after the ESP with a 2-second ozone contact period.

- Ventilation rates –will be automatically controlled to maximise ambient fresh air free cooling and minimise supply of air heating and cooling energy use.
- Removal of extract air will be via an external vertical discharge flue located at roof level, with an unrestricted vertical high velocity discharge flue at of rate of 15 m/s.
- Discharge point located 1 m above roof level above kitchen in a location free from obstructions.

Effective maintenance is required to ensure any extract system works effectively and continues to remove odours from the extract air. The proposed system will include access doors at intervals of at least 1.2 m within the extract ductwork to allow for cleaning. All air filters will be changed quarterly in conjunction with six monthly cleaning of the ducting and six-monthly servicing. The effectiveness of the extract system will be monitored and the interval between cleaning of filters and ducting will be reduced if considered necessary.

6 Conclusion

An assessment of odour from the proposed kitchen facility has been undertaken using the EMAQ+ '*Guidance on the Control of Odours and Noise from Commercial Kitchen Exhaust Systems'*.

Based on the risk assessment criteria, the proposed kitchen facility is identified as having a High Risk of producing odour impacts at adjacent receptors. To ensure an adequate level of odour control an extraction system will be installed within the kitchen incorporating the following features:

- stainless steel extract canopy;
- Electrostatic precipitator (ESP);
- Purified Air UV-O 1000 ozone generator unit;
- Unrestricted high velocity discharge flue with extract rate of 15m/s terminating at least 1m above roof level;
- Access doors within ducting system at intervals of at least 1.2m.

In addition, an effective maintenance program will be implemented including regular cleaning of grill and fryer hoods, ducting, filters, ESP and Ozone units.
Based on the above extraction system and maintenance program it is considered that odour emissions will be effectively controlled, and no adverse effects will be experienced at nearby sensitive receptors.

Appendix A

Best practice for Design and Operation of Commercial Kitchen Ventilation Systems

Minimum ventilation rates

- An internal ambient air temperature of 26^0C maximum.
- Maximum humidity levels of 65%.
- Internal noise level should comply with HSE workplace guidance.
- Dedicated make up air system to be approximately 85% of the extract flow rate.
- Minimum air change rate of 40 per hour (bases on canopy and general room extraction).
- Extract flow rates for a commercial kitchen should be calculated using the thermal convection method, as this overcomes heat and odour variation between different types of cooking appliances. Other methods can be used for setting extraction requirements from other parts of the kitchen.

Minimum Requirements For Canopy

- Velocity requirements
  - Light loading – 0.15 m/s (applies to steaming ovens, boiling pans, bains maries and stock pot stoves).
  - Medium loading – 0.225 m/s (applies to deep fat fryers, bratt pans solid and open top ranges and griddles).
  - Heavy loading – 0.3 m/s (applies to chargrills, mesquite and specialist broiler units).
- Sizing
  - Ideally, the plan dimensions of the canopy shall always exceed the plan dimensions of the catering equipment with an overhang of 0.3m on each free side.
  - The overhand should be increased to 0.6m in front of combination steaming ovens to cope with the steam and fumes released when the doors of the

appliance are opened. Solid fuel appliances must have an overhang measured from the door open position.

- Material
  - To comply with the food hygiene requirements the canopy should be made of stainless steel.
- Grease Separation
  - The grease extracted by the separators shall be collected and removed so that it will not accumulate in either the canopy plenum or the ductwork system, or fall back onto the cooking surface.
  - The separator shall be constructed so that there are not sharp edges or projections and shall be easily removable for regular cleaning.
  - Primary filters that retain grease within the filtration matrix until cleaned, shall not be used (not to be confused with those designed with purpose made integral collection reservoirs).

Minimum Requirements For Duct Work

- All ductwork should be constructed in accordance with industry best practice.
- Duct velocities should be between 2.5 and 8 m/s.
- All internal surfaces of the ductwork should be accessible for cleaning and inspection. Access panels should be installed suitable intervals and should be leak tight.
- Duct work should comply with fire safety regulations.

Minimum Requirements For Fans

Fans should have the capacity to operate at a margin of over 10% above the design pressure to allow for build-up of material or to account for possible extensions to the original kitchen plan.

Fans must be capable of handling hot, grease-laden air. The fan housing should be fitted with plugged drain holes, which should be fitted at the lowest point in the fan housing to remove grease and condensate.

The supply and extract fans should be located to ensure that there is sufficient space for regular cleaning and maintenance.

There should be no air leakage at any point of the duck work and fan housing.

Fans providing extraction to canopies above solid fuel burning appliances, should be designed to accommodate the higher operating temperature (e.g. have their motor of the airstream, use metal impellers blades etc).

Minimum Requirements For Odour Control

Objectives

- for new premises or premises covered by planning conditions restricting the impact of odour the system shall be designed to prevent harm to the amenity.
- for existing premises not covered by planning conditions restricting the impact of odour, the system shall be designed to avoid statutory nuisance and shall comply with the principles of Best Practical Means.
- The design of a control system should recognise that there are two phases of contamination in a kitchen exhaust; particulate (grease, smoke, hydrocarbons/VOC) and gaseous (odour). The particulate phase needs to be removed prior to dealing with the gaseous phase.

To achieve these objectives the odour control system shall include an adequate level of:

1. Particulate and odour control; and
2. stack dispersion.

The overall performance of the odour abatement system will represent a balance of 1and 2.

Discharge stack

The discharge stack shall:

1. Discharge the extracted air not less than 1 m above the roof ridge of any building within 15m of the vent serving the commercial kitchen. Additional odour control, measures may still be required depending on the cooking type and frequency.
2. If 1 cannot be complied with for planning reasons, then the extracted air shall be discharged not less than 1 m above the roof eaves or dormer window of the building housing the commercial kitchen. A higher level of odour control measures than those for part 1 may be required.
3. If 1 or 2 cannot be complied with for planning reasons, then a higher level of odour control measures than those required for part 1 or 2 may be required.

Odour arrestment plant performance

Low to medium level control may include:

1. Fine filtration or ESP following by carbon filtration (carbon filters rated with a 0.1 second residence time).
2. Fine filtration followed by counteractant/neutralising system to achieve the same level of control as 1.

High level odour control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.2-0.4 second residence time).
2. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as 1.

Very high level odour control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.4 – 0.8 second residence time).
2. Fine filtration or ESP followed by carbon filtration and by counteractant/neutralising system to achieve the same level of control as 1.
3. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as 1.

In some instances where very high levels of control are required combinations or sacrificial levels of filtration may be employed.

Maintenance must be carried out to ensure these performance levels are always achieved.

Maintenance

Proprietors of commercial kitchens have a duty to ensure that the ventilation system serving the respective premises are maintained and operated effectively. Good maintenance is a prerequisite for ensuring that a system complies with Best Practicable Means under statutory nuisance provision and will form a key element of any scheme designed to minimise harm to the amenity under planning regulation. Good maintenance is required by the food hygiene regulations and will also minimise the risk of fire and minimise noise.

The recommended cleaning period for extract ductwork is:

- Heavy Use 12-16 Hours Per Day - 3 Monthly cleaning interval
- Moderate Use 6-12 Hours Per Day - 6 Monthly cleaning interval
- Light Use 2-6 Hours Per Day – Annually cleaning interval

Recommendations for maintenance of odour control system include:

- System employing fine filtration and carbon filtration.
  - Change fine filters every two weeks.
  - Change carbon filters every 4 to 6 months.
- Use a system employing ESP and other in line abatement, typically
  - ESP systems cleaned, and sump emptied on a four weekly basis.
  - UV-C systems used in line, cleaned on a four weekly basis.
  - Side Stream UV-C systems, cleaned every 3 to 6 months.
  - Carbon filters with ESP pre-treatment change carbon filter every 6 to 12 months.

These time frames may increase or reduce for extreme or very light applications.

Air Quality Assessment

New McDonalds Restaurant at

Perth Road, Blairgowrie

28th October 2024

Rev D 27th June 2025

ENVIRONMENTAL AND SUSTAINABILITY CONSULTANTS

encon associates

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Executive Summary

Encon Associates were commissioned by McDonalds (the 'Client') to carry out an air quality assessment in connection with the proposed new McDonalds Drive-Thru and restaurant at Perth Road, Blairgowrie (the 'Site').

This report has been updated with the new Proposed Site Plan, Proposed Site Plan, 13638_AEW_2473_1004C, dated 06.06.25.

The Site falls within the district of Perth and Kinross Council (PKC) on the western edge of the town of Blairgowrie, within the Westpark Retail Estate. Air quality within the brough is generally good and is meeting the relevant air quality limits at locations of relevant exposure within Blairgowrie. The Council have declared two Air Quality Management Area (AQMA) due to exceedances of the annual mean nitrogen dioxide (NO_2) objective. The AQMA covers the whole of Perth City (over 14 km to the south-west of Blairgowrie) and the high street corridor through Crieff (0ver 20km to the south-west of Blairgowrie). No AQMA has been declared within Blairgowrie.

It is inevitable that with any development, demolition and construction activities will cause some disturbance to those nearby. Dust arising from most construction activities tends to be of a coarse nature, which through dispersion by the wind can lead to soiling of property including windows, cars, external paintwork and laundry. However, as well as giving rise to annoyance due to soiling of surfaces from dust emissions, there is evidence of major construction activities causing increases in long term PM_{10} concentrations and in the number of days exceeding the short term PM_{10} objective of 50 μgm^{-3}.

The IAQM guidance on assessing impacts on air quality from construction activities and determining the likely significance has been used to determine the risk of impacts occurring during the construction of the development and to identify appropriate mitigation measures to be implemented on site to reduce dust emissions and associated impacts.

Due to the proximity of nearby residential receptors the Site is considered to have a low risk of impacts with regards to dust soiling and PM_{10} concentrations. However, following the implementation of appropriate mitigation measures impacts associated with the construction of the development are likely to be insignificant.

The proposals will not generate a significant number of additional vehicle movements on the adjacent road network. Impacts on local air quality associated with operational traffic will be negligible. Furthermore, all energy provision will be provided by low emission or non-combustible sources therefore on-site emissions will be negligible.

The assessment has also concluded that pollution levels across the borough are well within the relevant air quality limit values therefore impacts associated with exposure will be negligible.

The assessment shows that the development proposals will meet the requirements of both national and local planning policy and air quality does not pose a constraint to development of the Site for the proposed uses.

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1 Introduction

1.1 Overview

Encon Associates were commissioned by McDonalds (the 'Client') to carry out an air quality assessment in connection with the proposed new McDonalds Drive-Thru and restaurant at Perth Road, Blairgowrie (the 'Site').

The Site falls within the district of Perth and Kinross Council (PKC) on the western edge of the town of Blairgowrie, within the Westpark Retail Estate. Air quality within the borough is generally good and is meeting the relevant air quality limits at locations of relevant exposure within Blairgowrie. The Council have declared two Air Quality Management Area (AQMA) due to exceedances of the annual mean nitrogen dioxide (NO_2) objective. The AQMA cover the whole of Perth City (over 14 km to the south-west of Blairgowrie) and the high street corridor through Crieff (0ver 20km to the south-west of Blairgowrie). No AQMA has been declared within Blairgowrie.

This report assesses air quality impacts associated with the proposed development. Potential sources of emissions are identified and assessed in the context of existing air quality and emission sources and the nature and location of receptors.
A glossary of common air quality terminology is provided in Appendix A.

1.2 Scope of Assessment

The application is for the construction of a new McDonalds restaurant and drive-thru on land to the west of Perth Road, on the northern edge of Westpark retail park. The potential impacts of operational traffic have been assessed in accordance with current air quality planning guidance published by the Institute of Air Quality management (IAQM)[1],

The assessment has concentrated on nitrogen dioxide (NO_2) and particulate matter with an aerodynamic diameter of less than 10 µm and 2.5 µm (PM_{10} and $PM_{2.,5}$), the pollutants most associated with traffic emissions and which can be harmful and cause discomfort to humans.

An assessment of air quality impacts associated with the demolition and construction activities has also been undertaken to determine measures for inclusion within a Construction Management Plan (CMP).

[1] IAQM, Land-use Planning and Development Control: Planning for Air Quality, January 2017

2 Site Description

2.1 The Existing Site

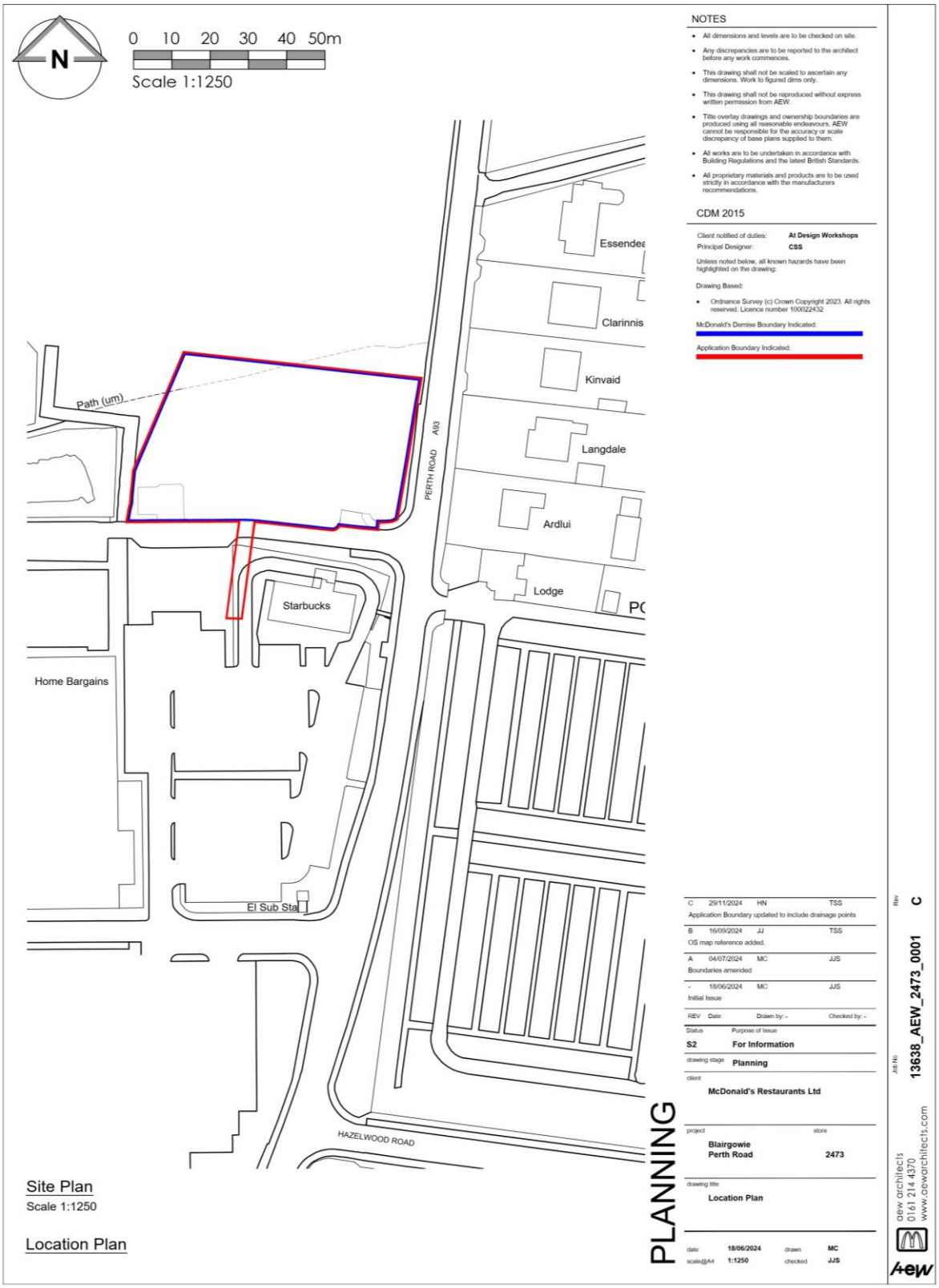
The Site is located on the south- western edge of Blairgowrie, within the Westpark Retail Park, west of Perth Road. The Site lies on the northern side of the retail park opposite Starbucks Drive-thru.

The Site currently consists of an area of scrub land and is bounded by Perth Road to the east, the wider retail park to the south, scrub land to the north and west with an area of woodland beyond and a residential area to the east which includes the St Stephens RC Primary School and Blairgowrie Community Campus.

The nearest residential receptors are approximately 25 m to the east, while the school and surrounding outside space lie approximately 70 m to the east.

The location of the Site is shown, bounded in red, in Figure 2.1.

Figure 2.1: Location of proposed development site



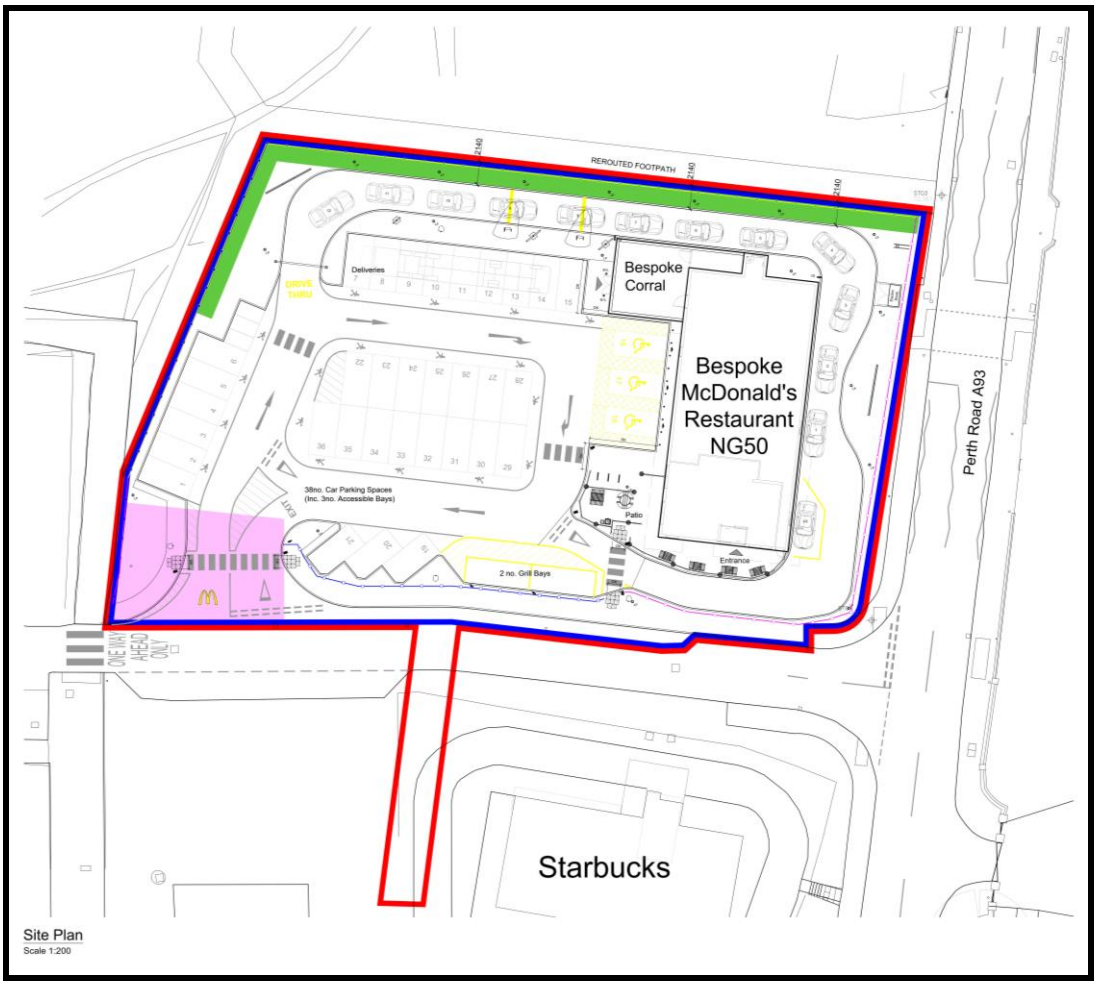
2.2 Proposed Development

An application is being submitted for the construction of a purpose-built, Drive-thru restaurant with Drive-thru lane and car park area.

Access to the Site will be via the existing access road into the northern part of the retail park to the north of the existing Starbucks Drive-thru. A Drive-thru Lane will be provided running round the boundary of the Site in a clockwise direction and a central car park area. The restaurant building will be located on the eastern side of the Site immediately adjacent to Perth Road.
The restaurant will include a front of house seating area and commercial kitchen.

An indicative layout of the Site is shown in Figure 2.2.
A high velocity exhaust flue connected to the ventilation and extraction system will terminate 1 m above the roof level, with the kitchen extract system being located above the kitchen area within the roof space or at roof level.

Figure 2.2: Layout of Site



3 Policy Context and Guidance

3.1 National Legislation and Policy

3.1.1 The Air Quality Regulations

The Air Quality (Scotland) Regulations 2000[2], Air Quality (Scotland) Amendment Regulations 2002[3] and Air Quality (Scotland) Amendment Regulations 2016[4] set out a series of air quality objectives for the protection of human health and critical levels for the protection of vegetation. Objectives apply both nationally, where they are the responsibility of national government and locally, where achieving them is the responsibility of the relevant local authority.

The air quality objectives are long-term benchmarks for ambient pollutant concentrations which represent negligible or zero risk to health, based on medical and scientific evidence reviewed by the Expert Panel on Air Quality Standards (EPAQS) and the World Health Organisation (WHO). These are general concentration limits, above which sensitive members of the public (e.g. children, the elderly and the unwell) might experience adverse health effects.

For some pollutants, there is both a long-term (annual mean) limit and a short-term limit. In the case of NO_2, the short-term standard is for a 1-hour averaging period, whereas for PM_{10} it is for a 24-hour averaging period. These periods reflect the varying impacts on health of differing exposures to pollutants (e.g. temporary exposure on the pavement adjacent to a busy road, compared with the exposure of residential properties adjacent to a road).
Of the pollutants included in the regulations, NO_2, PM_{10} and $PM_{2.5}$ are of particular relevance to this assessment as these are the primary pollutants associated with road traffic. The current limit values for these three pollutants in relation to human health are set out in Table 3.1.

[2] The Air Quality (Scotland) Regulations 2000- Scottish Statutory Instrument 2000 No.97
[3] The Air Quality (Scotland) Amendment Regulations 2002 – Scottish Statutory Instrument No. 297
[4] The Air Quality (Scotland) Amendment Regulations 2016 – Scottish Statutory instrument No. 162

Table 3.1: Relevant Limit Values set out in the Air Quality Regulations

Pollutant	Concentrations	Measured As	Date to be Achieved by
Nitrogen Dioxide (NO_2)	200 µg/m^3 not to be exceeded more than 18 times per year	1-hour mean	31 December 2005
	40 µg/m^3	Annual mean	31 December 2005
Particulate Matter (PM_{10})	50 µg/m^3 not to be exceeded more than 7 times per year	24-hour mean	31 December 2010
	18 µg/m^3	Annual mean	31 December 2010
Particulate Matter ($PM_{2.5}$)	10 µg/m^3	Annual Mean	31 December 2020

The NAQOs apply to external air where there is relevant exposure to the public over the associated averaging periods within each objective. Guidance is provided within Local Air Quality Management Technical Guidance 2022 (LAQM.TG(22))[5] issued by the Defra for Local Authorities, on where the NAQOs apply as detailed in Table 3.2. The objectives do not apply in workplace locations, to internal air or where people are unlikely to be regularly exposed (i.e. centre of roadways).

It should be noted that the EU Limit Values are numerically the same as the NAQO values but differ in terms of compliance dates, locations where they apply and legal responsibility. The compliance date for the NO_2 Limit Values is 1 January 2010, which is five years later than the date for the NAQO.

The Limit Values are mandatory, whereas the NAQOs are policy objectives. Local authorities are not required to achieve them but have to work towards their achievement. In addition, the limit Values apply in all locations except where members of the public do not have access and there is no fixed habitation, on factory premises or at industrial installations, and on the carriageway/central reservation of roads except where there is normally pedestrian access.

[5] Defra (2022) Local Air Quality Management. Technical Guidance LAQM.TG(22)

Table 3.2: Locations Where Air Quality Objectives Apply

Averaging Period	Objectives should apply at:	Objectives should generally not apply at:
Annual mean	All locations where members of the public might be regularly exposed. Building Facades of residential properties, schools, hospitals, care home etc.	Building facades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. Gardens of residential properties. Kerbside sites (as opposed to locations at the building facade), or any other location where public exposure is expected to be short term.
24-hour mean	All locations where the annual mean objective would apply together with hotels. Gardens of residential properties.	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term.
1-hour mean	All locations where the annual mean and 24 hour mean objectives apply. Kerbside Sites (e.g. pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc. which are not fully enclosed, where the public might reasonably be expected to spend 1-hour or more. Any outdoor locations where the public might reasonably be expected to spend 1-hour or longer.	Kerbside sites where the public would not be expected to have regular access.

3.1.2 Local Air Quality Management

Local authorities are seen to play a particularly important role. Section 82 of the Environment Act 1995 requires every local authority to conduct a review of the air quality from time to time within the authority's area. LAQM.TG(22) and Scotland's LAQM Policy Guidance ((PG(S)(24))[6] describes a streamlined approach to the Local Air Quality Management (LAQM) regime, whereby every authority has to undertake and submit a single Annual Status Report/Annual Progress Report within its area, to identify whether the objectives have been or will be achieved at relevant locations by the applicable date. If the objectives are not being met, the authority must declare an Air Quality Management Area (section 83 of the Act) and prepare an action plan (section 84) which identifies measures that will be introduced in pursuit of the objectives.

3.1.3 Cleaner Air For Scotland 2 – Towards a Better Place for Everyone

The Strategy[7] sets out how the Scottish Government will continue to deliver air quality improvements across the country based on the recommendations arising from the Cleaner Air for Scotland (CAFS) review[8]. The Strategy sets out actions the Government will take to reduce emissions and improve air quality, working with local authorities and other organisations to implement measures and actions that benefit air quality, inform future plans and policy making and undertake further research and monitoring of emissions.

3.1.4 Control of Dust and Particulates Associated with Construction

Section 79 of the Environmental Protection Act (1990)[9] states that where a statutory nuisance is shown to exist, the local authority must serve an abatement notice. Statutory nuisance is defined as:

- *'any dust or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance', and*
- *'any accumulation or deposit which is prejudicial to health or a nuisance'.*

Failure to comply with an abatement notice is an offence and if necessary, the local authority may abate the nuisance and recover expenses.
In the context of the proposed development, the main potential for nuisance of this nature would arise during the construction phase - potential sources being the clearance, earthworks, construction and landscaping processes.

[6] Scottish Government (2024) Local Air Quality management Policy Guidance PG(S) (24), May 2024
[7] Scottish Government (2021) Cleaner Air for Scotland – Towards a Better Place for Everyone, July 2021
[8] Cleaner Air for Scotland Strategy: Independent Review – www.gov.scot
[9] Secretary of State, The Environment Act 1990 HMSO

There are no statutory limit values for dust deposition above which 'nuisance' is deemed to exist - 'nuisance' is a subjective concept and its perception is highly dependent upon the existing conditions and the change which has occurred. However, research has been undertaken by a number of parties to determine community responses to such impacts and correlate these to dust deposition rates. However, impacts remain subjective and statutory limits have yet to be derived.

3.2 Planning Policy

3.2.1 National Planning Policy

The most recent Scottish planning policy, National Planning Framework 4 (NPF4) was published in February 2023. The Plan sets out six overarching spatial principles aimed at delivering on the United Nations (UN) Sustainable Development Goals (SDgs) and the Scottish national outcomes. By applying the spatial principles, the Strategy aims to support the planning and delivery of:

- Sustainable places – where emissions are reduced, and biodiversity is restored and better connected
- Liveable places – where there is better and healthier living
- Productive places – where the economy is greener, fairer and more inclusive.

Page 76 of the Framework sets out Policy 23 which aims *to 'protect people and places from environmental harm, mitigate risks arising from safety hazards and encourage, promote and facilitate development that improves health and wellbeing'*.

With specific reference to air quality the Policy sets out the following:
'…d) Development proposals that are likely to have significant adverse effects on air quality will not be supported. Development proposals will consider opportunities to improve air quality and reduce exposure to poor air quality. An air quality assessment may be required where the nature of the proposal or the air quality in the location suggest significant effects are likely'.

3.2.2 Perth and Kinross Local Development Plan 2

The Perth and Kinross Local Development Plan 2[10] sets out the framework for which planning applications will be assessed.

In dealing with air quality the Plan sets out the following under Policy 57:

'The Council has a responsibility to improve air quality. The LDP does this by seeking to prevent the creation of new pollution hotspots, and to prevent introduction of new human exposure where there could be existing poor air quality.

The LDP extends support to low emission technologies for both transport and energy production. AS well as aspiring to improve air quality, the policy also aspires to eliminate the gradual worsening in air quality that is caused by the cumulative impact of many small developments.
Within or adjacent to designated AQMA, where pollution concentrations are in excess of the national air quality objectives and may pose a risk to human health, development proposal that would adversely affect air quality may not be permitted. There is a presumption against locating development catering for sensitive receptors in areas where they may be expose to elevated pollution levels.

Any proposed development that could have a detrimental effect on air quality, through exacerbation of exiting air quality issues or introduction of new sources of pollution (including dust and/or odour), must provide appropriate mitigation measures. The LDP expects that some type of mitigation of air quality impacts will be required for all but the smallest developments. Best practice design measures should therefore be considered early in the design and placemaking process.
Proposals and mitigation measures must not conflict with the actions proposed in Air Quality Action Plans.

An air quality assessment will usually be requiried where the Council considers that there may be a risk of an air quality impact upon human health. The main ways in which a development may potentially impact upon air quality are as follows:

- *a) Introducing new human exposure at a location with poor air quality (e.g. within an existing AQMA or close to a busy road or junction);*
- *b) The development may itself lead to a deterioration in local air quality (e.g. from increased vehicle emissions or flue emissions from heating or energy production plant); and*
- *c) If the demolition/construction phase will have an impact upon the local environment (e.g. through fugitive dust and/or exhaust emissions from machinery and vehicles).*

[10] Perth and Kinross Council (2019) Local Development Plan 2, November 2019

The cumulative impact of other consented development and of these three criteria will be taken into account. In line with best practice, screening criteria will be used to identify where impacts are significant. Supplementary guidance will set out how air quality will be considered when determining planning applications.
The Council keeps an evidence base of air quality and has developed a high-resolution dispersion model for the LDP area.'

3.2.3 Perth and Kinross Air Quality and Planning Supplementary Document

The Perth and Kinross Air Quality SPD[11] sets out an approach to assessing air quality in relation to development proposals to provide a consistent approach to the process and provide guidance on how air quality will be considered by the Council when determining an application. Guidance set out within the SPD has been used to determine the scope of this assessment.

3.3 Air Quality Guidance

3.3.1 DEFRA Technical Guidance

LAQM.TG(22) sets out detailed guidance on how air quality should be assessed and monitored by local authorities. The document provides useful guidance on how air quality from specific sources should be screened and the approaches that should be used to undertake detailed assessment where potentially significant emissions are identified, including details on model verification and consideration of monitoring data for use in assessments.

3.3.2 IAQM Land Use Planning and Development Control: Planning for Air Quality

Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK) have published joint guidance on the assessment of air quality impacts for planning purpose. This includes information on when an air quality assessment is required, what should be included in an assessment and criteria for assessing the significance of any impacts. The scope of the operational impact and exposure assessment within this report are based on the guidance set out in this document.

3.3.3 IAQM Guidance on the Assessment of Dust from Demolition and Construction

Guidance produced by the IAQM on assessing impacts from construction and demolition activities[12] includes a methodology for identifying the risk magnitude of potential dust sources associated with

[11] Perth and Kinross Council (2020) Air Quality and Planning, March 2020
[12] IAQM (2024) Guidance on the Assessment of Dust from Demolition and Construction, Version 2.2, January 2024

demolition, construction, earthworks and trackout. This is then used to identify the level of mitigation necessary in order for the impacts to be not significant.

4 Methodology

4.1 Baseline Assessment

A baseline assessment of air quality in the vicinity of the Site and the surrounding area has been carried out through a review of monitoring data available within the NYC air quality review and assessment reports, most notably the PKC 2023 Air Quality Annual Progress Report (APR)[13] Additional data has been obtained from the UK Air Information Resource (UK-AIR) background pollution maps[14].

The baseline assessment has also been informed by the results of the detailed modelling assessment, the details of which are set out in Section 4.3.

4.2 Construction Phase

4.2.1 Construction Traffic

During construction of the proposed development, lorries will require access to the Site to deliver and remove materials; earthmoving plant and other mobile machinery will work on site and generators and cranes will also be in operation. These machines produce exhaust emissions; of particular concern are emissions of NO_2 and PM_{10}.
It is anticipated that during the construction phase there would be no more than 5-10 heavy duty vehicles (HDV) accessing the Site in any given day.

The EPUK & IAQM air quality planning guidance sets out criteria to determine when significant effects are likely to occur, and a more detailed assessment of traffic emissions is required. The criteria indicate that significant impacts on air quality are unlikely to occur where a development results in less than 25 HDV movements per day in locations within or adjacent to an AQMA and less than 100 HDV outside of an AQMA. It is therefore anticipated that as the Site does not fall within an AQMA, construction traffic generated by the proposed development would result in a negligible impact on local NO_2 and PM concentrations and has not been considered any further in this assessment.

[13] PKC (2023) 2023 Air Quality Annual Progress Report for Perth & Kinross Council, July 2023
[14] https://uk-air.defra.gov.uk/data/laqm-background-home

4.2.2 Construction/Fugitive Dust

Construction phase activities associated with the Proposed Development may result in the generation of fugitive dust emissions (i.e. dust emissions generated by site-specific activities that disperse beyond the construction site boundaries).
If transported beyond the site boundary, dust can have an adverse impact on local air quality. The IAQM guidance considers the potential for dust nuisance and impacts to human health and ecosystems to occur due to activities carried out during the following stages of construction:

- Demolition (removal of existing structures).
- Earthworks (soil-stripping, ground-levelling, excavation and landscaping).
- Construction (activities involved in the provision of a new structure); and
- Trackout (the transport of dust and dirt from the construction site onto the public road network where it may be deposited and then re-suspended by vehicles using the network).

A qualitative assessment of air quality impacts due to the release of fugitive dust and particulates (PM_{10}) during the construction phase was undertaken in accordance with the methodology detailed in the IAQM guidance.

The assessment takes into account the nature and scale of the activities undertaken for each source and the sensitivity of the area to an increase in dust and PM_{10} levels, thus enabling a level of risk to be assigned. Risks are described in terms of there being a low, medium or high risk of dust impacts.

Once the level of risk has been ascertained, then site specific mitigation proportionate to the level of risk is identified, and the significance of residual effects determined.
A summary of the IAQM assessment methodology is provided in Appendix B.

4.3 Operational Phase

4.3.1 Traffic Emissions

The screening criteria set out in the EPUK & IAQM has been used to determine whether the trip generation from the operational development is likely to result in a significant impact on local air quality. The guidance states that where the following criteria are exceeded a more detailed assessment is required:

- An increase in LGV or more than 100 vehicles per day within or adjacent of an AQMA, an increase of more than 500 per day elsewhere;
- An increase in HGV or more than 25 vehicles per day or adjacent to an AQMA, an increase of more than 100 per day.

Anticipated trip generation from the operational development has assessed against the above criteria. Where this criterion is exceeded then a detailed assessment of operational impacts may be required.

5 Baseline Assessment

5.1 Perth and Kinross Review and Assessment of Air Quality

PKC has carried out detailed assessments of air quality in the borough and as a result has declared two AQMA within the district due to exceedances of the annual mean NO_2 objective at locations of relevant exposure. However, both AQMA are over 14km from the Site.
The Site does not fall within an AQMA and air quality within Blairgowrie has been found to be meeting the relevant air quality objective limits at locations of relevant exposure. Furthermore, monitoring across the district has shown that for the fourth year running, the air quality objective limits have not been exceeded at any location within the district, including within the AQMA.

5.2 Air Quality Monitoring

5.2.1 NO_2 Concentrations

PKC monitors NO_2 concentrations extensively across the borough using both automatic and non-automatic (diffusion tubes) monitoring sites at a mix of background, roadside and kerbside sites. Only one of these is located in Blairgowrie, located at the junction of Balmoral Road (A93) and Boat Brae (A926) (Monitoring Site P108), approximately 1.6 km to the north-east of the Site.

Annual mean NO_2 concentrations recorded at all monitoring sites within the district have been below the limit value of 40 µg/m^3 since 2019, based on data set out within the PKC 2023 APR. Concentrations recorded at Site P108 on Balmoral Road have been at less than 70% of the objective (well below) since 2018. Furthermore, data from across the district shows a consistent downward trend in concentrations since 2018. During 2022 an annual mean concentration of 17.3 µg/m^3 was recorded at monitoring site P108 in Blairgowrie.

Diffusion tubes cannot monitor short-term NO_2 concentrations, however, research[15] has concluded that exceedences of the 1-hour mean objective are generally unlikely to occur where annual mean concentrations do not exceed 60 µg/m^3. Based on monitoring data presented in the 2023 APR, which shows at all locations annual mean concentrations are less than 30 µg/m^3, it is unlikely that the short-term objective is being exceeded at any of the monitoring sites.

[15] D Laxen and B Marner: Analysis of the relationship between 1-hour and annual mean nitrogen dioxide at UK roadside and kerbside monitoring sites (July 2003).

5.2.2 PM Concentrations

PM_{10} concentrations are measured at four location within the district, three within Perth and one in Crieff.

Annual mean concentrations recorded at all three sites have been less than 18 µg/m^3 since 2018 although there has been little change in concentrations over the five year period.
All three sites have recorded exceedances of the 24-hour limit value since 2018, however, only at one site, located on Atholl Street in Perth, has the number of exceedances exceeded 7, indicating a an exceedance of the 24-hour objective which allows for up to 7 exceedances in any given year.
$PM_{2.5}$ concentrations are also measured at the three automatic sites. Data recorded since 2018 indicates that $PM_{2.5}$ concentrations have been below the objective of 10 µg/m^3 over the monitoring period, again with little change in concentrations over the 5 year period.

5.2.3 Defra Background Maps

Additional information on estimated background pollutant concentrations has been obtained from the Scottish Government Air Quality website (https://www.scottishairquality.scot/data/mapping/data) background mapping data. Estimated air pollution concentrations for oxides of nitrogen (NO_x), NO_2 and PM_{10} have been extracted from the 2018 based background pollution maps for Scotland. These maps are available in 1 km x 1 km grid squares and provide an estimate of concentrations between 2018 and 2030. The average concentrations for the grid square representing the Site (OS317500, 743500) have been extracted for the 2024 base year. The data is provided in Table 4.1.
No data is currently available within the Scottish maps for $PM_{2.5}$. Background data for this pollutant has therefore been obtained from the Defra background maps provided on the UK-AIR, the Air Quality Information Resource (http://uk-air.defra.gov.uk/). 2024 data is provided in Table 4.1.

Table 4.1: Annual Mean Background Air Pollution Concentrations in 2023

Location (OS Grid Square)	Annual mean concentrations (μgm^{-3})		
	Nitrogen dioxide	PM_{10}	$PM_{2.5}$
317500, 743500	2.7	8.2	4.6

The data indicates that existing background concentrations are currently meeting the NO_2, PM_{10} and $PM_{2.5}$ objectives in the vicinity of the Site.

6 Construction Assessment

6.1 Assessing the Risk of Dust Effects

6.1.1 Site and Surroundings

A summary of the proposed development is provided in Section 2 of this report.

There are residential properties located to the east of the Site within 50 m. An assessment of construction related impacts in relation to human receptors is therefore considered necessary.

Significant impacts on ecologically sensitive receptors are unlikely to occur beyond 50 m from any construction activities. A review of data held on the Defra MAGIC website[16] shows no sites designated as important for wildlife within 50 m of the Site therefore impacts on ecological receptors has not been considered any further within this assessment.

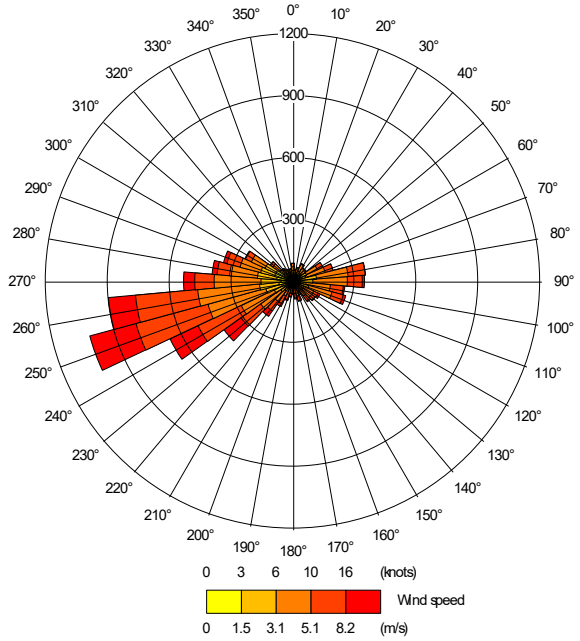
A review of background data published by the Scottish Government and Defra within the 2024 background maps, indicates background concentrations of PM_{10} at the Site in the region of 8-9 $\mu g/m^3$, at 50% of the annual mean objective. It is therefore expected, based on professional judgement, that concentrations at roadside locations are unlikely to be higher than 14 $\mu g/m^3$, making the surrounding area low in sensitivity to human health impacts.

The precise behaviour of the dust, its residence time in the atmosphere, and the distance it may travel before being deposited would depend upon a number of factors. These include wind direction and strength, local topography and the presence of intervening structures (buildings, etc.) that may intercept dust before it reaches sensitive locations. Furthermore, dust would be naturally suppressed by rainfall.

A windrose from the Dundee Meteorological Station for 2022 is provided below in Figure 6.1, which shows that the prevailing wind is from the west-southwest. Receptors located to the east-northeast of the Site are therefore most at risk of experiencing impacts. There are residential properties located to the east-northeast, with the school/education campus beyond, all of which will be of high sensitivity to dust effects.

Figure 6.1: Windrose from Dundee Meteorological Site (2022)

[16] http://magic.defra.gov.uk/



6.1.2 Risk Assessment of Dust Impacts

Defining the Dust Emission Magnitude

With reference to the criteria detailed in Appendix B, the dust emission magnitude for each of the categories demolition, earthworks, construction and trackout have been determined. These have been summarised in Table 6.1.

Table 6.1: Dust Emission Magnitude for each Activity

Activity	Criteria	Magnitude
Demolition	No demolition required	n/a
Earthworks	Site area approx. 2,909 m², 1-2 HDV on site, storage bunds no more than <3m in height	Small
Construction	Total build volume <1,500 m^3 although brick and concrete will be main building materials	Small
Trackout	<20 HDV per day	Small

6.1.3 Sensitivity of Surrounding Area

Using the criteria set out in Tables B1 to B3, Appendix B, the sensitivity of the surrounding area to impacts from dust emissions has been determined and are set out in Table 6.2.

Dust Soiling

The nearest residential properties are approximately 25-30m to the east of the Site, although the garden areas lie within 20 m of the Site. There are only three residential gardens within 20m of the Site and 6 properties within 50 m of the Site. The sensitivity of the surrounding area in relation to dust soiling effects is therefore considered to be medium.

It is expected that there will be no more than 5-10 HDV (>3.5t) movements per day during the construction phase which are expected to travel to and from the Site along Perth Road. As a general guide, significant impacts from trackout may occur up to 500 m from large sites, 250 m from medium sites and 50 m from small sites, as measured from the site exit. There are >10 residential properties within 20 m of the roadside within 250 m of the Site along Perth Road. Furthermore, the car parking areas of the retail park would be of medium sensitivity to dust effects and lie within 20 m of the roadside. The sensitivity of the area to dust soiling effects from trackout is therefore considered to be high.

PM_{10} Effects

As previously discussed, annual mean PM_{10} concentrations in the vicinity of the Site are expected to be below 24 µg/m^3. Based on the proximity of sensitive receptors to the site boundary and the local concentrations of PM_{10} the sensitivity of the surrounding area is considered to be low with regards human health impacts.

Table 6.2: Sensitivity of Surrounding Area

Source	Dust Soiling	Human health
Demolition	n/a	n/a
Earthworks	Medium	Low
Construction	Medium	Low
Trackout	High	Low

6.1.4 Defining the Risk of Impacts

The dust emission magnitude as set out in Table 6.1 is combined with the sensitivity of the area (Table 6.2) to determine the risk of both dust soiling and human health impacts, assuming no mitigation measures applied at site. The risk of impacts associated with each activity is provided in Table 6.3 below and has been used to identify site-specific mitigation measures, which are discussed in Section 6.2 and set out in Appendix C.

Table 6.3: Summary of Risk Effects to Define Site Specific Mitigation

Source	Dust Soiling	Human health
Demolition	n/a	n/a
Earthworks	Low Risk	Negligible Risk
Construction	Low Risk	Negligible Risk
Trackout	Low Risk	Negligible Risk

6.2 Determining Appropriate Mitigation

The control of dust emissions from construction site activities relies upon management provisions and mitigation techniques to reduce emissions of dust and limit dispersion. Where dust emission controls have been used effectively, large-scale operations have been successfully undertaken without impacts to nearby properties.

An overall medium risk of impacts is predicted at adjacent receptors during construction of the proposed development. Appropriate mitigation measures for the Site have been identified following the IAQM guidance and based on the risk effects presented in Table 6.3. It is recommended that the

measures set out in Appendix C are incorporated into a DMP and approved by PKC prior to commencement of any work on site.

Based on the risk effects identified during each of the four types of activities and following implementation of the recommended mitigation measures, the significance of residual impacts during construction of the proposed development will be **negligible.**

7 Operational Impacts

7.1 Traffic Emissions

The proposals will create a new drive-thru restaurant on the Site. Traffic data provided by the transport consultants, Andrew Moseley Associates (AMA) indicates that the majority of trips associated with the new restaurant will be already existing pass-by trips and therefore are already on the network, making us of the wider retail park or using the A93 and a through road on their existing journey.

In terms of new trips on the network, the restaurant is estimated to create an additional 225 vehicle movements to the north of the Site on the A93 and 116 movements travelling to the south on the A93. This is significantly below the IAQM screening criteria set out in section 4.3.1 for locations outside of an AQMA.

Impacts on local air quality as a result of the operational development are concluded as being negligible.

7.2 Energy Plant Emissions

All energy for the new building will be through a combination of photovoltaic cells located at roof level and either non-combustible sources such as Air Source Heat Pumps (ASHP) or low NO_x boilers. Emissions associated with on-site energy sources will therefore be negligible.

7.3 On-site Exposure

The proposed development would not provide any sensitive receptors (i.e. residential, educational or health receptors). Due to the transient nature of users of the Site the annual mean and 24-hour objective limits do not apply. However, the short-term objective limits such as the 1-hour NO_2 objective are considered relevant to the Site. Exposure at the Site should therefore be considered in relation to the 1-hour NO_2 objective but not in relation to the PM objective limits.

The baseline review set out in Section 5 concludes that concentrations of all pollutants are well within the relevant air quality limit values across the district therefore the development would not introduce new employment use into a location of poor air quality, the impact of the proposals in terms of new exposure is therefore negligible.

7.4 Mitigation

The development would have a negligible impact on local air quality, no mitigation is therefore required.

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8 Conclusion

Encon Associates were commissioned by McDonalds (the ‘Client’) to carry out an air quality assessment in connection with the proposed new McDonalds Drive-Thru and restaurant at Perth Road, Blairgowrie.

The development once operational, would have a negligible impact on local air quality, no mitigation is therefore required.

However,

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t is inevitable that with any development, demolition and construction activities will cause some disturbance to those nearby. Dust arising from most construction activities tends to be of a coarse nature, which through dispersion by the wind can lead to soiling of property including windows, cars, external paintwork and laundry. However, as well as giving rise to annoyance due to soiling of surfaces from dust emissions, there is evidence of major construction activities causing increases in long term PM_{10} concentrations and in the number of days exceeding the short term PM_{10} objective of 50 μgm^{-3}.

The IAQM guidance on assessing impacts on air quality from construction activities and determining the likely significance has been used to determine the risk of impacts occurring during the construction of the development and to identify appropriate mitigation measures to be implemented on site to reduce dust emissions and associated impacts.

Due to the proximity of nearby residential receptors the Site is considered to have a low risk of impacts with regards to dust soiling and PM_{10} concentrations. However, following the implementation of appropriate mitigation measures impacts associated with the construction of the development are likely to be insignificant.

The proposals will not generate a significant number of additional vehicle movements on the adjacent road network. Impacts on local air quality associated with operational traffic will be negligible. Furthermore, all energy provision will be provided by low emission or non-combustible sources therefore on-site emissions will be negligible.

The assessment has concluded that pollution levels across the borough are well within the relevant air quality limit values therefore impacts associated with exposure within the Site will be negligible.

The assessment shows that the development proposals will meet the requirements of both national and local planning policy and air quality does not pose a constraint to development of the Site for the proposed uses.

Appendix A
Glossary of Terminology

Term	Definition
Accuracy	A measure of how well a set of data fits the true value.
Air quality objective	Policy target generally expressed as a maximum ambient concentration to be achieved, either without exception or with a permitted number of exceedences within a specific timescale (see also air quality standard).
Air quality standard	The concentrations of pollutants in the atmosphere which can broadly be taken to achieve a certain level of environmental quality. The standards are based on the assessment of the effects of each pollutant on human health including the effects on sensitive sub groups (see also air quality objective).
Ambient air	Outdoor air in the troposphere, excluding workplace air.
Annual mean	The average (mean) of the concentrations measured for each pollutant for one year. Usually this is for a calendar year, but some species are reported for the period April to March, known as a pollution year. This period avoids splitting winter season between 2 years, which is useful for pollutants that have higher concentrations during the winter months.
AQMA	Air Quality Management Area.
DEFRA	Department for Environment, Food and Rural Affairs.
Exceedance	A period of time where the concentrations of a pollutant is greater than, or equal to, the appropriate air quality standard.
Fugitive emissions	Emissions arising from the passage of vehicles that do not arise from the exhaust system.
LAQM	Local Air Quality Management.
NO	Nitrogen monoxide, a.k.a. nitric oxide.
NO_2	Nitrogen dioxide.
NO_x	Nitrogen oxides.
O_3	Ozone.
Percentile	The percentage of results below a given value.
PM_{10}	Particulate matter with an aerodynamic diameter of less than 10 micrometres.
Ratification (Monitoring)	Involves a critical review of all information relating to a data set, in order to amend or reject the data. When the data have been ratified they represent the final data to be used (see also validation).
μgm^{-3} micrograms per cubic metre	A measure of concentration in terms of mass per unit volume. A concentration of $1ug/m^3$ means that one cubic metre of air contains one microgram (millionth of a gram) of pollutant.
UKAS	United Kingdom Accreditation Service.
Uncertainty	A measure, associated with the result of a measurement, which characterizes the range of values within which the true value is expected to lie. Uncertainty is usually expressed as the range within which the true value is expected to lie with a 95% probability, where standard statistical and other procedures have been used to evaluate this figure. Uncertainty is more clearly defined than the

	closely related parameter 'accuracy', and has replaced it on recent European legislation.
USA	Updating and Screening Assessment.
Validation (modelling)	Refers to the general comparison of modelled results against monitoring data carried out by model developers.
Validation (monitoring)	Screening monitoring data by visual examination to check for spurious and unusual measurements (see also ratification).
Verification (modelling)	Comparison of modelled results versus any local monitoring data at relevant locations.

Appendix B

IAQM Construction Impact Assessment Procedure

In order to assess the potential impacts, the activities on construction sites are divided into four categories. These are:

- demolition (removal of existing structures).
- earthworks (soil-stripping, ground-levelling, excavation and landscaping).
- construction (activities involved in the provision of a new structure); and
- trackout (the transport of dust and dirt from the construction site onto the public road network where it may be deposited and then re-suspended by vehicles using the network).

For each activity, the risk of dust annoyance, health and ecological impact is determined using three risk categories: low, medium and high risk. The risk category may be different for each of the four activities. The risk magnitude identified for each of the construction activities is then compared to the number of sensitive receptors in the near vicinity of the site in order to determine the risks posed by the construction activities to these receptors.

Step 1: Screen the Need for an Assessment

The first step is to screen the requirement for a more detailed assessment. An assessment is required where there is:

- a 'human receptor' within 350m of the boundary of the site or 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s); and/or
- an 'ecological receptor' within 50m of the boundary of the site; or 50m of the route(s) used by the construction vehicles on the public highway, up to 500m from the site entrance(s).

Step 2A: Define the Potential Dust Emission Magnitude

This is based on the scale of the anticipated works and the proximity of nearby receptors. The risk is classified as small, medium or large for each of the four categories.

Demolition: The potential dust emission classes for demolition are:

- Large: Total building volume >50,000m^3, potentially dusty construction material (e.g. Concrete), on site crushing and screening, demolition activities >20m above ground level.
- Medium: total building volume 20,000m^3 – 50,000m^3, potentially dusty construction material, demolition activities 10-20 m above ground level; and

- Small: total building volume <20,000m^3, construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <10m above ground, demolition during wetter months.

Earthworks: This involves excavating material, haulage, tipping and stockpiling. The potential dust emission classes for earthworks are:

- Large: Total site area >10,000m^2, potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size), >10 heavy earth moving vehicles active at any one time, formation of bunds >8 m in height, total material moved >100,000 tonnes;
- Medium: Total site area 2,500 m^2 – 10,000m^2, moderately dusty soil (e.g. silt), 5 – 10 heavy earth moving vehicles active at any one time, formation of bunds 4m – 8m in height, total material moved 20,000 tonnes- 100,000 tonnes; and
- Small: Total site area <2,500m^2, soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <4 m in height, total material moved <20,000 tonnes, earthworks during wetter months.

Construction: The important issues here when determining the potential dust emission magnitude include the size of the building(s)/infrastructure, method of construction, construction materials, and duration of build. The categories are:

- Large: Total building volume >100,000m^3, on site concrete batching, sandblasting.
- Medium: Total building volume 25,000m^3 – 100,000m^3, potentially dusty construction material (e.g. concrete), on site concrete batching; and
- Small: Total building volume <25,000m^3, construction material with low potential for dust release (e.g. metal cladding or timber).

Trackout: The risk of impacts occurring during trackout is predominantly dependent on the number of vehicles accessing the Site on a daily basis. However, vehicle size and speed, the duration of activities and local geology are also factors which are used to determine the emission class of the Site as a result of trackout. The categories are:

- Large: >50 HDV (>3.5t) outward movements in any one day, potentially dusty surface material (e.g. high clay content), unpaved road length > 100m.
- Medium: 10-50 HDV (>3.5t) outward movements in any one day, moderately dusty surface material (e.g. high clay content, unpaved road length 50-100m; and

- Small: <10 HDV (>3.5t) outward movements in any one day, surface material with low potential for dust release, unpaved road length >50m.

Step 2B: Defining the Sensitivity of the Area

The sensitivity of the area is defined for dust soiling, human health (PM_{10}) and ecological receptors. The sensitivity of the area takes into account the following factors:

- the specific sensitivities of receptors in the area.
- the proximity and number of receptors.
- in the case of PM_{10}, the local background concentration; and
- site specific factors, such as whether there are natural shelters, such as trees, to reduce the risk of wind-blown dust.

Table B1 is used to define the sensitivity of different types of receptors to dust soiling, health effects and ecological effects.
Based on the sensitivities assigned to the different receptors surrounding the site and numbers of receptors within certain distances of the site, a sensitivity classification can be defined for each. Tables B2 to B4 indicate the criteria used to determine the sensitivity of the area to dust soiling, human health and ecological impacts.

Table B1: Examples of Factors Defining Sensitivity of an Area			
Sensitivity of Area	**Dust Soiling**	**Human Receptors**	**Ecological Receptors**
High	Users can reasonably expect enjoyment of a high level of amenity The appearance, aesthetics or value of their property would be diminished by soiling' The people or property would reasonably be expected to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land. E.g. dwellings, museums and other important collections, medium and long term car parks and car showrooms.	10 – 100 dwellings within 20 m of site. Local PM_{10} concentrations close to the objective (e.g. annual mean 36 -40 µg/m^3). E.g. residential properties, hospitals, schools and residential care homes.	Locations with an international or national designation and the designated features may be affected by dust soiling. Locations where there is a community of a particularly dust sensitive species such as vascular species included in the Red List for Great Britain. E.g. A Special Area of Conservation (SAC).
Medium	Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home. The appearance, aesthetics or value of their property could be diminished by soiling The people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land. E.g. parks and places of work.	Less than 10 receptors within 20 m. Local PM_{10} concentrations below the objective (e.g. annual mean 30-36 µg/m^3). E.g. office and shop workers but will generally not include workers occupationally exposed to PM_{10} as protection is covered by the Health and Safety at Work legislation.	Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown. Locations with a national designation where the features may be affected by dust deposition E.g. A Site of Special Scientific Interest (SSSI) with dust sensitive features.
Low	The enjoyment of amenity would not reasonably be expected. Property would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling. There is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the	Locations where human exposure is transient. No receptors within 20 m. Local PM_{10} concentrations well below the objectives (less than 75%). E.g. public footpaths, playing fields, parks and shopping streets.	Locations with a local designation where the features may be affected by dust deposition. E.g. Local Nature Reserve with dust sensitive features.

Table B1: Examples of Factors Defining Sensitivity of an Area			
Sensitivity of Area	**Dust Soiling**	**Human Receptors**	**Ecological Receptors**
	normal pattern of use of the land. E.g. playing fields, farmland unless commercially sensitive horticultural, footpaths, short lived car [parks and roads.		

Table B2: Sensitivity of the Area to Dust Soiling on People and Property					
Receptor Sensitivity	**Number of Receptors**	**Distance from the Source (m)**			
		<20	**<50**	**<100**	**<350**
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table B3: Sensitivity of the Area to Human Health Impacts							
Receptor Sensitivity	**Annual Mean PM_{10} Concentration**	**Number of Receptors**	**Distance from Source (m)**				
			<20	**<50**	**<100**	**<200**	**<350**
High	>32 µg/m^3	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32 µg/m^3	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28 µg/m^3	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<24 µg/m^3	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low

Table B3: Sensitivity of the Area to Human Health Impacts							
Receptor Sensitivity	**Annual Mean PM_{10} Concentration**	**Number of Receptors**	**Distance from Source (m)**				
			<20	**<50**	**<100**	**<200**	**<350**
Medium	>32 µg/m^3	>10	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	28-32 µg/m^3	>10	Medium	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	24-28 µg/m^3	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	<24 µg/m^3	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low	Low

Table B4: Sensitivity of the Area to Ecological Impacts		
Receptor Sensitivity	**Distance from the Source (m)**	
	<20	**<50**
High	High	Medium
Medium	Medium	Low
Low	Low	Low

Define the Risk of Impacts

The final step is to combine the dust emission magnitude determined in step 2A with the sensitivity of the area determined in step 2B to determine the risk of impacts with no mitigation applied. Tables

B5 to B7 indicate the method used to assign the level of risk for each construction activity. The identified level of risk is then used to determine measures for inclusion within a site-specific Construction Management Plan (CMP) aimed at reducing dust emissions and hence reducing the impact of the construction phase on nearby receptors. The mitigation measures are drawn from detailed mitigation set out within the IAQM guidance document.

Table B5: Risk of Dust Impacts from Demolition			
Sensitivity of Area	**Large**	**Medium**	**Small**
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

Table B6: Risk of Dust Impacts from Earthworks/ Construction			
Sensitivity of Area	**Large**	**Medium**	**Small**
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table B7: Risk of Dust Impacts from Trackout			
Sensitivity of Area	**Large**	**Medium**	**Small**
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

Appendix C

Construction Mitigation Measures

It is recommended that the following measures are incorporated into a DMP and approved by PKC prior to commencement of any work on site. The measures set out below summaries the measures set out within the IAQM guidance.

This guidance should be read in conjunction with this report to obtain full details of all the measures that should be applied on site.

It is recommended that the following ***preferred measures*** are implemented during the construction phase:

- display the name and contact details of the person accountable for air quality and dust issues on the site boundary (i.e. the environment manager/engineer or site manager);
- display the head or regional office contact information on the site boundary;
- record all dust and air quality complaints, identify cause, take appropriate measures to reduce emissions in a timely manner and record the measures taken;
- make the complaints log available to the local authority when asked;
- record any exceptional incidents that cause dust and/or air emissions, either on- or off- site and the action taken to resolve the situation in the log book;
- carry out regular site inspections to monitor compliance with the DMP, record inspection results and make inspection log available to PKC when asked;
- increase frequency of site inspection by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged periods of dry or windy conditions;
- plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;
- erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles;
- avoid site runoff of water or mud;
- ensure all vehicles switch off engines when stationary - no idling vehicles;
- avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable; produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials;

- only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction e.g. suitable local exhaust ventilation systems;
- ensure an adequate water supply on site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate;
- use enclosed chutes and conveyors and covered skips;
- minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate;
- avoid bonfires and burning of waste materials;

The following ***desirable measures*** should also be considered for inclusion to further reduce emissions:

- undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars, window sills within 100 m of site boundary, with cleaning to be provided if necessary;
- fully enclose site or specific operations where there is a high potential for dust production and the activities are being undertaken for an extensive period;
- keep site fencing, barriers and scaffolding clean using wet methods;
- remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If being re-used on site, cover as detailed below;
- cover, seed or fence stockpiles to prevent wind whipping;
- ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods;
- avoid scabbling where possible;
- ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place;
- use water-assisted dust sweepers on the access and local roads, to remove, as necessary, any material tracked out of the site;
- avoid dry sweeping of large areas;
- ensure vehicles entering and leaving the site are covered to prevent the escape of materials during transport.

- use water-assisted dust sweepers on the access and local roads, to remove, as necessary, any material tracked out of the site;
- avoid dry sweeping of large areas;
- ensure vehicles entering and leaving the site are covered to prevent the escape of materials during transport;
- record all inspections of haul routes and any subsequent action in a site log book;
- implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud);
- ensure there is adequate area of hard surfaced road between the wheel wash facility and the site exit where ever site size and layout permits.

Noise Impact Assessment

Proposed McDonald's Restaurant, Perth Road, Blairgowrie

6th November 2024

Rev A 11th November 2024, Rev B 27th June 2025, Rev C 7th July 2025, Rev D 8th July 2025, Rev E 25th July 2025, Rev F 1st August 2025

ENVIRONMENTAL AND SUSTAINABILITY CONSULTANTS

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Executive Summary

A sound survey was undertaken to inform the assessment of the likelihood of adverse impact from the proposed McDonald's restaurant with associated car park and drive-thru facility Westpark Retail Park, off Perth Road, Blairgowrie. The sound survey was carried out in compliance with BS 4142 as detailed in this report. The sound survey considers the impacts at nine noise-sensitive receptors including four existing receptors on the opposite side of Perth Road to the site, Lodge, Ardlui, Langdale and Kinvaid. The other five receptors are approved future dwellings that are to built immediately to the north of the site.

Sound measurements were taken at one location representing the most exposed noise-sensitive receptors. Noise measurements were taken from other sites to represent noise sources that will be associated with the proposed site, such as car park vehicle movements and deliveries. Sound levels associated with noise sources such as mechanical plant and refuse collections have been established from British Standards and Manufacturer datasheets.

The initial assessment of the typical worst-case daytime period indicates that adverse impact is not likely at any of the nearby noise-sensitive receptors. The contextual considerations required by BS 4142, particularly the nature of the source within the residual environment and acoustic design measures being incorporated at the most-exposed noise-sensitive receptors suggest that the impact is likely to be lower than predicted by the initial BS 4142 assessment.

The initial assessment of the absolute worst-case daytime period, where waste collections are taking place in the same one-hour period as when the car park and drive-thru are at their busiest indicates that adverse impact is not likely at Lodge, Ardlui, Langdale, Kinvaid and proposed dwelling 1. The contextual considerations required by BS 4142, particularly the nature of the source within the residual environment and acoustic design measures being incorporated at the most-exposed noise-sensitive receptors suggest that the impact is likely to be lower than predicted by the initial BS 4142 assessment.

The initial assessment of the absolute worst-case daytime period, where waste collections are taking place in the same one-hour period as when the car park and drive-thru are at their busiest indicates that adverse impact is likely at proposed dwelling 2. The contextual considerations required by BS 4142, particularly the nature of the source within the residual environment and acoustic design measures being incorporated at the most-exposed noise-sensitive receptors suggest that the impact is likely to be lower than predicted by the initial BS 4142 assessment.

The initial assessment of the absolute worst-case daytime period predicts that significant adverse impact is likely at Proposed Dwellings 3, 4 and 5. Considering that the rating sound level is only just above the level difference that indicates likelihood of significant adverse impact at all three receptors, close consideration should be given to contextual factors. The contextual considerations

required by BS 4142, particularly the nature of the source within the residual environment and acoustic design measures being incorporated at the most-exposed noise-sensitive receptors suggest that the impact is likely to be lower than predicted by the initial BS 4142 assessment. Additionally, waste collections which are likely to be required regardless of the development that would be built on the plot, occur sparingly, meaning that this assessment is not a representation of typical site operation.

The initial assessment of the worst-case night-time period when the restaurant is open and the carpark and drive-thru are in use indicates that significant adverse impact is likely. The difference between the specific sound level and the background sound level is substantial, meaning that there is a high degree of confidence and uncertainty is diminished, and the relevance of contextual considerations in this instance is reduced.
It is recommended that the proposed 1.1m surrounding the drive-thru lane be upgraded to an acoustic fence with a minimum height of 1.8m. The fence should have a minimum mass of 10kg/m^2 and not have holes or gaps present.

Some items of fixed mechanical plant are to continue running if the facility stops trading during the night-time period. Although the calculations suggest that the cumulative plant noise level will exceed the prevailing background sound level by 8dB – 11dB, which indicates adverse or significant adverse impact, plant noise levels inside are still expected to comply with the internal ambient noise level outlined in BS 8233:2014 in all of the receptors considering that the attenuation that can be achieved with a partially open window should result in plant noise level that is well below the indoor ambient noise level target for the night-time inside a bedroom. If windows were at the dwellings were to be closed the plant noise level would fall even further below the internal ambient noise level target as specified in BS 8233:2014 inside the bedrooms, as a standard double glazing system typically provides at least 24 dB of attenuation.

1 Introduction

1.1 Overview

Encon Associates Ltd have been commissioned to prepare an environmental noise impact assessment for a proposed McDonald's Restaurant with an associated car park and drive-thru facility on Westpark Retail Park, off Perth Road, Blairgowrie.

The following report has been produced to accompany a planning application that is to be submitted to Perth and Kinross Council.

This report details existing background sound levels at the noise-sensitive receptors considered as the worst affected, as well as noise emissions associated with the operations that are to take place.

Due to the necessary technical nature of the report, a glossary of terms can be found in Appendix A to assist the reader.

2 Site Description & Background Information

2.1 Site & Surrounding Area

The site is located on Westpark Retail Park off Perth Road, Blairgowrie. Immediately to the north of the site is currently arable land which has been approved for housing development. Immediately to the east is Perth Road, which facilitates regular traffic flow during daytime hours. Directly opposite the site on the other side of Perth Road are no.4 residential dwellings, The Lodge, Ardlui, Langdale and Kinvaid. Immediately to the south of the south of the site is a Starbucks café with a car park and drive-thru facility. The opening hours of the Starbucks are believed to be 07:00-21:00 daily. Home Bargains and Lidl, also associated with Westpark Retail Park, are situated to the south of Starbucks. Home Bargains operates between 08:00 and 20:00 from Monday to Saturday and 08:00 and 18:00 on Sundays. Lidl is believed to be open 08:00-22:00 daily.

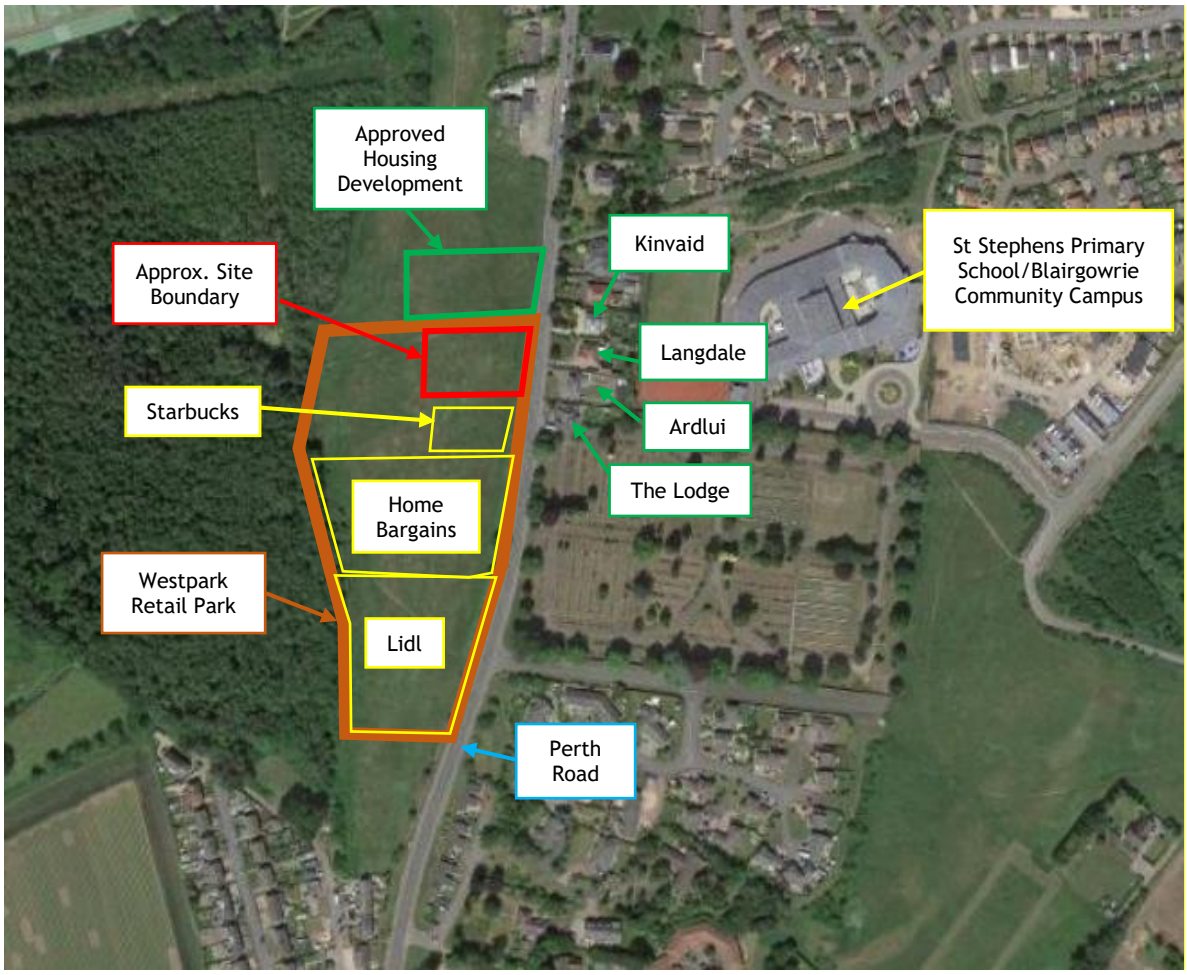

Figure 1.0 – Site and Surrounding Area

2.2 Background

It is proposed that a McDonald's Restaurant with an associated car park and drive-thru facility with side-by-side customer order displays (CODs) be erected at Westpark Retail Park off Perth Road, Blairgowrie. McDonald's are seeking permission to trade 24/7 from this new facility. Consequently, a noise impact assessment was required to determine the likelihood of adverse impact upon nearby residents. The existing acoustic environment is dominated by road traffic along Perth Road. The assessment considers the four existing residential dwellings on the opposite side of Perth Road, as well the five closest dwellings from the Approved Housing Development to be the most exposed noise-sensitive receptors.

3 Legislation, Policy and Guidance

This report is based on the following policy, guidance and legislation.

3.1 BS4142: 2014 'Methods for rating and assessing industrial and commercial sound

British Standard 4142: 2014 describes methods for rating and assessing sound of an industrial and/or commercial nature, which includes:

- Sound from industrial and manufacturing processes;
- Sound from fixed installations which comprise mechanical and electrical plant and equipment;
- Sound from the loading and unloading of goods and materials and/or commercial premises; and
- Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as the from fork-lift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

The methods described in the standard use outdoor sound levels to assess the likely effects of sound on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident.

The standard presents methods to measure and determine ambient, background and residual sound levels, and the rating levels of industrial/commercial sound. BS4142:2014requires consideration of the level of uncertainty in the data and associated calculations.

The determination of noise amounting to a nuisance is beyond the scope of BS4142. The standard stipulates that it not intended to be applied to the rating and assessment of sound from the passage of vehicles of vehicles on public roads and railway systems, recreational activities, music and entertainment, shooting grounds, construction and demolition, domestic animals, public address systems and other sources not specified within the document.

The Reference Time Interval, T, is defined in the standard as the "specified interval over which the specific sound level is determined", which is 1 hour during the daytime (07:00 to 23:00 hours) and 15 minutes during the night (23:00 to 07:00 hours).

Ambient sound is defined as "totally encompassing sound in a given situation at a given time, usually composed of sound from many sources near and far". It comprises the residual sound and the specific sound when present.

Residual sound is defined as "ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound".

The background sound level is the $L_{A90,\,T}$ of the residual sound level, and is the underlying level of sound. Measurements of background sound level should be undertaken at the assessment location where possible or at a comparable location.

The measurement time interval should be sufficient to obtain a representative value (normally not less than 15 minutes) and the monitoring duration should reflect the range of background sound levels across the assessment period. The background sound level used for the assessment should be representative of the period being assessed.

The specific sound level is the $L_{Aeq,T}$ of the sound source being assessed over the reference time interval, Tr. BS 4142: 2014 advises that Tr should be 1 hour during the day and 15 minutes at night.

The rating level is the specific sound level plus any adjustment for the characteristics that are present with the sound including tonality, impulsivity, intermittency or other acoustic characteristics. The standard describes subjective and objective methods to establish the appropriate adjustment. The characteristics and coinciding adjustments are defined as:

- Tonality: A rating penalty of + 2dB is applicable for a tone which I "just perceptible", +4 dB where a tone is "clearly perceptible", and +6 dB where a tone is "highly perceptible".

- Impulsivity: A rating penalty of +3 dB is applicable for impulsivity which is "just perceptible", +6 dB where it is "clearly perceptible", and +9 dB where it is "highly perceptible".

- Intermittency: When the specific sound has identifiable on/off conditions, the specific sound level ought to be representative of the time period of length equal to the reference time interval which contains the greatest total amount of on-time if the intermittency is readily distinctive against the residual acoustic environment, a penalty of +3dB can be applied."

- Other Sound Characteristics: Where the specific sound features that are neither tonal nor impulsive but are otherwise readily distinctive against the residual acoustic environment, a 3 dB penalty can be applied.

The level of impact is assessed by comparing the rating level with the background sound level. Typically the greater the difference between the rating level and background sound level the greater the magnitude of impact, depending on context. A difference of +5 dB is likely to indicate an adverse impact and a difference of +10 dB is likely is likely to indicate a significant adverse impact, depending on context.

4 Environmental Noise Survey

To characterise the acoustic environment of the area, an unattended noise survey was carried out on the 6th and 7th of August 2024. Additional measurements were also taken on the 25th and 26th of February 2025.

4.1 Measurement Methodology

Attended monitoring was carried out at one measurement position (MP1). The sound level meter was positioned approximately 15m from the edge of Perth Road, an equal distance from the edge of Perth Road as the properties opposite. The microphone was mounted onto a tripod 1.5m above the ground in free-field conditions (more than 3.5m from any reflective surfaces apart from the ground). On the 6th and 7th of August 2024, measurements were taken during the daytime period between 10:00 and 17:00 using a method similar to the shortened CRTN measurement method to obtain background sound levels that are representative of the daytime period, and between 00:00 and 02:00 during the night-time to represent the most sensitive night-time period. This measurement position was chosen to obtain background sound levels that are representative of the most exposed noise-sensitive receptor. Additional measurements were taken on the 25th and 26th of February 2025 at the same monitoring location to obtain measurements of the late evening period and the end of the night-time period to the beginning of the daytime period (06:00 – 08:30).

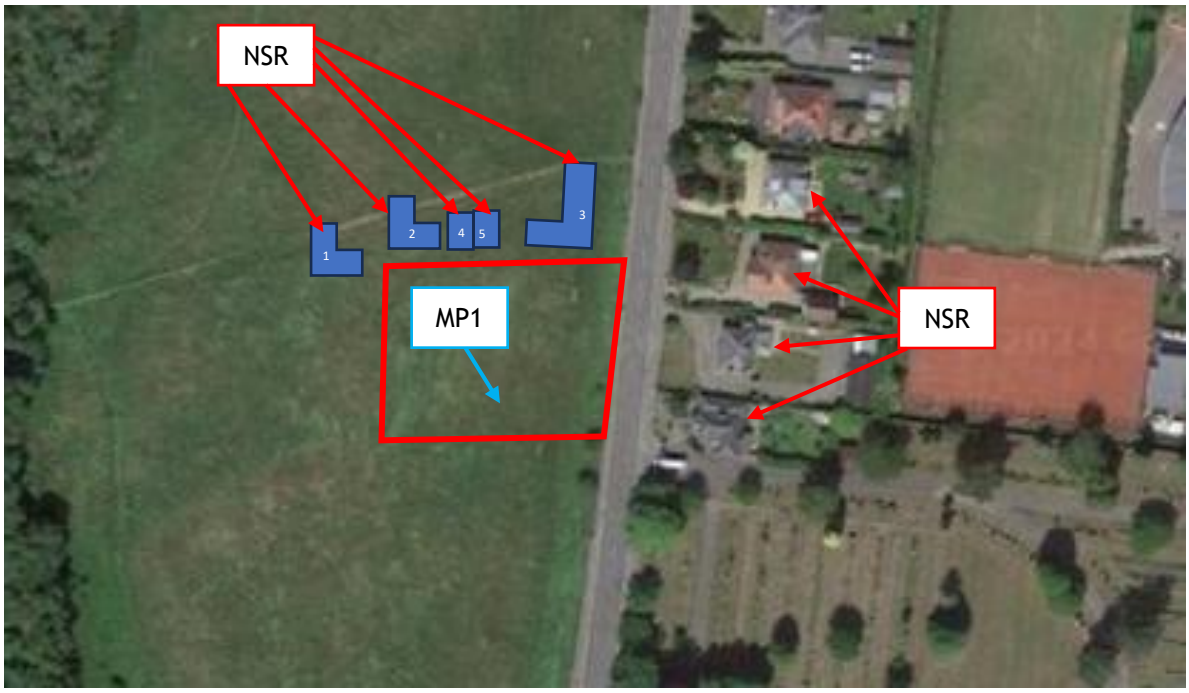

Figure 2.0 – Measurement Positions

4.2 Instrumentation

Equipment	Serial No.	Laboratory Calibration
Rion NL52 Class 1 Sound Level Meter	0034848	10/01/2023

Table 1.0 – Instrumentation

All sound level meters were field calibrated immediately before and after the measurement period and no significant drift (≤0.5 dB) occurred. Laboratory calibration by a third-party is carried out on all sound level meters every twenty-four months with all calibrators being calibrated every twelve months. All microphones were fitted with a protective windshield.

4.3 Weather Conditions

Meteorological conditions from 6th – 7th August 2024 and 25th – 26th February 2025 were considered suitable i.e. in accordance with those laid out in BS 7445-2:1991 and provided no significant uncertainty to the measured data.

4.4 Survey Results

The following tables show the results of the attended noise survey. These tables display the 15-minute L_{A90}, L_{A10} L_{Aeq}, and L_{AFmax} sound levels at Measurement Position 1 during the daytime and night-time periods.

Daytime (07:00 – 23:00)	L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
Tuesday 6th August 2024 (11:44:13 – 11:59:13)	62.1	75.3	65.7	47.2
Tuesday 6th August 2024 (11:59:13 – 12:14:13)	62.1	70.8	66.0	46.8
Tuesday 6th August 2024 (12:14:13 – 12:29:13)	61.6	71.8	65.5	47.4
Tuesday 6th August 2024 (12:29:13 – 12:44:13)	62.0	73.5	65.7	48.4
Tuesday 6th August 2024 (12:44:13 – 12:59:13)	62.3	74.2	65.9	50.7
Tuesday 6th August 2024 (12:59:13 – 13:14:13)	61.9	73.9	65.7	46.9
Tuesday 6th August 2024 (13:14:13 – 13:29:13)	62.5	77.2	65.8	51.8
Tuesday 6th August 2024 (13:29:13 – 13:44:13)	62.1	73.3	65.9	51.5
Tuesday 6th August 2024 (13:59:13 – 14:14:13)	61.6	71.7	65.2	49.9
Tuesday 6th August 2024 (14:14:13 – 14:29:13)	61.9	74.7	65.6	50.1
Tuesday 6th August 2024 (14:29:13 – 14:44:13)	61.8	72.7	65.6	48.7
Tuesday 25th February 2025 (19:45:00 – 20:00:00)	58.2	71.1	60.8	42.4
Tuesday 25th February 2025 (20:00:00 – 20:15:00)	56.0	71.0	60.9	40.7
Tuesday 25th February 2025 (20:15:00 – 20:30:00)	53.1	65.7	58.0	40.2
Tuesday 25th February 2025 (20:30:00 – 20:45:00)	53.8	65.9	58.6	39.3
Tuesday 25th February 2025 (20:45:00 – 21:00:00)	54.9	75.8	58.4	40.8
Tuesday 25th February 2025 (21:00:00 – 21:15:00)	54.0	69.7	58.6	40.8
Tuesday 25th February 2025 (21:15:00 – 21:30:00)	53.5	68.9	58.1	36.7
Tuesday 25th February 2025 (21:30:00 – 21:45:00)	53.7	67.7	58.3	37.5

Tuesday 25th February 2025 (21:45:00 – 22:00:00)	53.4	68.0	56.6	36.4
Tuesday 25th February 2025 (22:00:00 – 22:15:00)	52.4	66.5	54.4	34.1
Tuesday 25th February 2025 (22:15:00 – 22:30:00)	51.9	65.3	53.9	33.7
Tuesday 25th February 2025 (22:30:00 – 22:45:00)	49.8	62.3	52.8	33.1
Tuesday 25th February 2025 (22:45:00 – 23:00:00)	47.6	61.1	52.2	32.8
Wednesday 26th February 2025 (07:00:00 – 07:15:00)	54.9	67.5	58.0	35.6
Wednesday 26th February 2025 (07:15:00 – 07:30:00)	56.3	68.3	59.6	39.7
Wednesday 26th February 2025 (07:30:00 – 07:45:00)	57.1	68.5	60.3	40.1
Wednesday 26th February 2025 (07:45:00 – 08:00:00)	59.7	69.2	62.7	41.1
Wednesday 26th February 2025 (08:00:00 – 08:15:00)	60.7	70.3	63.8	42.5
Wednesday 26th February 2025 (08:15:00 – 08:30:00)	61.8	70.5	65.0	43.5

Table 2.0 – Daytime Environmental Noise Survey Results – MP1

Night-time (23:00 - 07:00)	**L_{Aeq}**	**L_{Amax}**	**L_{A10}**	**L_{A90}**
Wednesday 7th August 2024 (00:43:10 – 00:58:10)	48.9	74.3	34.4	22.1
Wednesday 7th August 2024 (00:58:10 – 01:13:10)	38.1	60.7	30.6	18.3
Wednesday 7th August 2024 (01:13:10 – 01:28:10)	25.5	43.1	26.7	19.9
Wednesday 7th August 2024 (01:28:10 – 01:43:10)	29.4	61.7	23.4	18.1
Wednesday 26th February 2025 (06:00:00 – 06:15:00)	49.1	61.6	51.1	26.8
Wednesday 26th February 2025 (06:15:00 – 06:30:00)	50.2	62.0	52.9	27.6
Wednesday 26th February 2025 (06:30:00 – 06:45:00)	51.7	62.9	54.3	28.9
Wednesday 26th February 2025 (06:45:00 – 07:00:00)	53.1	64.1	56.9	31.1

Table 3.0 – Night-time Environmental Survey Results – MP1

Tables 2 and 3 demonstrate the range of background sound levels at the noise-sensitive receptors. Considering that the background sound levels have not been influenced by on-site activity, the $L_{A90, 15min}$ measured sound levels during the same periods that activities are taking place are to be used for the assessment.

5 Specific Sound Sources

5.1 Customer Vehicle Noise

To assess whether noise from the car park will have an impact on nearby residents, secondary data has been used from a survey carried out at an existing McDonald's site. The following table shows sound levels associated with car park and drive-thru vehicle movements.

Source	Measurement Distance (m)	Time (s)	Sound Level dB $L_{Aeq, T}$	Sound Exposure Level (L_{AE})
Drive Thru – drive off street and stop at COD	5	10	65	75
Engine Idling – Making Order	5	63	58	76
Drive to Pay Point	7	6	67	75
Engine Idling – Pay Point	5	20	58	71
Drive to Collection Point	5	8	67	77
Engine Idling - Collection Point	5	20	58	71
Car Driving off from Collection Point	5	9	71	81
Car Pulling Drive-Thru into Car Park	5	9	71	81
Car Pulling into Car Park	6	6	67	75
Car Pulling off onto street	8	7	64	72
Car Reversing	7	10	56	66
Car Pulling off Parking Space	4	6	63	70
Car Engine Starting	5	6	62	68
Car Passage	3	6	65	73
Car Door Slam	1	6	81	90

Table 4.0 – Individual Noise Sources from Vehicle Movements

Using this data, it is possible to predict the noise levels from the car park during the busiest period. The following table predicts the noise levels from the car park over the busiest one-hour daytime period at the noise-sensitive receptor based on a table of comings and goings provided by Andrew Moseley Associates (Appendix B). The transport assessment predicts that the busiest one-hour period consists of 115 vehicles coming onto the site. Of the inbound vehicles, 77 vehicles will use the drive-thru, whilst the other 38 vehicles will use the customer carpark. The table does not provide the number of outgoings from the carpark. Therefore, the assumption has been made that all 77 vehicles using the drive-thru and half those using the carpark will leave within the same hour.

Where there is no line of sight between the source and receptor a -10 dB screening correction has been applied (BS 5228: 2009). Where the source is partly visible, a -5 dB screening correction has been applied (BS 5228: 2009). It is understood that a 1.1m high close-boarded timber fence is to be installed around the drive-thru part of the site. However, the receptors are elevated above the carpark/drive-thru, and it is assumed that a fence of this height will not remove the line of sight between the vehicle movements and the dwellings. Initial calculations indicated that during the busiest hour daytime period, noise levels from the associated carpark and drive-thru will be well above the measured daytime background sound levels at the noise-sensitive receptors. Therefore, it is highly recommended that the height of the close-boarded fence be extended from 1.1m to a minimum of 1.8m to remove the line of sight between the source and the receptors. The fence should have a minimum mass of 10kg/m^2 and no gaps or holes present. The restaurant building itself should also provide screening from vehicle movements taking place in the middle of the carpark. The following table shows the predicted noise emissions for Cark Park and Drive-Thru movements at all of the considered receptors during the daytime. A detailed breakdown of the cumulative 1-hour figures can be found in Appendix B.

Receptor	dB $L_{Aeq, 1hour}$
Lodge	44
Ardlui	45
Langdale	42
Kinvaid	41
Proposed Dwelling 1	43
Proposed Dwelling 2	47
Proposed Dwelling 3	49
Proposed Dwelling 4	47
Proposed Dwelling 5	48

Table 5.0 – Car Park and Drive-Thru Movement Noise Emissions at Receptors – Daytime

The following table shows the predicted noise emissions for Cark Park and Drive-Thru movements during the night-time period at all considered receptors. The transport assessment predicts that the busiest one-hour night-time period consists of 31 vehicles coming onto the site. Of the inbound vehicles, it is predicted that 15 vehicles will use the drive-thru, whilst the other 16 vehicles will use the customer carpark. These values have been divided by four to represent a 15-minute period. The assumption has been made that all 4 vehicles using the drive-thru will leave site within the same 15-minute period. It is assumed that two of the vehicles using the car park will leave within the same 15-minute period. The assessments at the proposed new dwellings consider the first-floor bedrooms consider he first-floor bedrooms as the receptors during the night-time. A detailed breakdown of the cumulative 15-minute figures can be found in Appendix H.

Receptor	dB $L_{Aeq, 15min}$
Lodge	39
Ardlui	38
Langdale	36
Kinvaid	34
Proposed Dwelling 1	43
Proposed Dwelling 2	46
Proposed Dwelling 3	47
Proposed Dwelling 4	46
Proposed Dwelling 5	46

Table 6.0 – Car Park and Drive-Thru Movement Noise Emissions at Receptors – Night-time

5.2 Customer Order Display

There are two customer order display units in the drive-thru facility where customers place their orders. Sound measurements were taken of the member of staff conversing with a customer which was emitted from the speaker of the customer order display at a McDonald's in Arnold, Nottingham. The table below shows the associated sound levels.

Source	Measurement Distance (m)	Time (s)	Sound Level dB $L_{Aeq, T}$	Sound Exposure Level (L_{AE})
Customer Order Display	0.5	7	79	87

Table 7.0 – Individual Noise Source – Customer Order Display

The following table shows the predicted noise emissions for Customer Order Displays at all of the considered receptors during the daytime. A detailed breakdown of the cumulative 1-hour figures can be found in Appendix C.

Receptor	dB $L_{Aeq, 1hour}$
Lodge	28
Ardlui	31
Langdale	33
Kinvaid	32
Proposed Dwelling 1	23
Proposed Dwelling 2	32
Proposed Dwelling 3	30
Proposed Dwelling 4	32
Proposed Dwelling 5	33

Table 8.0 – Customer Order Displays Noise Emissions at Receptors – Daytime

The following table shows the predicted noise emissions for Customer Order Displays at all of the considered receptors during the daytime. A detailed breakdown of the cumulative 15-minute figures can be found in Appendix C.

Receptor	dB $L_{Aeq, 15min}$
Lodge	12
Ardlui	15
Langdale	17
Kinvaid	16
Proposed Dwelling 1	21
Proposed Dwelling 2	30
Proposed Dwelling 3	28
Proposed Dwelling 4	30
Proposed Dwelling 5	31

Table 9.0 – Customer Order Displays Noise Emissions at Receptors – Night-time

5.3 Fixed Plant Installations

Items of mechanical plant are scheduled to be installed on the roof of the main building. Sound level data has been obtained from manufacturer datasheets quoted as either A-weighted sound pressure level at 1m or as a sound power level. The following table shows the sound levels associated with all items of mechanical plant associated with the development and predict cumulative A-weighted sound pressure levels at the closest noise sensitive receptors with all plant running simultaneously. It is understood that the items of plant will be shielded by a parapet, meaning that there should be no line of sight between the plant and the receptors. Subsequently, a -10dB screening correction has been applied (BS 5228:2009).

Receptor	dB $L_{Aeq, 1hour}$
Lodge	39
Ardlui	39
Langdale	37
Kinvaid	35
Proposed Dwelling 1	33
Proposed Dwelling 2	37
Proposed Dwelling 3	38
Proposed Dwelling 4	38
Proposed Dwelling 5	38

Table 10.0 – Customer Order Displays Noise Emissions at Receptors – Daytime and Night-time

5.4 Delivery Noise

It is understood that the restaurant will require three deliveries per week, which will be made on a tail lift HGV. The deliveries shall take place within the hours of 07:00 – 21:00 Monday – Friday and 09:00 – 19:00 Sunday. The delivery vehicle will enter the site and will park in front of the Corral. The goods will be transported manually on trolleys into the Corral. Once the delivery has been completed, the HGV will drive around the carpark to the exit and will pull out of the carpark.

Sound Measurements were taken of a HGV delivery being made at a McDonald's restaurant in Arnold, Nottingham. The table below shows sound levels associated with the loading and unloading of goods from the HGV.

Source	Measurement Distance (m)	Time (mm:ss)	Sound Level dB $L_{Aeq, T}$	Sound Exposure Level (L_{AE})
Goods Loading and Unloading	6	13:10	71	100
HGV Engine Starting and Idling	5	00:20	76	89
HGV Pulling Off	7	00:13	76	88
HGV Passage	5	00:11	73	83

Table 11.0 – Individual Noise Sources – Delivery

The following table shows the predicted noise emissions from Deliveries at all of the considered receptors during the daytime. A detailed breakdown of the cumulative 1-hour figures can be found in Appendix E.

Recptor	dB $L_{Aeq, 1hour}$
Lodge	35
Ardlui	36
Langdale	42
Kinvaid	35
Proposed Dwelling 1	42
Proposed Dwelling 2	46
Proposed Dwelling 3	41
Proposed Dwelling 4	46
Proposed Dwelling 5	44

Table 12.0 – Delivery Noise Emissions at Receptors – Daytime

5.5 Waste Collection

It is understood that waste from McDonald's restaurants is stored in bins provided by a private contractor employed by the franchisee. Subsequently, the company making the waste collections is currently unknown, meaning that sound level data which relates specifically to waste collections at this particular McDonald's site cannot be obtained due to the potential difference in vehicles, bins and the method of collection. It is understood that waste collections will take place on four occasions per week during daytime hours. BS 5228:2009 provides sound level data for a refuse wagon quoted at 10m, as shown in the following table.

Source	Octave Band Sound Pressure Levels @10m (Hz)								A-weighted sound pressure level $L_{Aeq, T}$ @10m
	63	125	250	500	1k	2k	4k	8k	
Refuse Wagon	88	81	79	76	72	70	64	60	78

Table 13.0 – Refuse Wagon Sound Levels

It is assumed that each waste collection will take place over a 5-minute period. Therefore, the activity on-time correction has been applied based on a 1-hour reference period. It is assumed that the refuse wagon will pull into the same space as the delivery vehicle. The following tables show the sound levels associated with the refuse wagon at the noise-sensitive receptors after the on-time correction has been applied.

The following table shows the predicted noise emissions from Waste Collections at all of the considered receptors during the daytime. A detailed breakdown of the cumulative 1-hour figures can be found in Appendix F.

Receptor	dB $L_{Aeq, 1hour}$
Lodge	42
Ardlui	43
Langdale	42
Kinvaid	42
Proposed Dwelling 1	46
Proposed Dwelling 2	52
Proposed Dwelling 3	53
Proposed Dwelling 4	53
Proposed Dwelling 5	51

Table 14.0 – Refuse Wagon at Receptors – Daytime

5.6 Determining the Specific Sound Level

In order to carry out the BS 4142 assessments, the specific sound level must be determined. Assuming that the site will be operating during both daytime and night-time hours, the specific sound level must be determined for both daytime and night-time assessments based on the activities that are likely to take place. BS 4142 stipulates a 1-hour daytime reference period. Vehicle movements associated with the customer carpark and drive-thru facility are one of the main sources of noise impact from the proposed development. As such, the worst-case daytime 1-hour period considers the hour where the carpark and drive-thru are predicted to be at their busiest. The following table shows the specific sound level for the typical worst-case 1-hour daytime period at all of the considered noise sensitive receptors. Tables demonstrating how the specific sound levels have been calculated are shown Appendix G.

Receptor	dB $L_{Aeq, 1hour}$
Lodge	45
Ardlui	46
Langdale	44
Kinvaid	43
Proposed Dwelling 1	43
Proposed Dwelling 2	48
Proposed Dwelling 3	49
Proposed Dwelling 4	48
Proposed Dwelling 5	48

Table 15.0 – Specific Sound Levels at Receptors – Typical Worst-Case Daytime

It is understood that deliveries and waste collections will only take place during daytime hours. It is highly unlikely that waste collections and goods deliveries will take place within the same hour as when the carpark and drive-thru are at their busiest. Therefore, an 'absolute worst-case' scenario considers a waste collection taking place during the same hour as when the carpark and drive-thru are predicted to be at their busiest. This ensures that the assessment is robust, as the noise levels from waste collections are predicted to be greater than from deliveries at the noise sensitive receptors. The operator should schedule delivery and waste collections where possible to ensure that both events do not take place within the same 1-hour period. The following table shows the specific sound level for the absolute worst-case 1-hour daytime period at all of the considered noise sensitive receptors. Tables demonstrating how the specific sound levels have been calculated are shown Appendix G.

Source	dB $L_{Aeq, 1hour}$
Lodge	47
Ardlui	48
Langdale	46
Kinvaid	45
Proposed Dwelling 1	48
Proposed Dwelling 2	53
Proposed Dwelling 3	55
Proposed Dwelling 4	54
Proposed Dwelling 5	53

Table 16.0 – Specific Sound Levels at Receptors – Absolute Worst-Case Daytime

Considering that deliveries and waste collections shall not take place between the hours of 23:00 and 07:00, these noise sources are not included in the specific sound level for the night-time assessment. The worst-case night-time period considers the worst-case scenario in terms of vehicle comings and goings. The following table shows the specific sound level for the worst-case 15-minute night-time period at all of the considered noise sensitive receptors. Tables demonstrating how the specific sound levels have been calculated are shown Appendix G.

Source	dB $L_{Aeq, 15min}$
Lodge	42
Ardlui	42
Langdale	40
Kinvaid	39
Proposed Dwelling 1	43
Proposed Dwelling 2	46
Proposed Dwelling 3	48
Proposed Dwelling 4	47
Proposed Dwelling 5	47

Table 17.0 – Specific Sound Levels at Receptors – Night-time

6 BS 4142:2014 Assessments

6.1 BS 4142 Assessment Tables

Daytime Assessment - Typical Worst-Case - Lodge			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	45 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 37.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The typical lowest background $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	45 dB_A	9.1	
Excess of rating level over background level	(45 – 47) = -2 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is -2dBA, which is 7dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 18.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Lodge

Daytime Assessment - Absolute Worst-Case - Lodge			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	47 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well as the contribution of stock deliveries and waste collections. Table 38.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The typical lowest background $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	50 dB_A	9.1	
Excess of rating level over background level	(50 – 47) = +3 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +3dBA, which is 2dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 19.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Lodge

Night-time Assessment - Lodge			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	42 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 39.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The typical lowest background $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	45 dB_A	9.1	
Excess of rating level over background level	(45 – 22) = +23 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +23dBA, which is 13dBA above the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 20.0 - BS 4142: 2014 Assessment – Night-time Assessment – Lodge

Daytime Assessment - Typical Worst-Case - Ardlui			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	46 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 40.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	46 dB_A	9.1	
Excess of rating level over background level	(46 – 47) = -1 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is -1dBA, which is 6dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 21.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Ardlui

Daytime Assessment – Absolute Worst-Case – Ardlui			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	48 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well the contribution of stock deliveries and waste collections. Table 41.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	51 dB_A	9.1	
Excess of rating level over background level	(51 – 77) = +4 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +4dBA, which is 1dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 22.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Ardlui

Night-time Assessment - Ardlui			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	42 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 30.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	45 dB_A	9.1	
Excess of rating level over background level	(45 – 22) = +23 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +23dBA, which is 13dBA above the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 23.0 - BS 4142: 2014 Assessment – Night-time Assessment – Ardlui

Daytime Assessment - Typical Worst-Case - Langdale			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	44 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 43.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	44 dB_A	9.1	
Excess of rating level over background level	(44 – 47) = -3 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is -3dBA, which is 8dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 24.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Langdale

Daytime Assessment - Absolute Worst-Case - Langdale			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	46 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well the contribution of stock deliveries and waste collections. Table 44.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	49 dB_A	9.1	
Excess of rating level over background level	(49 – 47) = +2 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +2dBA, which is 3dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 25.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Langdale

Night-time Assessment – Langdale			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	40 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 45.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	43 dB_A	9.1	
Excess of rating level over background level	(43 – 22) = +21 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +21dBA, which is 11dBA above the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 26.0 - BS 4142: 2014 Assessment – Night-time Assessment – Langdale

Daytime Assessment - Typical Worst-Case - Kinvaid			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	43 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 46.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	47 dB_A	9.1	
Excess of rating level over background level	(43 – 47) = -4 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is -4dBA, which is 9dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 27.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Kinvaid

Daytime Assessment - Absolute Worst-Case - Kinvaid			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	45 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well the contribution of stock deliveries and waste collections. Table 47.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	48 dB_A	9.1	
Excess of rating level over background level	(48 – 47) = +1 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +1dBA, which is 4dBA level of difference that indicates likelihood of adverse impact, depending on context

Table 28.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Kinvaid

Night-time Assessment - Kinvaid			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	39 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 48.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	42 dB_A	9.1	
Excess of rating level over background level	(42 – 22) = +20 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +20dBA, which is 10dBA above the level of difference that indicates likelihood of adverse impact, depending on context

Table 29.0 - BS 4142: 2014 Assessment – Night-time Assessment – Kinvaid

Daytime Assessment - Typical Worst-Case - Proposed Dwelling 1			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	43 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 46.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	47 dB_A	9.1	
Excess of rating level over background level	(43 – 47) = -4 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is -4dBA, which is 9dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 30.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Proposed Dwelling 1

Daytime Assessment - Absolute Worst-Case - Proposed Dwelling 1			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	48 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well the contribution of stock deliveries and waste collections. Table 47.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	51 dB_A	9.1	
Excess of rating level over background level	(51 – 47) = +4 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +4dBA, which is 1dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 31.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Proposed Dwelling 1

Night-time Assessment – Proposed Dwelling 1			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	43 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 48.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	46 dB_A	9.1	
Excess of rating level over background level	(46 – 22) = +24 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +24dBA, which is 10dBA above the level of difference that indicates likelihood of adverse impact, depending on context

Table 32.0 - BS 4142: 2014 Assessment – Night-time Assessment – Proposed Dwelling 1

Daytime Assessment - Typical Worst-Case - Proposed Dwelling 2			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	48 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 46.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	48 dB_A	9.1	
Excess of rating level over background level	(48 – 47) = +1 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +1dBA, which is 4dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 33.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Proposed Dwelling 2

Daytime Assessment - Absolute Worst-Case - Proposed Dwelling 2			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	53 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well the contribution of stock deliveries and waste collections. Table 47.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	56 dB_A	9.1	
Excess of rating level over background level	(56 – 47) = +9 dB_A	11	
Impact	The Assessment indicates that adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +9dBA, which is 4dBA above the level of difference that indicates likelihood of adverse impact, depending on context

Table 34.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Proposed Dwelling 2

Night-time Assessment – Proposed Dwelling 2			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	46 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 48.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	49 dB_A	9.1	
Excess of rating level over background level	(49 – 22) = +27 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +27dBA, which is 17dBA above the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 35.0 - BS 4142: 2014 Assessment – Night-time Assessment – Proposed Dwelling 2

Daytime Assessment - Typical Worst-Case - Proposed Dwelling 3			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	49 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 46.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	48 dB_A	9.1	
Excess of rating level over background level	(49 – 47) = +2 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +2dBA, which is 3dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 36.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Proposed Dwelling 3

Daytime Assessment - Absolute Worst-Case - Proposed Dwelling 3			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	55 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well the contribution of stock deliveries and waste collections. Table 47.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	58 dB_A	9.1	
Excess of rating level over background level	(58 – 47) = +11 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +11dBA, which is 1dBA above the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 37.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Proposed Dwelling 3

Night-time Assessment – Proposed Dwelling 3			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	48 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 48.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	51 dB_A	9.1	
Excess of rating level over background level	(51 – 22) = +29 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +29dBA, which is 19dBA above the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 38.0 - BS 4142: 2014 Assessment – Night-time Assessment – Proposed Dwelling 3

Daytime Assessment - Typical Worst-Case - Proposed Dwelling 4			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	48 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 46.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	48 dB_A	9.1	
Excess of rating level over background level	(48 – 47) = +1 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +1dBA, which is 4dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 39.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Proposed Dwelling 4

Daytime Assessment - Absolute Worst-Case - Proposed Dwelling 4			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	54 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well the contribution of stock deliveries and waste collections. Table 47.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	58 dB_A	9.1	
Excess of rating level over background level	(57 – 47) = +10 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +10dBA, which is the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 40.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Proposed Dwelling 4

Night-time Assessment – Proposed Dwelling 4			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	47 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 48.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	50 dB_A	9.1	
Excess of rating level over background level	(50 – 22) = +28 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +28dBA, which is 18dBA above the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 41.0 - BS 4142: 2014 Assessment – Night-time Assessment – Proposed Dwelling 4

Daytime Assessment - Typical Worst-Case - Proposed Dwelling 5			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	49 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 46.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction:	0 dB	9.2	No perceptible tones, intermittency or impulsivity.
Rating Level at Receiver	49 dB_A	9.1	
Excess of rating level over background level	(49 – 47) = +2 dB_A	11	
Impact	The Assessment indicates that adverse impact is not likely, depending on context	11	The excess of rating level over background sound level is +2dBA, which is 3dBA below the level of difference that indicates likelihood of adverse impact, depending on context

Table 42.0 - BS 4142: 2014 Assessment – Daytime Assessment - Typical Worst-Case – Proposed Dwelling 5

Daytime Assessment - Absolute Worst-Case - Proposed Dwelling 5			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	53 $dB_{LAeq,1hour}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru, noise emissions from fixed plant installations as well the contribution of stock deliveries and waste collections. Table 47.0 for determination of specific sound level.
Background Sound Level	47 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the daytime period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of waste collections can be impulsive in nature. However, the presence of 1.8m barrier and the substantial physical distance between the activities and the receptor mean that the effect of impulsivity is likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	56 dB_A	9.1	
Excess of rating level over background level	(56 – 47) = +9 dB_A	11	
Impact	The Assessment indicates that adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +9dBA, which is 4dBA above the level of difference that indicates likelihood of adverse impact, depending on context

Table 43.0 - BS 4142: 2014 Assessment – Daytime Assessment – Absolute Worst-Case – Proposed Dwelling 5

Night-time Assessment – Proposed Dwelling 5			
Assessment		**Relevant Clause**	**Commentary**
Specific Sound Level	47 $dB_{LAeq,15min}$		Calculated based on predicted vehicle movements from the associated car park and drive-thru as well as noise emissions from fixed plant installations. Table 48.0 for determination of specific sound level.
Background Sound Level	22 $dBL_{A90,15min}$	8.1.1 8.1.2 8.1.3 8.1.4 8.2 8.6	The statistically most-repeated $L_{A90,15min}$ value for the night-time period.
Barrier Attenuation	0 dB_A		Barrier Attenuation already applied in tables for each source
Acoustic Character Correction: Impulsivity: Just Perceptible	+3 dB	9.2	The sound of car doors closing is impulsive in nature and the background sound level is lower during this period, meaning that it is likely to be more noticeable than during the daytime period. However, it is predicted that there will be far fewer instances of doors being slammed relative to the reference period. Therefore, the effect of impulsivity is considered likely to be 'just' perceptible. No perceptible tones or intermittency.
Rating Level at Receiver	50 dB_A	9.1	
Excess of rating level over background level	(50 – 22) = +28 dB_A	11	
Impact	The Assessment indicates that significant adverse impact is likely, depending on context	11	The excess of rating level over background sound level is +28dBA, which is 18dBA above the level of difference that indicates likelihood of significant adverse impact, depending on context

Table 44.0 - BS 4142: 2014 Assessment – Night-time Assessment – Proposed Dwelling 5

6.2 Discussion

6.2.1 Overview

The assessment of adverse impact at the noise sensitive receptors considered to be the worst affected has been employed by the measured sound levels from the environmental noise survey. The measurement and subsequent assessment have been carried out in accordance with methodology outlined in BS 4142:2014. BS 4142 requires that human response to activity sound is rated via numerical values as well as careful consideration for the context in which the sound exists.

The assessments of the typical worst-case 1-hour daytime periods indicate that adverse impact is not likely, subject to context.

The assessments of the absolute worst-case 1-hour daytime period indicate that adverse impact is likely at Proposed Dwelling 2, subject to context.

The assessments of the absolute worst-case 1-hour daytime period indicate that significant adverse impact is likely at Proposed Dwellings 3, 4 and 5, subject to context. Although it is unlikely that waste collections will commonly take place during the period where the carpark and drive-thru are at their busiest, arrangements should be made to ensure that waste collections do not take place during periods where the carpark and drive-thru are at their busiest, if possible.

The night-time assessments indicate that significant adverse impact is likely. The excess of the specific sound level over the background sound level is substantial and therefore, contextual considerations do not alter the assessment outcome.

6.2.2 Context

It is stated in section 11 of BS 4142: 2014 that "where the initial estimate of the impact needs to be modified due to context, take all pertinent factors into consideration, including the following."

1) The character and level of the residual sound compared to the character and level of the specific sound. Considering that the specific sound will exist within proximity of a main road and a retail park, it is reasonable to expect that the nearby residents would expect an acoustic climate which includes noise from vehicle movements. The sound of vehicle movements, which is the greatest source of noise impact associated with the proposed restaurant is likely to be masked by road traffic noise and is not distinguishable from the residual sound environment. Noise associated with fixed plant installations is unlikely to contain impulsive elements and is not likely to be readily distinguished considering the steady residual environment which is dominated by road traffic noise during the daytime period.

2) The sensitivity of the receptor and whether the dwellings will already incorporate design measures that secure good internal and/or another acoustic conditions, such as:

   i) Façade insulation treatment. The attenuation provided by the façade treatment at the receptors should ensure that the rating levels from the assessments should be well below the internal ambient noise level criteria of BS 8233:2014 during the daytime period. It is likely that windows at the existing noise-sensitive receptors comprise secondary glazing. Additionally, secondary glazing is also likely to be installed at the approved new dwellings. Typically, even the most basic double-glazing systems provide at least 24dB of attenuation when closed.

ii) Ventilation and/or cooling that will reduce the need to have windows open. It should be considered that BS 8233:2014 suggests that 15dB of attenuation can be achieved with a partially opened window. This amount of attenuation should ensure that the rating level itself should fall below the internal ambient noise level criteria of BS 8233:2014 during the typical worst-case period daytime period with the window partially open. It is also considered likely, based on the Road Traffic Sound report issued by Charlie Fleming Associates for Westpark, Blairgowrie, that alternative ventilation in the form of trickle vents is to be installed at the approved new dwellings, which should reduce the need to have open windows.

6.2.3 Rating Level Assessment

BS 4142 requires the assessment of acoustic features. Considering that the specific sound is currently not present, feature corrections have been applied based on observations which were made when taking sound measurements which would be used for the specific sound, as well as information gathered from an existing McDonald's restaurant. The sound of car engines from vehicles using the associated carpark and drive-thru facility is likely to be masked by road traffic from the surrounding road networks. Engine noise generally does not contain tonal elements and is not impulsive in nature. Subsequently, no rating penalty has been applied for the vehicle movements during the daytime period.

External mechanical plant may contain tonal elements. However, the cumulative noise level from the plant is below the background sound level during the daytime. Additionally, if the restaurant is closed during the night-time period, fewer items of plant will be running during this period. Therefore, it is considered that tones are unlikely to be perceptible.

The sound of waste being dumped into the back of a wagon from a height as well as bin lids slamming is impulsive in nature, however, due to the physical distance to the receptors, the presence of barriers as well as refuse collections only taking place for a fraction of the 1-hour reference period, the impact of impulsivity from the loading and unloading of goods is not considered 'just' perceptible against the background. Subsequently, a 3dB penalty for impulsivity has been applied.

The sources associated with the McDonald's restaurant do not contain perceivable on/off characteristics and therefore, no penalty has been applied for intermittency. The noise sources from the site also do not possess other characteristics that are particularly discernible from the residual noise environment.

6.2.4 On-time Impact

BS 4142:2014 uses a reference period of 1-hour during the daytime and 15-minutes assess the likelihood of adverse impact. The activities within these periods are required to be typical of the operation under investigation both in terms of level and duration. This identifies whether the sounds associated with the activity have the likelihood of adverse impact, depending on context. The proportion of time the activity takes place within extended periods of time greater than the one-hour reference period provides part of the acoustic context that the BS 4142:2014 assessment is subject to.

This assessment assumes that the McDonald's restaurant will operate 24/7. While this is unlikely to be the case, there will be periods where the site will be busier, as predicted by the transport assessment of vehicle arrivals. The assessment has been based on the likely worst-case 1-hour daytime period, as well as the worst-case 15-minute night-time period. It is therefore considered that the assessment accurately represents the impact of site activity during the busiest 1-hour period and the worst-case 15-minute night-time period, therefore the noise environment will be improved during all other time periods.
It should be considered the assessment of the absolute worst-case includes waste collections. These collections usually occur fewer than three times a week and therefore, do not represent the level of impact over the wider period.

6.2.5 Uncertainty

Reasonable steps have been undertaken to reduce uncertainty in both measurement and assessment in line with section 10 of BS 4142:2014. These steps include the use of class 1 instrumentation, measurements being taken in suitable weather conditions, the measurement locations chosen to obtain background sound levels being representative of the assessment locations and the number of measurements taken. Considering that the assessment has been carried out for a proposed site, uncertainty has been reduced by taking measurements of a comparable car park with the same road surface, as well as observations made of a similar existing McDonald's restaurant. Uncertainty has been reduced by the inclusion of considered and supported contextual issues, as they provide a greater understanding of the residual acoustic environment and the level of variability in sound emission from the source.

7 Assessment of Impacts

The significance of sound of a commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs. An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context. An initial estimate of the impact of the specific sound is made by subtracting the background level.

a) Typically, the greater this difference, the greater the magnitude of the impact.

b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.

c) A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.

d) The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound having a low impact, depending on the context.

Based on the above, the assessment indicates that adverse impact is not likely to occur during the typical worst-case daytime period at any of the noise sensitive receptors. The contextual considerations such as the noise from vehicle movements blending into the residual environment and the closest receptors incorporating acoustic design measures means that the level of impact is likely to be lower than indicated by the initial assessment.

The assessment of the absolute worst-case daytime period at the noise sensitive receptors indicates that adverse effect is not likely at Lodge, Ardlui, Langdale, Kinvaid and proposed dwelling 1. The contextual considerations such as the noise from vehicle movements blending into the residual environment and the closest receptors incorporating acoustic design measures means that the level of impact is likely to be lower than indicated by the initial assessment.

The assessment of the absolute worst-case daytime period at the noise sensitive receptors indicates that adverse effect is likely at proposed dwelling 2. The contextual considerations such as the noise from vehicle movements blending into the residual environment and the closest receptors incorporating acoustic design measures means that the level of impact is likely to be lower than indicated by the initial assessment.

The assessment of the absolute worst-case daytime period at the noise sensitive receptors indicates that significant adverse effect is likely at proposed dwellings 3, 4 and 5. Considering that the rating sound level is only just above the level difference that indicates likelihood of significant adverse impact at all three receptors, close consideration should be given to contextual factors. The contextual considerations such as the noise from vehicle movements blending into the residual environment and the closest receptors incorporating acoustic design measures means that the level of impact is likely to be lower than indicated by the initial assessment. It should also be noted that the dominant sound source driving the up the specific sound level is from waste collections. Waste collections occur sparingly, meaning that this assessment is not a representation of typical site operation. Additionally, waste collections are likely to be required regardless of the development that would be built on the plot of land.

8 Night-time Plant Noise Impact Assessment

It is understood that if the restaurant is closed during night-time hours, the HVAC and kitchen extract will not run apart from until an hour after closure when the crew are cleaning up. The following table shows the predicted sound pressure level from all other items of plant running simultaneously at Lodge.

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
A-weighted total (dB) (All plant running simultaneously)							29

Table 45.0 – Noise Emissions from Proposed Mechanical Plant Installations – Lodge (Night-time)

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	18
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pl	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	9
A-weighted total (dB) (All plant running simultaneously)							29

Table 46.0 – Noise Emissions from Proposed Mechanical Plant Installations – Ardlui (Night-time)

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	20
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	20
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
HWS	fRY013pl	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	9
A-weighted total (dB) (All plant running simultaneously)							28

Table 47.0 – Noise Emissions from Proposed Mechanical Plant Installations – Langdale (Night-time)

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pl	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
A-weighted total (dB) (All plant running simultaneously)							26

Table 48.0 – Noise Emissions from Proposed Mechanical Plant Installations – Kinvaid (Night-time)

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	57	-	-10	17
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	57	-	-10	17
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	63	-	-10	16
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	63	-	-10	16
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	63	-	-10	16
AC/02	Mitsubishi M50FA	-	51	59	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	57	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	14
EF/02	EF/02	-	67	57	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	13
EF/03	EF/03	-	67	52	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
HWS	fRY013pI	-	59	52	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	7
A-weighted total (dB) (All plant running simultaneously)							25

Table 49.0 – Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 1 (Night-time)

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	37	-	-10	20
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	36	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	40	-	-10	20
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	39	-	-10	20
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	39	-	-10	20
AC/02	Mitsubishi M50FA	-	51	28	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	4
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	30	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	19
EF/02	EF/02	-	67	27	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	19
EF/03	EF/03	-	67	21	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	23
HWS	fRY013pI	-	59	21	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
A-weighted total (dB) (All plant running simultaneously)							30

Table 50.0 – Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 2 (Night-time)

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	36	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	36	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	36	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	35	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	34	-	-10	21
AC/02	Mitsubishi M50FA	-	51	23	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	6
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	24	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/02	EF/02	-	67	22	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/03	EF/03	-	67	18	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	24
HWS	fRY013pI	-	59	18	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
A-weighted total (dB) (All plant running simultaneously)							31

Table 51.0 – Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 3 (Night-time)

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	36	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	35	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	38	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	37	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	36	-	-10	21
AC/02	Mitsubishi M50FA	-	51	27	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	4
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	25	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/02	EF/02	-	67	24	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	20
EF/03	EF/03	-	67	18	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	24
HWS	fRY013pI	-	59	18	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
A-weighted total (dB) (All plant running simultaneously)							31

Table 52.0 – Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 4 (Night-time)

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	35	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	35	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	36	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	35	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	34	-	-10	21
AC/02	Mitsubishi M50FA	-	51	23	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	6
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	24	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/02	EF/02	-	67	22	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/03	EF/03	-	67	16	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	25
HWS	fRY013pl	-	59	16	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
A-weighted total (dB) (All plant running simultaneously)							31

Table 53.0 – Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 5 (Night-time)

Tables 45.0 – 53.0 predict that during the night-time hours, the plant noise level will be 8dB – 11dB greater than the prevailing background sound level depending on the noise-sensitive receptor. An initial noise impact assessment would suggest that adverse or significant adverse impact would be likely, subject to context. However, the plant noise level outside of all of the receptors is predicted to be below 30dB, which is the Indoor ambient noise level target for dwellings. Considering that 15dB of attenuation (BS 8233:2014) can be achieved with a partially open window, the plant noise level inside the dwellings is likely to be well below the indoor ambient noise level target with a partially open window. As stated in section 6.2.2 of this report, the approved new dwellings are also likely to incorporate alternative ventilation, which should reduce the need for the windows to be open. If windows at the dwellings were to be closed, the plant noise level would be even further below the indoor ambient noise level.

9 Conclusions

A sound survey was undertaken to inform the assessment of the likelihood of adverse impact from the proposed McDonald's restaurant with associated car park and drive-thru facility Westpark Retail Park, off Perth Road, Blairgowrie. The sound survey was carried out in compliance with BS 4142 as detailed in this report. The sound survey considers the impacts at nine noise-sensitive receptors including four existing receptors on the opposite side of Perth Road to the site, Lodge, Ardlui, Langdale and Kinvaid. The other five receptors are approved future dwellings that are to built immediately to the north of the site.

Sound measurements were taken at one location representing the most exposed noise-sensitive receptors. Noise measurements were taken from other sites to represent noise sources that will be associated with the proposed site, such as car park vehicle movements and deliveries. Sound levels associated with noise sources such as mechanical plant and refuse collections have been established from British Standards and Manufacturer datasheets.

The initial assessment of the typical worst-case daytime period indicates that adverse impact is not likely at any of the nearby noise-sensitive receptors. The contextual considerations required by BS 4142, particularly the nature of the source within the residual environment and acoustic design measures being incorporated at the most-exposed noise-sensitive receptors suggest that the impact is likely to be lower than predicted by the initial BS 4142 assessment.

The initial assessment of the absolute worst-case daytime period, where waste collections are taking place in the same one-hour period as when the car park and drive-thru are at their busiest indicates that adverse impact is not likely at Lodge, Ardlui, Langdale, Kinvaid and proposed dwelling 1. The contextual considerations required by BS 4142, particularly the nature of the source within the residual environment and acoustic design measures being incorporated at the most-exposed noise-sensitive receptors suggest that the impact is likely to be lower than predicted by the initial BS 4142 assessment.

The initial assessment of the absolute worst-case daytime period, where waste collections are taking place in the same one-hour period as when the car park and drive-thru are at their busiest indicates that adverse impact is likely at proposed dwelling 2. The contextual considerations required by BS 4142, particularly the nature of the source within the residual environment and acoustic design measures being incorporated at the most-exposed noise-sensitive receptors suggest that the impact is likely to be lower than predicted by the initial BS 4142 assessment.

The initial assessment of the absolute worst-case daytime period predicts that significant adverse impact is likely at Proposed Dwellings 3, 4 and 5. Considering that the rating sound level is only just above the level difference that indicates likelihood of significant adverse impact at all three receptors, close consideration should be given to contextual factors. The contextual considerations required by BS 4142, particularly the nature of the source within the residual environment and acoustic design measures being incorporated at the most-exposed noise-sensitive receptors suggest that the impact is likely to be lower than predicted by the initial BS 4142 assessment. Additionally, waste collections which are likely to be required regardless of the development that would be built on the plot, occur sparingly, meaning that this assessment is not a representation of typical site operation.

The initial assessment of the worst-case night-time period when the restaurant is open and the carpark and drive-thru are in use indicates that significant adverse impact is likely. The difference between the specific sound level and the background sound level is substantial, meaning that there is a high degree of confidence and uncertainty is diminished, and the relevance of contextual considerations in this instance is reduced.

It is recommended that the proposed 1.1m surrounding the drive-thru lane be upgraded to an acoustic fence with a minimum height of 1.8m. The fence should have a minimum mass of 10kg/m^2 and not have holes or gaps present.

Some items of fixed mechanical plant are to continue running if the facility stops trading during the night-time period. Although the calculations suggest that the cumulative plant noise level will exceed the prevailing background sound level by 8dB – 11dB, which indicates adverse or significant adverse impact, plant noise levels inside are still expected to comply with the internal ambient noise level outlined in BS 8233:2014 in all of the receptors considering that the attenuation that can be achieved with a partially open window should result in plant noise level that is well below the indoor ambient noise level target for the night-time inside a bedroom. If windows were at the dwellings were to be closed the plant noise level would fall even further below the internal ambient noise level target as specified in BS 8233:2014 inside the bedrooms, as a standard double glazing system typically provides at least 24 dB of attenuation.

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Appendix A – Acoustic Terminology & Definitions

Sound Pressure	The fluctuations in air pressure, from the steady atmospheric pressure, created by sound, measured in pascals (Pa).
Sound Pressure Level (SPL)	The sound pressure measured on a decibel scale relative to a standard reference pressure of 20μPa (20x10-6 Pascals).
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s1 and s2 is given by 20 log10 (s1 / s2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20μPa.
Frequency (Hz)	The pitch of the sound, measured in Herts (Hz)
Integrating Sound Level Meter	An instrument used for measuring sound levels with the capacity to perform calculations to derive other parameters.
Calibration	A check of the function of a sound level meter by comparing the meter reading with a known sound pressure level. This is performed in the field before and after measurement and by a laboratory every year calibrators and every two years for Sound Level Meters.
A-Weighting, dB(A)	A frequency waiting devised to attempt to take the fact that human response to sound is not equally sensitive at all frequencies into account.
Z-Weighting	A zero frequency weighting (often referred to as unweighted).
Attenuation	Noise reduction, measured in decibels.
Ambient Sound Level $L_{Aeq.T}$	The total encompassing sound in a given situation, at a given time. Usually composed of sounds from many sources, near and far.
Residual Sound Level $L_{Aeq.T}$	The ambient sound remaining when the specific sound source is suppressed to a degree it does not contribute to the ambient sound.
Specific Sound Level $L_{Aeq.T}$	The equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given reference time interval, Tr.
Rating Level $L_{Ar, tr}$	The specific sound level plus any adjustment for the characteristic features of the sound.
Background Sound Level $L_{A90.T}$	A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels.
Sound Exposure Level , SEL (L_{AE})	A measure of A-weighted sound energy used to describe noise events such as the passing of trains; it is the A-weighted sound pressure level which, is occurring over a period of one second, would contain the same amount of A-weighted sound energy as the event.
Frequency Analysis	Analysis of a sound into its frequency components. Commonly 1/1 or 1/3 octave bands
Frequency Spectrum	A graph resulting from frequency analysis and showing different levels of the signal in the various frequency bands.
Octave-bands	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
Noise Index	A method of evaluating or rating a noise, usually by assigning a single number to it, based on some combination of its physical parameters (sound pressure level, frequency, duration) and other factors such as time of day, tonal characteristics and impulsive characteristics.
Leq, T	Otherwise referred to as the 'continuous equivalent noise level' of a period of time (T). This is the steady noise level which contains the same amount of energy as the time varying sound level that was recorded.
Lmax,T	The maximum RMS sound pressure level that occurs within a specified time period. It is used often to describe occasional loud noise events that may have little influence on the Leq but will have an effect on the overall acoustic environment. The time weighting (Fast or Slow) is usually specified.

L90, T	The noise level exceeded for 90% of the specified time period (T). It is often used to characterise the background noise.
L10, T	The noise level exceeded for 10% of the specified time period (T). It is often used to characterise road traffic noise.
Free-Field	A situation where the radiation from a sound source is completely unaffected by the presence of reflective surfaces. In terms of environmental noise measurement, it is usually taken to mean at least 3.5m away from 3.5m away from reflective surfaces with the exception of the ground.
Façade Noise Level	A noise level measured within 3m of a building façade, which contains a contribution arising from reflection of sound at the façade. The difference between the façade level and free-field level is described as the façade correction factor.
Noise Sensitive Receptor	Premises that are used for purposes sensitive to noise and that require protection.
Line Source	A source of sound that as distance increases away from the source it still appears large in one dimension. Attenuation of this form of source occurs at a distance of (a/π) where a is the largest dimension of the source.
Point Source	A source of sound that as distance increases away from the source it appears as a point in space. Attenuation of this form of source occurs at a distance of (b/π) where b is the smallest dimension of the source.
Time Weighting	One of the standard averaging times (Fast, Slow or Impulsive) used for the measurement of RMS sound pressure level in sound level meters, specified in ISO 61671-1.
Rw	Single number quantity which characterises the airborne the airborne sound insulation of a material or building element over a range of frequencies, based on laboratory measurements.
DnT,w + Ctr	A single value that characterises the airborne sound insulation performance using the Ctr: spectrum adaption terms described in BS EN ISO 717-1. The value is based on field measurements and the value represents total sound transmission including flanking sound, not just the partition.

The table below presents an indication of sound levels associated with the environment starting from 0dB (the threshold of hearing) to 140dB (The threshold of pain).

Sound Level	Location/Activity
0 dB(A)	Threshold of Hearing
20 – 30 dB(A)	Inside Quiet Bedroom at Night
30 – 40 dB(A)	Inside a Living Room During the Day
40 – 50 dB(A)	Inside Typical Office
50 – 60 dB(A)	Inside a Car
60 – 70 dB(A)	Typical High Street
70 – 90 dB(A)	Inside Factory
100 – 110 dB(A)	Burglar Alarm at 1m
110 – 130 dB(A)	Jet Aircraft on Take Off
140 dB(A)	Threshold of Pain

The 'A' denotes the A-weighting scale used to replicate the frequency response of the human ear.

Appendix B – Carpark and Drive-Thru Vehicle Movement Noise Emissions Tables

Proposed Carpark Noise Emissions at Lodge – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	74	0	52	77	35
Car Passage	3	83	-10	44	77	17
Drive Thru – drive off street and stop at COD	5	82	-10	51	77	24
Engine Idling – Making Order	1	63	-10	57	77	30
Drive to Pay Point	5	51	-10	55	77	28
Engine Idling – Pay Point	5	42	-10	58	77	31
Drive to Collection Point	5	36	-10	59	77	32
Engine Idling - Collection Point	5	34	-10	59	77	33
Car Pulling off Collection Point	5	28	-10	66	77	39
Car Pulling off Drive-Thru into Car Park	5	49	-10	61	77	34
Car Passage	3	61	-10	47	77	20
Car Driving off and pulling onto the street	8	74	-10	53	77	26
Car Passage	3	83	0	44	57	26
Car Passage	3	65	-10	46	57	18
Car Passage	3	54	-10	48	57	20
Car Passage	3	61	-10	47	57	19
Car Driving off and pulling onto the street	8	73	0	53	57	35
Car Reversing	7	83	-10	45	19	12
Car Reversing	7	65	-10	47	19	14

Car Reversing	7	54	-10	48	19	15
Car Pulling off Parking Space	4	83	-10	44	19	11
Car Pulling off Parking Space	4	65	-10	46	19	13
Car Pulling off Parking Space	4	54	-10	47	19	15
Car Engine Starting	5	83	-10	44	6	6
Car Engine Starting	5	65	-10	46	6	8
Car Engine Starting	5	54	-10	47	7	10
Car Door Slam	1	83	-10	52	38	22
Car Door Slam	1	65	-10	54	38	24
Car Door Slam	1	54	-10	55	38	26
Total dBLAeq, 1hour						**44**

Proposed Carpark Noise Emissions at Lodge - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	74	0	52	4	28
Car Passage	3	83	0	44	4	21
Drive Thru – drive off street and stop at COD	5	82	-10	51	4	17
Engine Idling – Making Order	1	63	-10	57	4	23
Drive to Pay Point	5	51	-10	55	4	21
Engine Idling – Pay Point	5	42	-10	58	4	24
Drive to Collection Point	5	36	-10	59	4	25
Engine Idling - Collection Point	5	34	-10	59	4	26
Car Pulling off Collection Point	5	28	-10	66	4	33

Car Pulling off Drive-Thru into Car Park	5	49	-10	61	4	28
Car Passage	3	61	-10	47	4	13
Car Driving off and pulling onto the street	8	74	0	53	4	29
Car Passage	3	83	-10	44	6	12
Car Passage	3	65	-10	46	6	15
Car Passage	3	54	-10	48	6	16
Car Passage	3	61	-10	47	6	15
Car Driving off and pulling onto the street	8	73	0	53	6	31
Car Reversing	7	83	-10	45	3	10
Car Reversing	7	65	-10	47	3	12
Car Reversing	7	54	-10	48	3	13
Car Pulling off Parking Space	4	83	-10	44	3	9
Car Pulling off Parking Space	4	65	-10	46	3	11
Car Pulling off Parking Space	4	54	-10	47	3	13
Car Engine Starting	5	83	-10	44	2	7
Car Engine Starting	5	65	-10	46	2	9
Car Engine Starting	5	54	-10	47	2	11
Car Door Slam	1	83	-10	52	4	18
Car Door Slam	1	65	-10	54	4	20
Car Door Slam	1	54	-10	55	4	22
Total dBLAeq, 15min						**39**

Proposed Carpark Noise Emissions at Ardlui – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	78	0	51	77	34
Car Passage	3	85	-10	44	77	17
Drive Thru – drive off street and stop at COD	5	79	-10	51	77	24
Engine Idling – Making Order	1	58	-10	58	77	31
Drive to Pay Point	5	43	-10	56	77	30
Engine Idling – Pay Point	5	34	-10	59	77	33
Drive to Collection Point	5	33	-10	60	77	33
Engine Idling - Collection Point	5	31	-10	60	77	33
Car Pulling off Collection Point	5	29	-10	66	77	39
Car Pulling off Drive-Thru into Car Park	5	52	-10	61	77	34
Car Passage	3	64	-10	46	77	20
Car Driving off and pulling onto the street	8	78	0	52	77	36
Car Passage	3	85	-10	44	57	16
Car Passage	3	64	-10	46	57	18
Car Passage	3	54	-10	48	57	20
Car Passage	3	64	-10	46	57	18
Car Driving off and pulling onto the street	8	78	0	52	57	34
Car Reversing	7	84	-10	44	19	12
Car Reversing	7	54	-10	48	19	15
Car Reversing	7	64	-10	47	19	14

Car Pulling off Parking Space	4	84	-10	44	19	11
Car Pulling off Parking Space	4	54	-10	47	19	15
Car Pulling off Parking Space	4	64	-10	46	19	13
Car Engine Starting	5	84	-10	43	6	6
Car Engine Starting	5	54	-10	47	6	10
Car Engine Starting	5	64	-10	46	7	9
Car Door Slam	1	84	-10	52	38	22
Car Door Slam	1	54	-10	55	38	26
Car Door Slam	1	64	-10	54	38	24
Total dBLAeq, 1hour						**45**

Proposed Carpark Noise Emissions at Ardlui - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	78	0	52	4	28
Car Passage	3	85	-10	44	4	10
Drive Thru - drive off street and stop at COD	5	79	-10	51	4	18
Engine Idling - Making Order	1	58	-10	57	4	24
Drive to Pay Point	5	43	-10	55	4	23
Engine Idling - Pay Point	5	34	-10	58	4	26
Drive to Collection Point	5	33	-10	59	4	26
Engine Idling - Collection Point	5	31	-10	59	4	27
Car Pulling off Collection Point	5	29	-10	66	4	32

Car Pulling off Drive-Thru into Car Park	5	52	-10	61	4	27
Car Passage	3	64	-10	47	4	13
Car Driving off and pulling onto the street	8	78	0	53	4	29
Car Passage	3	85	-10	44	6	12
Car Passage	3	64	-10	46	6	15
Car Passage	3	54	-10	48	6	16
Car Passage	3	64	-10	47	6	15
Car Driving off and pulling onto the street	8	78	0	53	6	30
Car Reversing	7	84	-10	45	3	10
Car Reversing	7	54	-10	47	3	13
Car Reversing	7	64	-10	48	3	12
Car Pulling off Parking Space	4	84	-10	44	3	9
Car Pulling off Parking Space	4	54	-10	46	3	13
Car Pulling off Parking Space	4	64	-10	47	3	11
Car Engine Starting	5	84	-10	44	2	7
Car Engine Starting	5	54	-10	46	2	11
Car Engine Starting	5	64	-10	47	2	9
Car Door Slam	1	84	-10	52	4	18
Car Door Slam	1	54	-10	54	4	22
Car Door Slam	1	64	-10	55	4	20
Total dBLAeq, 15min						**38**

Proposed Carpark Noise Emissions at Langdale – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	97	-10	49	77	23
Car Passage	3	90	-10	43	77	17
Drive Thru – drive off street and stop at COD	5	80	-10	51	77	24
Engine Idling – Making Order	1	60	-10	57	77	31
Drive to Pay Point	5	43	-10	56	77	30
Engine Idling – Pay Point	5	35	-10	59	77	32
Drive to Collection Point	5	35	-10	59	77	32
Engine Idling - Collection Point	5	35	-10	59	77	32
Car Pulling off Collection Point	5	37	-10	64	77	37
Car Pulling off Drive-Thru into Car Park	5	59	-10	60	77	33
Car Passage	3	70	-10	46	77	19
Car Driving off and pulling onto the street	8	87	-10	51	77	25
Car Passage	3	90	-10	43	57	15
Car Passage	3	67	-10	46	57	18
Car Passage	3	58	-10	47	57	19
Car Passage	3	70	-10	46	57	18
Car Driving off and pulling onto the street	8	97	-10	50	57	22
Car Reversing	7	65	-10	47	19	14
Car Reversing	7	67	-10	46	19	14
Car Reversing	7	70	-10	46	19	13

Car Pulling off Parking Space	4	65	-10	46	19	13
Car Pulling off Parking Space	4	67	-10	46	19	13
Car Pulling off Parking Space	4	70	-10	45	19	12
Car Engine Starting	5	65	-10	46	6	8
Car Engine Starting	5	67	-10	45	6	8
Car Engine Starting	5	70	-10	45	7	8
Car Door Slam	1	65	-10	54	38	24
Car Door Slam	1	67	-10	53	38	24
Car Door Slam	1	70	-10	53	38	23
Total dBLAeq, 1hour						**42**

Proposed Carpark Noise Emissions at Langdale - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	97	-10	49	4	16
Car Passage	3	90	-10	43	4	10
Drive Thru - drive off street and stop at COD	5	80	-10	51	4	17
Engine Idling - Making Order	1	60	-10	57	4	24
Drive to Pay Point	5	43	-10	56	4	23
Engine Idling - Pay Point	5	35	-10	59	4	26
Drive to Collection Point	5	35	-10	59	4	26
Engine Idling - Collection Point	5	35	-10	59	4	26
Car Pulling off Collection Point	5	37	-10	64	4	30

Car Pulling off Drive-Thru into Car Park	5	59	-10	60	4	26
Car Passage	3	70	-10	46	4	12
Car Driving off and pulling onto the street	8	87	-10	51	4	18
Car Passage	3	90	-10	43	6	12
Car Passage	3	67	-10	46	6	14
Car Passage	3	58	-10	47	6	16
Car Passage	3	70	-10	46	6	14
Car Driving off and pulling onto the street	8	97	-10	50	6	19
Car Reversing	7	65	-10	47	3	12
Car Reversing	7	67	-10	46	3	12
Car Reversing	7	70	-10	46	3	11
Car Pulling off Parking Space	4	65	-10	46	3	11
Car Pulling off Parking Space	4	67	-10	46	3	11
Car Pulling off Parking Space	4	70	-10	45	3	10
Car Engine Starting	5	65	-10	46	2	9
Car Engine Starting	5	67	-10	45	2	9
Car Engine Starting	5	70	-10	45	2	9
Car Door Slam	1	65	-10	54	4	20
Car Door Slam	1	67	-10	53	4	20
Car Door Slam	1	70	-10	53	4	20
Total dBLAeq, 15min						**36**

Proposed Carpark Noise Emissions at Kinvaid – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	106	-10	48	77	22
Car Passage	3	96	-10	43	77	16
Drive Thru – drive off street and stop at COD	5	82	-10	51	77	24
Engine Idling – Making Order	1	61	-10	57	77	31
Drive to Pay Point	5	43	-10	56	77	30
Engine Idling – Pay Point	5	40	-10	58	77	31
Drive to Collection Point	5	40	-10	58	77	31
Engine Idling - Collection Point	5	44	-10	57	77	30
Car Pulling off Collection Point	5	47	-10	62	77	35
Car Pulling off Drive-Thru into Car Park	5	68	-10	58	77	32
Car Passage	3	78	-10	45	77	18
Car Driving off and pulling onto the street	8	106	-10	50	77	23
Car Passage	3	96	-10	43	57	15
Car Passage	3	71	-10	46	57	18
Car Passage	3	66	-10	46	57	18
Car Passage	3	78	-10	45	57	17
Car Driving off and pulling onto the street	8	106	-10	50	57	22
Car Reversing	7	96	-10	43	19	10
Car Reversing	7	71	-10	46	19	13
Car Reversing	7	78	-10	45	19	12

Car Pulling off Parking Space	4	96	-10	42	19	10
Car Pulling off Parking Space	4	71	-10	45	19	12
Car Pulling off Parking Space	4	78	-10	44	19	11
Car Engine Starting	5	96	-10	42	6	5
Car Engine Starting	5	71	-10	45	6	7
Car Engine Starting	5	78	-10	44	7	7
Car Door Slam	1	96	-10	50	38	21
Car Door Slam	1	71	-10	53	38	23
Car Door Slam	1	78	-10	52	38	22
Total dBLAeq, 1hour						**41**

Proposed Carpark Noise Emissions at Kinvaid - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	106	-10	49	4	15
Car Passage	3	96	-10	43	4	9
Drive Thru - drive off street and stop at COD	5	82	-10	51	4	17
Engine Idling - Making Order	1	61	-10	57	4	24
Drive to Pay Point	5	43	-10	56	4	23
Engine Idling - Pay Point	5	40	-10	59	4	24
Drive to Collection Point	5	40	-10	59	4	24
Engine Idling - Collection Point	5	44	-10	59	4	24
Car Pulling off Collection Point	5	47	-10	64	4	28

Car Pulling off Drive-Thru into Car Park	5	68	-10	60	4	25
Car Passage	3	78	-10	46	4	11
Car Driving off and pulling onto the street	8	106	-10	51	4	16
Car Passage	3	96	-10	43	6	11
Car Passage	3	71	-10	46	6	14
Car Passage	3	66	-10	47	6	14
Car Passage	3	78	-10	46	6	13
Car Driving off and pulling onto the street	8	106	-10	50	6	18
Car Reversing	7	96	-10	47	3	8
Car Reversing	7	71	-10	46	3	11
Car Reversing	7	78	-10	46	3	10
Car Pulling off Parking Space	4	96	-10	46	3	8
Car Pulling off Parking Space	4	71	-10	46	3	4
Car Pulling off Parking Space	4	78	-10	45	3	9
Car Engine Starting	5	96	-10	46	2	6
Car Engine Starting	5	71	-10	45	2	8
Car Engine Starting	5	78	-10	45	2	8
Car Door Slam	1	96	-10	54	4	17
Car Door Slam	1	71	-10	53	4	19
Car Door Slam	1	78	-10	53	4	19
Total dBLAeq, 15min						**34**

Proposed Carpark Noise Emissions at Proposed Dwelling 1 - Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	43	-10	46	77	30
Car Passage	3	26	-10	44	77	28
Drive Thru – drive off street and stop at COD	5	18	-10	54	77	37
Engine Idling – Making Order	1	37	-10	52	77	35
Drive to Pay Point	5	42	-10	47	77	30
Engine Idling – Pay Point	5	68	-10	43	77	27
Drive to Collection Point	5	69	-10	43	77	27
Engine Idling - Collection Point	5	69	-10	43	77	27
Car Pulling off Collection Point	5	69	-10	48	77	32
Car Pulling off Drive-Thru into Car Park	5	60	-10	49	77	33
Car Passage	3	46	-10	39	77	23
Car Driving off and pulling onto the street	8	43	-10	47	77	31
Car Passage	3	26	-10	44	57	26
Car Passage	3	35	-10	42	57	24
Car Passage	3	51	-10	38	57	20
Car Passage	3	46	-10	39	57	21
Car Driving off and pulling onto the street	8	43	-10	47	57	29
Car Reversing	7	26	-10	45	19	22
Car Reversing	7	35	-10	42	19	19
Car Reversing	7	51	-10	39	19	16

Car Pulling off Parking Space	4	26	-10	44	19	21
Car Pulling off Parking Space	4	35	-10	41	19	18
Car Pulling off Parking Space	4	51	-10	38	19	15
Car Engine Starting	5	26	-10	44	6	16
Car Engine Starting	5	35	-10	41	6	13
Car Engine Starting	5	51	-10	38	7	11
Car Door Slam	1	26	-10	52	38	32
Car Door Slam	1	35	-10	49	38	29
Car Door Slam	1	51	-10	46	38	26
Total dBLAeq, 1hour						**43**

Proposed Carpark Noise Emissions at Proposed Dwelling 1 - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	43	-5	51	4	28
Car Passage	3	26	-5	49	4	26
Drive Thru - drive off street and stop at COD	5	18	-5	59	4	35
Engine Idling - Making Order	1	37	-5	57	4	33
Drive to Pay Point	5	42	-5	52	4	28
Engine Idling - Pay Point	5	68	-5	48	4	25
Drive to Collection Point	5	69	-5	48	4	25
Engine Idling - Collection Point	5	69	-5	48	4	25
Car Pulling off Collection Point	5	69	-5	53	4	30

Car Pulling off Drive-Thru into Car Park	5	60	-5	54	4	31
Car Passage	3	46	-5	44	4	21
Car Driving off and pulling onto the street	8	43	-5	52	4	29
Car Passage	3	26	-5	49	6	27
Car Passage	3	35	-5	47	6	25
Car Passage	3	51	-5	43	6	22
Car Passage	3	46	-5	44	6	23
Car Driving off and pulling onto the street	8	43	-5	52	6	31
Car Reversing	7	26	-5	50	3	25
Car Reversing	7	35	-5	47	3	22
Car Reversing	7	51	-5	44	3	19
Car Pulling off Parking Space	4	26	-5	49	3	24
Car Pulling off Parking Space	4	35	-5	46	3	21
Car Pulling off Parking Space	4	51	-5	43	3	18
Car Engine Starting	5	26	-5	49	2	22
Car Engine Starting	5	35	-5	46	2	20
Car Engine Starting	5	51	-5	43	2	16
Car Door Slam	1	26	-5	57	4	33
Car Door Slam	1	35	-5	54	4	31
Car Door Slam	1	51	-5	51	4	27
Total dBLAeq, 15min						**43**

Proposed Carpark Noise Emissions at Proposed Dwelling 2 - Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	57	-10	44	77	27
Car Passage	3	41	-10	40	77	24
Drive Thru – drive off street and stop at COD	5	14	-10	56	77	39
Engine Idling – Making Order	1	13	-10	61	77	44
Drive to Pay Point	5	18	-10	54	77	37
Engine Idling – Pay Point	5	38	-10	48	77	32
Drive to Collection Point	5	40	-10	48	77	31
Engine Idling - Collection Point	5	45	-10	47	77	30
Car Pulling off Collection Point	5	45	-10	52	77	35
Car Pulling off Drive-Thru into Car Park	5	47	-10	52	77	35
Car Passage	3	42	-10	40	77	23
Car Driving off and pulling onto the street	8	57	-10	45	77	28
Car Passage	3	41	-10	40	57	22
Car Passage	3	26	-10	44	57	26
Car Passage	3	34	-10	42	57	24
Car Passage	3	42	-10	40	57	22
Car Driving off and pulling onto the street	8	57	-10	45	57	27
Car Reversing	7	26	-10	45	19	22
Car Reversing	7	34	-10	42	19	19
Car Reversing	7	42	-10	40	19	18

Car Pulling off Parking Space	4	26	-10	44	19	21
Car Pulling off Parking Space	4	34	-10	41	19	19
Car Pulling off Parking Space	4	42	-10	40	19	17
Car Engine Starting	5	26	-10	44	6	16
Car Engine Starting	5	34	-10	41	6	14
Car Engine Starting	5	42	-10	40	7	12
Car Door Slam	1	26	-10	52	38	32
Car Door Slam	1	34	-10	49	38	30
Car Door Slam	1	42	-10	48	38	28
Total dBLAeq, 1hour						**47**

Proposed Carpark Noise Emissions at Proposed Dwelling 2 - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	57	-5	49	4	15
Car Passage	3	41	-5	45	4	9
Drive Thru - drive off street and stop at COD	5	14	-5	61	4	17
Engine Idling - Making Order	1	13	-5	66	4	24
Drive to Pay Point	5	18	-5	59	4	23
Engine Idling - Pay Point	5	38	-5	53	4	24
Drive to Collection Point	5	40	-5	53	4	24
Engine Idling - Collection Point	5	45	-5	52	4	24
Car Pulling off Collection Point	5	45	-5	57	4	28

Car Pulling off Drive-Thru into Car Park	5	47	-5	57	4	25
Car Passage	3	42	-5	45	4	11
Car Driving off and pulling onto the street	8	57	-5	50	4	16
Car Passage	3	41	-5	45	6	11
Car Passage	3	26	-5	49	6	14
Car Passage	3	34	-5	47	6	14
Car Passage	3	42	-5	45	6	13
Car Driving off and pulling onto the street	8	57	-5	50	6	18
Car Reversing	7	26	-5	50	3	8
Car Reversing	7	34	-5	47	3	11
Car Reversing	7	42	-5	45	3	10
Car Pulling off Parking Space	4	26	-5	49	3	8
Car Pulling off Parking Space	4	34	-5	46	3	4
Car Pulling off Parking Space	4	42	-5	45	3	9
Car Engine Starting	5	26	-5	49	2	6
Car Engine Starting	5	34	-5	46	2	8
Car Engine Starting	5	42	-5	45	2	8
Car Door Slam	1	26	-5	57	4	17
Car Door Slam	1	34	-5	54	4	19
Car Door Slam	1	42	-5	53	4	19
Total dBLAeq, 15min						**46**

Proposed Carpark Noise Emissions at Proposed Dwelling 3 - Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	68	-10	42	77	26
Car Passage	3	54	-10	38	77	21
Drive Thru – drive off street and stop at COD	5	25	-10	51	77	34
Engine Idling – Making Order	1	17	-10	58	77	42
Drive to Pay Point	5	8	-10	61	77	44
Engine Idling – Pay Point	5	20	-10	54	77	37
Drive to Collection Point	5	22	-10	53	77	36
Engine Idling - Collection Point	5	34	-10	49	77	33
Car Pulling off Collection Point	5	28	-10	56	77	39
Car Pulling off Drive-Thru into Car Park	5	41	-10	53	77	36
Car Passage	3	46	-10	39	77	23
Car Driving off and pulling onto the street	8	74	-10	43	77	26
Car Passage	3	54	-10	38	57	20
Car Passage	3	31	-10	43	57	25
Car Passage	3	32	-10	42	57	24
Car Passage	3	46	-10	39	57	21
Car Driving off and pulling onto the street	8	64	-10	44	57	26
Car Reversing	7	54	-10	38	19	15
Car Reversing	7	31	-10	43	19	20
Car Reversing	7	46	-10	40	19	17

Car Pulling off Parking Space	4	54	-10	37	19	15
Car Pulling off Parking Space	4	31	-10	42	19	19
Car Pulling off Parking Space	4	46	-10	39	19	16
Car Engine Starting	5	54	-10	37	6	10
Car Engine Starting	5	31	-10	42	6	14
Car Engine Starting	5	46	-10	39	7	12
Car Door Slam	1	54	-10	45	38	26
Car Door Slam	1	31	-10	50	38	30
Car Door Slam	1	46	-10	47	38	27
Total dBLAeq, 1hour						**49**

Proposed Carpark Noise Emissions at Proposed Dwelling 3 - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	68	-5	47	4	24
Car Passage	3	54	-5	43	4	19
Drive Thru - drive off street and stop at COD	5	25	-5	56	4	32
Engine Idling - Making Order	1	17	-5	63	4	40
Drive to Pay Point	5	8	-5	66	4	42
Engine Idling - Pay Point	5	20	-5	59	4	35
Drive to Collection Point	5	22	-5	58	4	35
Engine Idling - Collection Point	5	34	-5	54	4	31
Car Pulling off Collection Point	5	28	-5	61	4	38

Car Pulling off Drive-Thru into Car Park	5	41	-5	58	4	34
Car Passage	3	46	-5	44	4	21
Car Driving off and pulling onto the street	8	74	-5	48	4	24
Car Passage	3	54	-5	43	6	21
Car Passage	3	31	-5	48	6	26
Car Passage	3	32	-5	47	6	26
Car Passage	3	46	-5	44	6	23
Car Driving off and pulling onto the street	8	64	-5	49	6	27
Car Reversing	7	54	-5	43	3	18
Car Reversing	7	31	-5	48	3	23
Car Reversing	7	46	-5	45	3	20
Car Pulling off Parking Space	4	54	-5	42	3	18
Car Pulling off Parking Space	4	31	-5	47	3	22
Car Pulling off Parking Space	4	46	-5	44	3	19
Car Engine Starting	5	54	-5	42	2	16
Car Engine Starting	5	31	-5	47	2	21
Car Engine Starting	5	46	-5	44	2	17
Car Door Slam	1	54	-5	50	4	27
Car Door Slam	1	31	-5	55	4	32
Car Door Slam	1	46	-5	52	4	28
Total dBLAeq, 15min						**47**

Proposed Carpark Noise Emissions at Proposed Dwelling 4 - Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	53	-10	44	77	28
Car Passage	3	33	-10	42	77	25
Drive Thru – drive off street and stop at COD	5	19	-10	53	77	37
Engine Idling – Making Order	1	13	-10	61	77	44
Drive to Pay Point	5	14	-10	56	77	39
Engine Idling – Pay Point	5	43	-10	47	77	31
Drive to Collection Point	5	44	-10	47	77	30
Engine Idling - Collection Point	5	46	-10	47	77	30
Car Pulling off Collection Point	5	47	-10	52	77	35
Car Pulling off Drive-Thru into Car Park	5	47	-10	52	77	35
Car Passage	3	41	-10	40	77	24
Car Driving off and pulling onto the street	8	53	-10	46	77	29
Car Passage	3	33	-10	42	57	24
Car Passage	3	24	-10	45	57	27
Car Passage	3	35	-10	42	57	24
Car Passage	3	41	-10	40	57	22
Car Driving off and pulling onto the street	8	53	-10	46	57	28
Car Reversing	7	33	-10	43	19	20
Car Reversing	7	24	-10	45	19	23
Car Reversing	7	41	-10	41	19	18

Car Pulling off Parking Space	4	33	-10	42	19	19
Car Pulling off Parking Space	4	24	-10	44	19	22
Car Pulling off Parking Space	4	41	-10	40	19	17
Car Engine Starting	5	33	-10	42	6	14
Car Engine Starting	5	24	-10	44	6	17
Car Engine Starting	5	41	-10	40	7	13
Car Door Slam	1	33	-10	50	38	30
Car Door Slam	1	24	-10	52	38	33
Car Door Slam	1	41	-10	48	38	28
Total dBLAeq, 1hour						**47**

Proposed Carpark Noise Emissions at Proposed Dwelling 4 - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	53	-5	49	4	26
Car Passage	3	33	-5	47	4	24
Drive Thru - drive off street and stop at COD	5	19	-5	58	4	35
Engine Idling - Making Order	1	13	-5	66	4	42
Drive to Pay Point	5	14	-5	61	4	38
Engine Idling - Pay Point	5	43	-5	52	4	29
Drive to Collection Point	5	44	-5	52	4	29
Engine Idling - Collection Point	5	46	-5	52	4	28
Car Pulling off Collection Point	5	47	-5	57	4	33

Car Pulling off Drive-Thru into Car Park	5	47	-5	57	4	33
Car Passage	3	41	-5	45	4	22
Car Driving off and pulling onto the street	8	53	-5	51	4	27
Car Passage	3	33	-5	47	6	25
Car Passage	3	24	-5	50	6	28
Car Passage	3	35	-5	47	6	25
Car Passage	3	41	-5	45	6	24
Car Driving off and pulling onto the street	8	53	-5	51	6	29
Car Reversing	7	33	-5	48	3	23
Car Reversing	7	24	-5	50	3	26
Car Reversing	7	41	-5	46	3	21
Car Pulling off Parking Space	4	33	-5	47	3	22
Car Pulling off Parking Space	4	24	-5	49	3	25
Car Pulling off Parking Space	4	41	-5	45	3	20
Car Engine Starting	5	33	-5	47	2	20
Car Engine Starting	5	24	-5	49	2	23
Car Engine Starting	5	41	-5	45	2	18
Car Door Slam	1	33	-5	55	4	31
Car Door Slam	1	24	-5	57	4	34
Car Door Slam	1	41	-5	53	4	29
Total dBLAeq, 15min						**46**

Proposed Carpark Noise Emissions at Proposed Dwelling 5 - Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq,\ 1hour}$
Car Pulling into Car Park	5	56	-10	44	77	27
Car Passage	3	37	-10	41	77	24
Drive Thru – drive off street and stop at COD	5	20	-10	53	77	36
Engine Idling – Making Order	1	12	-10	61	77	45
Drive to Pay Point	5	14	-10	56	77	39
Engine Idling – Pay Point	5	38	-10	48	77	32
Drive to Collection Point	5	39	-10	48	77	31
Engine Idling - Collection Point	5	43	-10	47	77	31
Car Pulling off Collection Point	5	43	-10	52	77	36
Car Pulling off Drive-Thru into Car Park	5	45	-10	52	77	35
Car Passage	3	42	-10	40	77	23
Car Driving off and pulling onto the street	8	56	-10	45	77	28
Car Passage	3	37	-10	41	57	23
Car Passage	3	25	-10	45	57	27
Car Passage	3	34	-10	42	57	24
Car Passage	3	42	-10	40	57	22
Car Driving off and pulling onto the street	8	56	-10	45	57	27
Car Reversing	7	37	-10	42	19	19
Car Reversing	7	25	-10	45	19	22
Car Reversing	7	42	-10	40	19	18

Car Pulling off Parking Space	4	37	-10	41	19	18
Car Pulling off Parking Space	4	25	-10	44	19	21
Car Pulling off Parking Space	4	42	-10	40	19	17
Car Engine Starting	5	37	-10	41	6	13
Car Engine Starting	5	25	-10	44	6	16
Car Engine Starting	5	42	-10	40	7	12
Car Door Slam	1	37	-10	49	38	29
Car Door Slam	1	25	-10	52	38	32
Car Door Slam	1	42	-10	48	38	28
Total dBLAeq, 1hour						**48**

Proposed Carpark Noise Emissions at Proposed Dwelling 5 - Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Car Pulling into Car Park	5	56	-5	49	4	25
Car Passage	3	37	-5	47	4	23
Drive Thru - drive off street and stop at COD	5	20	-5	58	4	34
Engine Idling - Making Order	1	12	-5	66	4	43
Drive to Pay Point	5	14	-5	61	4	38
Engine Idling - Pay Point	5	38	-5	52	4	30
Drive to Collection Point	5	39	-5	52	4	30
Engine Idling - Collection Point	5	43	-5	52	4	29
Car Pulling off Collection Point	5	56	-5	57	4	34

Car Pulling off Drive-Thru into Car Park	5	43	-5	57	4	33
Car Passage	3	45	-5	45	4	22
Car Driving off and pulling onto the street	8	42	-5	51	4	27
Car Passage	3	56	-5	47	6	24
Car Passage	3	37	-5	50	6	28
Car Passage	3	25	-5	47	6	25
Car Passage	3	34	-5	45	6	23
Car Driving off and pulling onto the street	8	42	-5	51	6	28
Car Reversing	7	56	-5	48	3	22
Car Reversing	7	37	-5	50	3	25
Car Reversing	7	25	-5	46	3	21
Car Pulling off Parking Space	4	42	-5	47	3	21
Car Pulling off Parking Space	4	37	-5	49	3	24
Car Pulling off Parking Space	4	25	-5	45	3	20
Car Engine Starting	5	42	-5	47	2	19
Car Engine Starting	5	37	-5	49	2	22
Car Engine Starting	5	25	-5	45	2	18
Car Door Slam	1	42	-5	55	4	30
Car Door Slam	1	37	-5	57	4	34
Car Door Slam	1	25	-5	53	4	29
Total dBLAeq, 15min						**46**

Appendix C – Customer Order Display Noise Emission Tables

Customer Order Display Noise Emissions at Lodge – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	63	-10	35	77	28
Total dBLAeq, 1hour						**28**

Customer Order Display Noise Emissions at Ardlui – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	43	-10	38	77	31
Total dBLAeq, 1hour						**31**

Customer Order Display Noise Emissions at Langdale – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	35	-10	40	77	33
Total dBLAeq, 1hour						**33**

Customer Order Display Noise Emissions at Kinvaid – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	40	-10	39	77	32
Total dBLAeq, 1hour						**32**

Customer Order Display Noise Emissions at Proposed Dwelling 1 – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	37	-10	40	77	23
Total dBLAeq, 1hour						**23**

Customer Order Display Noise Emissions at Proposed Dwelling 2 – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	13	-10	49	77	32
Total dBLAeq, 1hour						**32**

Customer Order Display Noise Emissions at Proposed Dwelling 3 – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	17	-10	46	77	30
Total dBLAeq, 1hour						**30**

Customer Order Display Noise Emissions at Dwelling 4 – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	13	-10	49	77	32
Total dBLAeq, 1hour						**32**

Customer Order Display Noise Emissions at Dwelling 5 – Daytime

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
Customer Order Display	0.5	12	-10	49	77	33
Total dBLAeq, 1hour						**33**

Customer Order Display Noise Emissions at Lodge – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	63	-10	35	4	12
Total dBLAeq, 15-minute						**12**

Customer Order Display Noise Emissions at Ardlui – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	43	-10	38	4	15
Total dBLAeq, 15-minute						**15**

Customer Order Display Noise Emissions at Langdale – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	35	-10	40	4	17
Total dBLAeq, 15-minute						**17**

Customer Order Display Noise Emissions at Kinvaid – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	40	-10	39	4	16
Total dBLAeq, 15-minute						**16**

Customer Order Display Noise Emissions at Proposed Dwelling 1 – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	37	-5	45	4	21
Total dBLAeq, 15-minute						**21**

Customer Order Display Noise Emissions at Proposed Dwelling 2 – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	13	-5	54	4	30
Total dBLAeq, 15-minute						**30**

Customer Order Display Noise Emissions at Proposed Dwelling 3 – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	17	-5	51	4	28
Total dBLAeq, 15-minute						**28**

Customer Order Display Noise Emissions at Proposed Dwelling 4 – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	13	-5	54	4	30
Total dBLAeq, 15-minute						**30**

Customer Order Display Noise Emissions at Proposed Dwelling 5 – Night-time

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 15min}$
Customer Order Display	0.5	12	-5	54	4	31
Total dBLAeq, 15-minute						**31**

Appendix D – Fixed Plant Installations Noise Emissions

Noise Emissions from Proposed Mechanical Plant Installations – Lodge

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	25
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	37
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	31
A-weighted total (dB) (All plant running simultaneously)							39

Noise Emissions from Proposed Mechanical Plant Installations – Ardlui

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	26
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	18
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	9
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	37
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	31
A-weighted total (dB) (All plant running simultaneously)							39

Noise Emissions from Proposed Mechanical Plant Installations – Langdale

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	20
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	20
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	25
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	9
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	36
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	29
A-weighted total (dB) (All plant running simultaneously)							37

Noise Emissions from Proposed Mechanical Plant Installations – Kinvaid

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	24
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	33
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	27
A-weighted total (dB) (All plant running simultaneously)							35

Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 1

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	57	-	-10	17
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	57	-	-10	17
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	63	-	-10	16
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	63	-	-10	16
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	63	-	-10	16
EF/01	BW10 (Breakout @1m)	67	-	54	-	-10	23
AC/02	Mitsubishi M50FA	-	51	59	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	57	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	14
EF/02	EF/02	-	67	57	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	13
EF/03	EF/03	-	67	52	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
HWS	fRY013pI	-	59	52	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	7
S1	S1 (Supply Fan Outlet in Duct)	-	86	68	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	31
S2	S2 (Supply Fan Outlet in Duct)	-	79	67	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	25
A-weighted total (dB) (All plant running simultaneously)							33

Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 2

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	37	-	-10	20
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	36	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	40	-	-10	20
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	39	-	-10	20
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	39	-	-10	20
EF/01	BW10 (Breakout @1m)	67	-	27	-	-10	29
AC/02	Mitsubishi M50FA	-	51	28	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	4
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	30	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	19
EF/02	EF/02	-	67	27	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	19
EF/03	EF/03	-	67	21	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	23
HWS	fRY013pI	-	59	21	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
S1	S1 (Supply Fan Outlet in Duct)	-	86	45	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	35
S2	S2 (Supply Fan Outlet in Duct)	-	79	43	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	29
A-weighted total (dB) (All plant running simultaneously)							37

Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 3

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	36	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	36	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	36	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	35	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	34	-	-10	21
EF/01	BW10 (Breakout @1m)	67	-	26	-	-10	29
AC/02	Mitsubishi M50FA	-	51	23	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	6
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	24	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/02	EF/02	-	67	22	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/03	EF/03	-	67	18	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	24
HWS	fRY013pI	-	59	18	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
S1	S1 (Supply Fan Outlet in Duct)	-	86	40	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	36
S2	S2 (Supply Fan Outlet in Duct)	-	79	38	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	30
A-weighted total (dB) (All plant running simultaneously)							38

Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 4

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	36	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	35	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	38	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	37	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	36	-	-10	21
EF/01	BW10 (Breakout @1m)	67	-	25	-	-10	29
AC/02	Mitsubishi M50FA	-	51	27	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	4
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	25	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/02	EF/02	-	67	24	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	20
EF/03	EF/03	-	67	18	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	24
HWS	fRY013pI	-	59	18	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
S1	S1 (Supply Fan Outlet in Duct)	-	86	42	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	35
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	29
A-weighted total (dB) (All plant running simultaneously)							38

Noise Emissions from Proposed Mechanical Plant Installations – Proposed Dwelling 5

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	35	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	35	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	36	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	35	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	34	-	-10	21
EF/01	BW10 (Breakout @1m)	67	-	25	-	-10	29
AC/02	Mitsubishi M50FA	-	51	23	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	6
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	24	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/02	EF/02	-	67	22	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
EF/03	EF/03	-	67	16	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	25
HWS	fRY013pI	-	59	16	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
S1	S1 (Supply Fan Outlet in Duct)	-	86	40	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	36
S2	S2 (Supply Fan Outlet in Duct)	-	79	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	29
A-weighted total (dB) (All plant running simultaneously)							38

Appendix E – Delivery Noise Emissions Tables

Delivery Noise Emissions at Lodge

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	80	-10	49	1	13
Goods Loading and Unloading	6	61	-10	70	1	34
HGV Engine Starting and Idling	5	65	-10	57	1	21
HGV Pulling Off	7	58	-10	60	1	24
HGV Passage	5	54	-10	52	1	17
HGV Passage	5	65	-10	51	1	15
HGV Pulling Off	7	74	-10	58	1	22
Total dBLAeq, 1hour						**35**

Delivery Noise Emissions at Ardlui

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	78	-10	49	1	14
Goods Loading and Unloading	6	59	-10	70	1	35
HGV Engine Starting and Idling	5	64	-10	57	1	21
HGV Pulling Off	7	57	-10	60	1	24
HGV Passage	5	54	-10	52	1	17
HGV Passage	5	64	-10	51	1	15
HGV Pulling Off	7	78	-10	57	1	21
Total dBLAeq, 1hour						**35**

Delivery Noise Emissions at Langdale

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	72	-10	50	1	14
Goods Loading and Unloading	6	55	-10	71	1	35
HGV Engine Starting and Idling	5	60	-10	57	1	22
HGV Pulling Off	7	60	-10	59	1	24
HGV Passage	5	58	-10	52	1	16
HGV Passage	5	70	-10	50	1	15
HGV Pulling Off	7	97	-10	55	1	20
Total dBLAeq, 1hour						**36**

Delivery Noise Emissions at Kinvaid

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	80	-10	49	1	13
Goods Loading and Unloading	6	60	-10	70	1	34
HGV Engine Starting and Idling	5	66	-10	57	1	21
HGV Pulling Off	7	66	-10	59	1	23
HGV Passage	5	66	-10	51	1	15
HGV Passage	5	78	-10	49	1	14
HGV Pulling Off	7	106	-10	54	1	19
Total dBLAeq, 1hour						**35**

Delivery Noise Emissions at Proposed Dwelling 1

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	27	-10	58	1	23
Goods Loading and Unloading	6	28	-10	77	1	41
HGV Engine Starting and Idling	5	28	-10	64	1	28
HGV Pulling Off	7	29	-10	66	1	30
HGV Passage	5	51	-10	53	1	17
HGV Passage	5	47	-10	54	1	18
HGV Pulling Off	7	45	-10	62	1	26
Total dBLAeq, 1hour						**42**

Delivery Noise Emissions at Proposed Dwelling 2

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	30	-10	57	1	22
Goods Loading and Unloading	6	17	-10	81	1	45
HGV Engine Starting and Idling	5	17	-10	68	1	33
HGV Pulling Off	7	22	-10	68	1	32
HGV Passage	5	39	-10	55	1	20
HGV Passage	5	42	-10	55	1	19
HGV Pulling Off	7	49	-10	61	1	26
Total dBLAeq, 1hour						**46**

Delivery Noise Emissions at Proposed Dwelling 3

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	46	-10	54	1	18
Goods Loading and Unloading	6	32	-10	75	1	40
HGV Engine Starting and Idling	5	24	-10	65	1	30
HGV Pulling Off	7	22	-10	68	1	32
HGV Passage	5	32	-10	57	1	21
HGV Passage	5	45	-10	54	1	18
HGV Pulling Off	7	60	-10	59	1	24
Total dBLAeq, 1hour						**41**

Delivery Noise Emissions at Proposed Dwelling 4

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	32	-10	57	1	21
Goods Loading and Unloading	6	18	-10	80	1	45
HGV Engine Starting and Idling	5	18	-10	68	1	32
HGV Pulling Off	7	19	-10	69	1	34
HGV Passage	5	36	-10	56	1	20
HGV Passage	5	45	-10	54	1	18
HGV Pulling Off	7	50	-10	61	1	25
Total dBLAeq, 1hour						**46**

Delivery Noise Emissions at Proposed Dwelling 5

Source	Measurement Distance (m)	Receptor Distance (m)	Screening Correction	L_{AE} @ Receptor	Number of Events	dB $L_{Aeq, 1hour}$
HGV Passage	5	37	-10	56	1	20
Goods Loading and Unloading	6	23	-10	78	1	43
HGV Engine Starting and Idling	5	23	-10	66	1	30
HGV Pulling Off	7	18	-10	70	1	34
HGV Passage	5	34	-10	56	1	21
HGV Passage	5	42	-10	55	1	19
HGV Pulling Off	7	54	-10	60	1	25
Total dBLAeq, 1hour						**44**

Appendix F – Waste Collection Noise Emissions Tables

Waste Collection Noise Emissions – Lodge

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	58	-10	42

Waste Collection Noise Emissions – Ardlui

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	53	-10	43

Waste Collection Noise Emissions – Langdale

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	55	-10	42

Waste Collection Noise Emissions – Kinvaid

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	58	-10	42

Waste Collection Noise Emissions – Proposed Dwelling 1

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	37	-10	46

Waste Collection Noise Emissions – Proposed Dwelling 2

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	17	-10	52

Waste Collection Noise Emissions – Proposed Dwelling 3

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	16	-10	53

Waste Collection Noise Emissions – Proposed Dwelling 4

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	16	-10	53

Waste Collection Noise Emissions – Proposed Dwelling 5

Source	dB $L_{Aeq, T}$ @10m	On-time (min)	On-time Correction (dB)	dB $L_{Aeq, 1\text{-hour}}$ @10m	Receptor Distance (m)	Screening Correction	dB $L_{Aeq, 1\text{-hour}}$ @Receptor
Refuse Wagon	78	5	-10.8	67	19	-10	51

Appendix G – Specific Sound Levels Tables

Specific Sound Level – Daytime – Typical Worst Case – Lodge

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	44
Customer Order Display	28
Fixed Plant Installations	39
Specific Sound Level dB$_{LAeq,1hour}$	**45**

Specific Sound Level – Daytime – Absolute Worst Case – Lodge

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	44
Customer Order Display	28
Fixed Plant Installations	39
Waste Collection	42
Specific Sound Level dB$_{LAeq,1hour}$	**47**

Specific Sound Level – Night-time – Lodge

Source	dB $L_{Aeq, 15\text{-}minute}$
Car Park and Drive-Thru vehicle Movements	39
Customer Order Display	12
Fixed Plant Installations	39
Specific Sound Level dB$_{LAeq,15\text{-}min}$	**42**

Specific Sound Level – Daytime – Typical Worst Case – Ardlui

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	45
Customer Order Display	31
Fixed Plant Installations	39
Specific Sound Level dB$_{LAeq,1hour}$	**46**

Specific Sound Level – Daytime – Absolute Worst Case – Ardlui

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	45
Customer Order Display	31
Fixed Plant Installations	39
Waste Collection	43
Specific Sound Level dB$_{LAeq,1hour}$	**48**

Specific Sound Level – Night-time – Ardlui

Source	dB $L_{Aeq, 15\text{-}minute}$
Car Park and Drive-Thru vehicle Movements	38
Customer Order Display	15
Fixed Plant Installations	39
Specific Sound Level dB$_{LAeq,15\text{-}min}$	**42**

Specific Sound Level – Daytime – Typical Worst Case – Langdale

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	42
Customer Order Display	33
Fixed Plant Installations	37
Specific Sound Level dB$_{LAeq,1hour}$	**44**

Specific Sound Level – Daytime – Absolute Worst Case – Langdale

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	42
Customer Order Display	33
Fixed Plant Installations	37
Delivery Noise	36
Waste Collection	42
Specific Sound Level dB$_{LAeq,1hour}$	**46**

Specific Sound Level – Night-time – Langdale

Source	dB $L_{Aeq, 15-minute}$
Car Park and Drive-Thru vehicle Movements	36
Customer Order Display	17
Fixed Plant Installations	37
Specific Sound Level dB$_{LAeq,15-min}$	**40**

Specific Sound Level – Daytime – Typical Worst Case – Kinvaid

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	41
Customer Order Display	32
Fixed Plant Installations	37
Specific Sound Level $dB_{LAeq,1hour}$	**43**

Specific Sound Level – Daytime – Absolute Worst Case – Kinvaid

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	41
Customer Order Display	32
Fixed Plant Installations	37
Waste Collection	42
Specific Sound Level $dB_{LAeq,1hour}$	**45**

Specific Sound Level – Night-time – Kinvaid

Source	dB $L_{Aeq, 15\text{-}minute}$
Car Park and Drive-Thru vehicle Movements	34
Customer Order Display	16
Fixed Plant Installations	37
Specific Sound Level $dB_{LAeq,15\text{-}min}$	**39**

Specific Sound Level – Daytime – Typical Worst Case – Proposed Dwelling 1

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	43
Customer Order Display	23
Fixed Plant Installations	33
Specific Sound Level $dB_{LAeq,1hour}$	**43**

Specific Sound Level – Daytime – Absolute Worst Case – Proposed Dwelling 1

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	43
Customer Order Display	23
Fixed Plant Installations	33
Waste Collection	46
Specific Sound Level $dB_{LAeq,1hour}$	**49**

Specific Sound Level – Night-time – Proposed Dwelling 1

Source	dB $L_{Aeq, 15\text{-}minute}$
Car Park and Drive-Thru vehicle Movements	43
Customer Order Display	21
Fixed Plant Installations	33
Specific Sound Level $dB_{LAeq,15\text{-}min}$	**43**

Specific Sound Level – Daytime – Typical Worst Case – Proposed Dwelling 2

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	47
Customer Order Display	32
Fixed Plant Installations	37
Specific Sound Level dB$_{LAeq,1hour}$	**48**

Specific Sound Level – Daytime – Absolute Worst Case – Proposed Dwelling 2

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	47
Customer Order Display	32
Fixed Plant Installations	37
Waste Collection	52
Specific Sound Level dB$_{LAeq,1hour}$	**54**

Specific Sound Level – Night-time – Proposed Dwelling 2

Source	dB $L_{Aeq, 15\text{-}minute}$
Car Park and Drive-Thru vehicle Movements	46
Customer Order Display	30
Fixed Plant Installations	33
Specific Sound Level dB$_{LAeq,15\text{-}min}$	**46**

Specific Sound Level – Daytime – Typical Worst Case – Proposed Dwelling 3

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	49
Customer Order Display	30
Fixed Plant Installations	38
Specific Sound Level $dB_{LAeq,1hour}$	**49**

Specific Sound Level – Daytime – Absolute Worst Case – Proposed Dwelling 3

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	49
Customer Order Display	30
Fixed Plant Installations	38
Waste Collection	53
Specific Sound Level $dB_{LAeq,1hour}$	**55**

Specific Sound Level – Night-time – Proposed Dwelling 3

Source	dB $L_{Aeq, 15\text{-}minute}$
Car Park and Drive-Thru vehicle Movements	47
Customer Order Display	28
Fixed Plant Installations	38
Specific Sound Level $dB_{LAeq,15\text{-}min}$	**48**

Specific Sound Level – Daytime – Typical Worst Case – Proposed Dwelling 4

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	47
Customer Order Display	32
Fixed Plant Installations	38
Specific Sound Level $dB_{LAeq,1hour}$	**48**

Specific Sound Level – Daytime – Absolute Worst Case – Proposed Dwelling 4

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	47
Customer Order Display	32
Fixed Plant Installations	38
Waste Collection	53
Specific Sound Level $dB_{LAeq,1hour}$	**54**

Specific Sound Level – Night-time – Proposed Dwelling 4

Source	dB $L_{Aeq, 15\text{-}minute}$
Car Park and Drive-Thru vehicle Movements	46
Customer Order Display	30
Fixed Plant Installations	38
Specific Sound Level $dB_{LAeq,15\text{-}min}$	**47**

Specific Sound Level – Daytime – Typical Worst Case – Proposed Dwelling 5

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	47
Customer Order Display	32
Fixed Plant Installations	38
Specific Sound Level $dB_{LAeq,1hour}$	**48**

Specific Sound Level – Daytime – Absolute Worst Case – Proposed Dwelling 5

Source	dB $L_{Aeq, 1hour}$
Car Park and Drive-Thru vehicle Movements	47
Customer Order Display	32
Fixed Plant Installations	38
Waste Collection	51
Specific Sound Level $dB_{LAeq,1hour}$	**53**

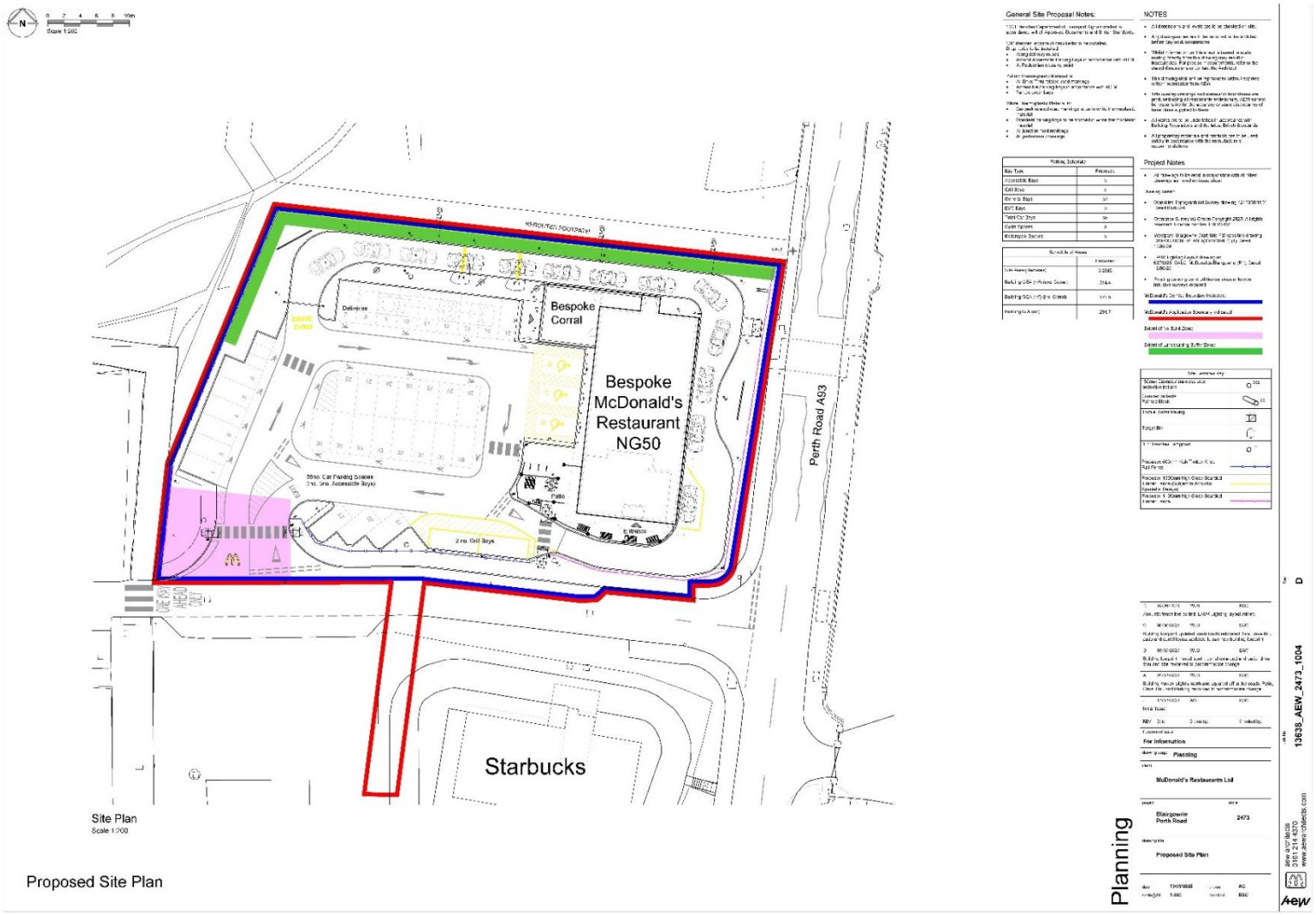
Specific Sound Level – Night-time – Proposed Dwelling 5

Source	dB $L_{Aeq, 15\text{-}minute}$
Car Park and Drive-Thru vehicle Movements	46
Customer Order Display	30
Fixed Plant Installations	38
Specific Sound Level $dB_{LAeq,15\text{-}min}$	**47**

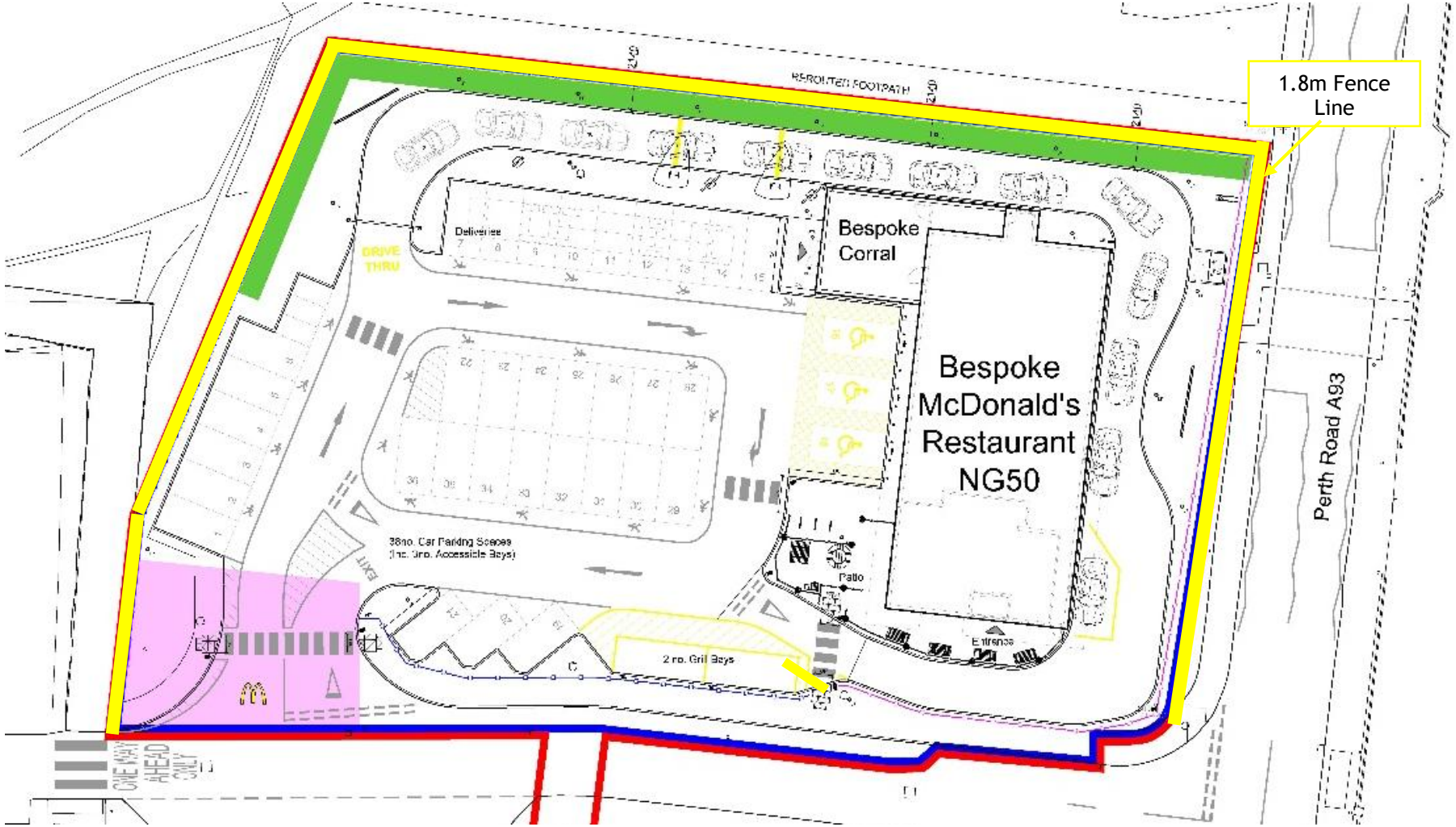
Appendix H – Predicted Vehicle Movements

Hour Beginning	Vehicles Enter And:		Total In
	Eat In	Drive Thru	
00:00	4	15	19
01:00	6	14	20
02:00	3	13	16
03:00	7	11	18
04:00	2	4	6
05:00	1	6	7
06:00	5	15	20
07:00	9	17	26
08:00	12	30	42
09:00	24	33	57
10:00	24	35	59
11:00	26	50	76
12:00	38	77	115
13:00	42	62	104
14:00	33	54	87
15:00	39	45	84
16:00	38	48	86
17:00	41	49	90
18:00	30	41	71
19:00	19	32	51
20:00	17	27	44
21:00	15	24	39
22:00	11	24	35
23:00	16	15	31
Total	**462**	**741**	**1203**

Appendix I – Proposed Site Plan



Appendix J – Proposed 1.8m Fence Line



Appendix K – Fixed Plant Noise Levels (Including Mitigation Measures)

Plant Noise Emissions – Lodge

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	25
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	25
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	19
A-weighted total (dB) (All plant running simultaneously)							32

Plant Noise Emissions – Ardlui

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	21
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	21
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	26
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	18
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	9
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	25
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	19
A-weighted total (dB) (All plant running simultaneously)							32

Plant Noise Emissions – Langdale

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	20
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	20
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	20
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	25
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	9
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	23
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	17
A-weighted total (dB) (All plant running simultaneously)							31

Plant Noise Emissions – Kinvaid

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	24
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
A-weighted total (dB) (All plant running simultaneously)							29

Plant Noise Emissions – Proposed Dwelling 1

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	24
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
A-weighted total (dB) (All plant running simultaneously)							29

Plant Noise Emissions – Proposed Dwelling 2

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	24
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
A-weighted total (dB) (All plant running simultaneously)							29

Plant Noise Emissions - Proposed Dwelling 3

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	24
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
A-weighted total (dB) (All plant running simultaneously)							29

Plant Noise Emissions - Proposed Dwelling 4

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	24
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
A-weighted total (dB) (All plant running simultaneously)							29

Plant Noise Emissions - Proposed Dwelling 5

Plan Reference	Plant Item	dBA @1m	dB LWA	Distance to NSR (m)	Propagation	Screening Correction	A-weighted SPL @ NSR
S2/C1	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S2/C2	Mitsubishi ZRP200 (Heating)	62	-	39	-	-10	18
S1/C1	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C2	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
S1/C3	Mitsubishi ZRP250 (Heating)	62	-	41	-	-10	18
EF/01	BW10 (Breakout @1m)	67	-	41	-	-10	24
AC/02	Mitsubishi M50FA	-	51	47	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	-
AC/03	Mitsubishi PUZ-ZM71VHA	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/02	EF/02	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
EF/03	EF/03	-	67	39	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	16
HWS	fRY013pI	-	59	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	8
S1	S1 (Supply Fan Outlet in Duct)	-	86	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	21
S2	S2 (Supply Fan Outlet in Duct)	-	79	41	On a reflective surface: Q-factor of 2 (+ 3dB)	-10	15
A-weighted total (dB) (All plant running simultaneously)							29

Additional Acoustic Calculations

Proposed McDonald's Restaurant, Perth Road, Blairgowrie

24th October 2025

ENVIRONMENTAL AND SUSTAINABILITY CONSULTANTS

encon associates

Report Reference Number: A6760

Document Control

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1 Introduction

1.1 Overview

Encon Associates Ltd were commissioned to prepare an environmental noise impact assessment for a proposed McDonald's Restaurant with an associated car park and drive-thru facility on Westpark Retail Park, off Perth Road, Blairgowrie.

The report (Ref: A6760 – Noise Impact Assessment Rev F) was produced to accompany a planning application that was submitted to Perth and Kinross Council.

The Environmental Health Officer of Perth & Kinross Council requested that additional calculations be made, specifically with regards to the plant equipment and the assessment of the worst-case, including stock deliveries.

This document should be read in conjunction with the Noise Impact Assessment (Ref: A6760 – Noise Impact Assessment Rev F).

Due to the necessary technical nature of this document, a glossary of terms can be found in Appendix A to assist the reader.

2 Assessment Requirements

Additional Calculations have been requested by the Environmental Health Officer of Perth & Kinross Council following the submission of the noise impact assessment for the proposed McDonald's restaurant off Peth Road, Blairgowrie. These requests are outlined in detail in an email correspondence shown in Appendix B.

Requirement 1:

"We would require further predictions for the internal impact from plant equipment – specifically NR Curves to show compliance with standard conditions – NR35 daytime and NR25 night-time."

Requirement 2:

"…predict separately worst-case plus deliveries and worst-case plus waste collections as do not usually accept over +5dB (above the background sound level)"

3 NR Curve Assessment

3.1 Plant Sound Levels

The following table shows the broadband sound levels associated with the items of the building services plant. Items of mechanical plant are scheduled to be installed on the roof of the main building. Sound level data has been obtained from manufacturer datasheets quoted as either A-weighted sound pressure level at 1m or as a sound power level.

Plan Reference	Plant Item	dBA @1m	dB LWA
S2/C1	Mitsubishi ZRP200 (Heating)	62	-
S2/C2	Mitsubishi ZRP200 (Heating)	62	-
S1/C1	Mitsubishi ZRP250 (Heating)	62	-
S1/C2	Mitsubishi ZRP250 (Heating)	62	-
S1/C3	Mitsubishi ZRP250 (Heating)	62	-
EF/01	BW10 (Breakout @1m)	67	-
AC/03	Mitsubishi PUZ-ZM71VHA	49	-
AC/02	Mitsubishi M50FA	-	48
EF/02	EF/02	-	67
EF/03	EF/03	-	67
HWS	fRY013pI	-	59
S1	S1 (Supply Fan Outlet in Duct)	-	86
S1	S1 (Supply Fan Inlet)	-	79
S2	S2 (Supply Fan Outlet in Duct)	-	79
S2	S2 (Supply Fan Inlet)	-	73

Table 1.0 - Broadband Plant Sound Levels

In order to carry out an NR Curve assessment, octave band data is required for each item of plant. Octave band data has been obtained from manufacturer datasheets. However, octave band sound data was not available for all items of plant. Therefore, octave band data from similar items of plant with the same broadband level as been used. This does result in a certain level of uncertainty as to the assessment outcomes, as the site-specific plant equipment may have different values in certain frequency bands. However, if the predicted internal plant noise values are substantially below the NR criteria, uncertainty is minimised. The following tables demonstrate octave band data used for each item of plant.

Plan Reference/Plant Item	Z-weighted Octave Band Sound Pressure Levels (Hz) @1m								dB_A @1m
	63	125	250	500	1k	2k	4k	8k	
S2/C1/Mitsubishi ZRP200 (Heating)	71	61	61	58	57	53	46	41	62
S2/C2/Mitsubishi ZRP200 (Heating)	71	61	61	58	57	53	46	41	62
S1/C1/Mitsubishi ZRP250 (Heating)	65	62	61	59	58	53	47	42	62
S1/C2/Mitsubishi ZRP250 (Heating)	65	62	61	59	58	53	47	42	62
S1/C3/Mitsubishi ZRP250 (Heating)	65	62	61	59	58	53	47	42	62
AC/02/ Mitsubishi M50FA	51	52	50	45	42	39	32	27	48
AC/03/ Mitsubishi PUZ-ZM71VHA (Heating)	53	52	53	44	43	38	33	27	49

Table 2.0 – Plant Equipment Sound Pressure Levels

Plan Reference/Plant Item	Z-weighted Octave Band Sound Power Levels (Hz)								dB LWA
	63	125	250	500	1k	2k	4k	8k	
S1/ S1 (Supply Fan Outlet in Duct)	78	85	85	84	81	75	74	71	86
S1/ S1 (Supply Fan Inlet)	73	80	81	77	72	70	69	67	79
S2/ S2 (Supply Fan Outlet in Duct)	77	83	77	76	74	72	67	60	79
S2/ S2 (Supply Fan Inlet)	75	80	73	69	66	66	62	55	73
EF/01/Vectaire CRL202M*	39	51	57	63	62	58	50	40	67
EF/02/Vectaire CRL202M*	39	51	57	63	62	58	50	40	67
EF/03/Vectaire CRL202M*	39	51	57	63	62	58	50	40	67
HWS/ fRY013pl	70	61	58	59	54	42	37	32	59

Table 3.0 – Plant Equipment Sound Power Levels

*Octave band sound data for the site-specific item of plant was not available.

3.2 Noise Model

The sound predictions in this assessment have been undertaken using a proprietary software-based noise model, IMMI, which implements a range of UK calculation methods. The algorithms set out in *ISO 9613-2:1996 Acoustics - Attenuation of sound during propagation outdoors - Part 2 General method of calculation* have been used. SRTM shuttle radar topography mission data was imported into the model. The model also assumes the following:

- Acoustically mixed ground
- Daytime receiver heights of 1.5m above ground based on the typical location of living rooms.
- Night-time receiver heights of 4.5m above ground, based on the typical location of bedrooms, with the exception of The Lodge, which is a bungalow and therefore has a receiver height of 1.5m.
- The McDonald's restaurant building has been set to a height of 4m.
- The parapet surrounding the plant has been set to a height of 1m above the roof of the restaurant building.
- The model considers the effect of a 1.8m barrier on the northern site boundary.
- All items of plant are running simultaneously during the daytime period.
- Air-handling units S1 and S2 are not running for the night-time assessment, as the restaurant is likely to be closed during night-time hours. Otherwise, all items are running simultaneously.

3.3 NR Curve Assessment Tables

The following tables show the NR curve predictions at each considered receptor during the daytime and night-time period with a partially open window. Octave band SRI data is not readily available for a partially open window, however, Building Research Establishment (BRE) Report 338, 1994 - "Open windows and environmental noise" found typical reductions of 3-5dB at 125Hz, 10-12 dB at 500Hz and 15-18dB at 2-4KHz, therefore values have been conservatively assumed for each octave band based on this information.

Lodge - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	**Octave Band dB**					
	125Hz	**250Hz**	**500Hz**	**1KHz**	**2KHz**	**4KHz**
Cumulative Plant Noise Level	45	44	42	39	34	30
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	42	38	32	27	19	15
Compliance Note					✓	

Table 4.0 - Lodge - Daytime NR Curve Assessment (Open Window)

Ardlui - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	45	44	42	39	35	32
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	42	38	32	27	20	17
Compliance Note					✓	

Table 5.0 - Ardlui - Daytime NR Curve Assessment (Open Window)

Langdale - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	44	42	40	37	32	29
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	41	36	30	25	17	14
Compliance Note					✓	

Table 6.0 - Langdale - Daytime NR Curve Assessment (Open Window)

Kinvaid - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	41	40	38	35	30	27
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	38	34	28	23	15	12
Compliance Note					✓	

Table 7.0 - Kinvaid - Daytime NR Curve Assessment (Open Window)

Proposed Development 1 - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	43	40	37	32	25	18
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	40	34	27	20	10	3
Compliance Note					✓	

Table 8.0 – Proposed Development 1 – Daytime NR Curve Assessment (Open Window)

Proposed Development 2 - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	40	38	37	33	27	22
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	37	32	27	21	12	7
Compliance Note					✓	

Table 9.0 – Proposed Development 2 – Daytime NR Curve Assessment (Open Window)

Proposed Development 3 - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	39	37	35	32	27	22
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	36	31	25	20	12	7
Compliance Note					✓	

Table 10.0 – Proposed Development 3 – Daytime NR Curve Assessment (Open Window)

Proposed Development 4 - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	**Octave Band dB**					
	125Hz	**250Hz**	**500Hz**	**1KHz**	**2KHz**	**4KHz**
Cumulative Plant Noise Level	41	40	38	34	28	22
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	38	34	28	22	13	7
Compliance Note					✓	

Table 11.0 – Proposed Development 4 – Daytime NR Curve Assessment (Open Window)

Proposed Development 5 - Daytime NR Curve Assessment (Open Window)						
Frequency Analysis	**Octave Band dB**					
	125Hz	**250Hz**	**500Hz**	**1KHz**	**2KHz**	**4KHz**
Cumulative Plant Noise Level	42	40	38	38	27	22
Partially Open Window	3	6	10	12	15	15
NR 35 Curve	52	45	39	35	32	30
Predicted Internal Noise Level	39	34	28	26	12	7
Compliance Note					✓	

Table 12.0 – Proposed Development 5 – Daytime NR Curve Assessment (Open Window)

Lodge - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	**Octave Band dB**					
	125Hz	**250Hz**	**500Hz**	**1KHz**	**2KHz**	**4KHz**
Cumulative Plant Noise Level	24	23	22	20	15	5
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	21	17	12	8	-	-
Compliance Note					✓	

Table 13.0 – Lodge – Night-time NR Curve Assessment (Open Window)

Ardlui - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	25	24	24	23	18	10
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	22	18	14	11	3	-
Compliance Note					✓	

Table 14.0 – Ardlui – Night-time NR Curve Assessment (Open Window)

Langdale - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	24	24	24	22	18	9
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	21	18	14	10	3	-
Compliance Note					✓	

Table 15.0 – Langdale – Night-time NR Curve Assessment (Open Window)

Kinvaid - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	22	22	22	21	16	7
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	19	16	12	9	1	-
Compliance Note					✓	

Table 16.0 – Kinvaid – Night-time NR Curve Assessment (Open Window)

Proposed Development 1 - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	29	29	31	30	25	17
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	26	23	21	18	10	2
Compliance Note					✓	

Table 17.0 – Proposed Development 1 – Night-time NR Curve Assessment (Open Window)

Proposed Development 2 - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	23	22	23	22	17	9
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	20	16	13	10	2	-
Compliance Note					✓	

Table 18.0 – Proposed Development 2 – Night-time NR Curve Assessment (Open Window)

Proposed Development 3 - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	Octave Band dB					
	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz
Cumulative Plant Noise Level	20	20	20	19	14	4
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	17	14	10	7	-	-
Compliance Note					✓	

Table 19.0 – Proposed Development 3 – Night-time NR Curve Assessment (Open Window)

Proposed Development 4 - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	**Octave Band dB**					
	125Hz	**250Hz**	**500Hz**	**1KHz**	**2KHz**	**4KHz**
Cumulative Plant Noise Level	25	24	25	24	19	11
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	22	18	15	12	4	-
Compliance Note					✓	

Table 20.0 – Proposed Development 4 – Night-time NR Curve Assessment (Open Window)

Proposed Development 5 - Night-time NR Curve Assessment (Open Window)						
Frequency Analysis	**Octave Band dB**					
	125Hz	**250Hz**	**500Hz**	**1KHz**	**2KHz**	**4KHz**
Cumulative Plant Noise Level	26	26	27	25	21	13
Partially Open Window	3	6	10	12	15	15
NR 25 Curve	44	35	29	25	22	20
Predicted Internal Noise Level	23	20	17	13	6	-
Compliance Note					✓	

Table 21.0 – Proposed Development 5 – Night-time NR Curve Assessment (Open Window)

The tables above predict that the NR curve criteria are to be complied with during the daytime and the night-time with a partially open window. It is therefore expected that the internal noise level will be lower with a closed window. The table below shows the sound reduction performance of a typical double-glazing system. The values have been obtained from Table 4 of BS EN 12758:2011 – Glazing and airborne sound insulation – Product descriptions and determination of properties.

Glazing Configuration	**Sound Reduction Index R(dB)**						**dB R_w**
	125Hz	**250Hz**	**500Hz**	**1KHz**	**2KHz**	**4KHz**	
4/(6-16)/4	26	26	27	25	21	13	29

Table 22.0 – Glazing Configuration – Standard Acoustic Performance

Considering that the values in the table above are significantly greater than those used for the assessment of the open window, it is reasonable to assume that the internal noise level as a result of plant equipment is even lower and therefore compliant with the NR criteria.

4 Assessment of the Worst-Case including Deliveries

An 'Absolute Worst-Case' is presented in the noise impact assessment report, which considers a one-hour period where the carpark and drive-thru are predicted to be at their busiest, as well as waste collection taking place within the same one-hour period. The Environmental Health Officer has requested that the worst-case scenario be presented along with the deliveries. The following table shows the predicted rating level in relation to the background sound level for the period where the carpark and drive-thru are to be at their busiest, with a delivery taking place within the same one-hour period. Delivery noise emissions are predicted to be below the background sound level at all of the receptors. Where the delivery noise level is within 3dB of the background sound level, a 3dB penalty for impulsivity has been applied.

Receptor	Typical Worst-Case Daytime (dBA)	Delivery Noise Emissions (dBA)	Specific Sound Level (dBA)	Acoustic Character Correction (dBA)	Rating Level (dBA)	Background Sound Level	Rating Sound Level - Background Sound Level (dBA)
Lodge	45	35	45	N/A	45	47	-2
Ardlui	46	36	46	N/A	46	47	-1
Langdale	44	42	46	N/A	46	47	-1
Kinvaid	43	35	44	N/A	44	47	-3
Proposed Dwelling 1	43	42	46	+3 (Impulsivity: Just Perceptible)	49	47	+2
Proposed Dwelling 2	48	46	50	+3 (Impulsivity: Just Perceptible)	53	47	+6
Proposed Dwelling 3	49	41	50	N/A	50	47	+3
Proposed Dwelling 4	48	46	50	+3 (Impulsivity: Just Perceptible)	53	47	+6
Proposed Dwelling 5	48	44	50	N/A	53	47	+3

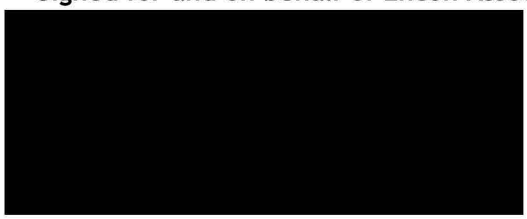
Table 23.0 – Worst-case Including Deliveries

Table 23.0 indicates that the rating level is predicted to just exceed the typical limit of Perth & Kinross Council (5dB above the background). However, it should be considered that the exceedance is because of the acoustic penalty for impulsivity. It is possible that in practice, the effect of impulsivity is not perceptible at the receptors. It should also be considered that stock deliveries typically take place fewer than three times a week, so it is not representative of typical operations associated with the McDonald's restaurant. Additionally, arrangements should be made to ensure that stock deliveries do not take place during the period when the carpark and the drive-thru are at their busiest. The transport assessment predicts that the carpark and drive-thru will be busiest between 12:00 and 14:00. On this basis, arrangements should be made to ensure that deliveries do not take place within these hours.

This Report has been prepared by:

Encon Associates Limited

Signed for and on behalf of Encon Associates Limited



Ben Phipps BSc (Hons), AMIOA

Acoustic Consultant

Date: 24th October 2025

Appendix A – Acoustic Terminology & Definitions

Sound Pressure	The fluctuations in air pressure, from the steady atmospheric pressure, created by sound, measured in pascals (Pa).
Sound Pressure Level (SPL)	The sound pressure measured on a decibel scale relative to a standard reference pressure of 20μPa (20x10-6 Pascals).
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s1 and s2 is given by 20 log10 (s1 / s2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20μPa.
Frequency (Hz)	The pitch of the sound, measured in Herts (Hz)
Integrating Sound Level Meter	An instrument used for measuring sound levels with the capacity to perform calculations to derive other parameters.
Calibration	A check of the function of a sound level meter by comparing the meter reading with a known sound pressure level. This is performed in the field before and after measurement and by a laboratory every year calibrators and every two years for Sound Level Meters.
A-Weighting, dB(A)	A frequency waiting devised to attempt to take the fact that human response to sound is not equally sensitive at all frequencies into account.
Z-Weighting	A zero frequency weighting (often referred to as unweighted).
Attenuation	Noise reduction, measured in decibels.
Ambient Sound Level $L_{Aeq.T}$	The total encompassing sound in a given situation, at a given time. Usually composed of sounds from many sources, near and far.
Residual Sound Level $L_{Aeq.T}$	The ambient sound remaining when the specific sound source is suppressed to a degree it does not contribute to the ambient sound.
Specific Sound Level $L_{Aeq.T}$	The equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given reference time interval, Tr.
Rating Level $L_{Ar, tr}$	The specific sound level plus any adjustment for the characteristic features of the sound.
Background Sound Level $L_{A90.T}$	A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels.
Sound Exposure Level , SEL (L_{AE})	A measure of A-weighted sound energy used to describe noise events such as the passing of trains; it is the A-weighted sound pressure level which, is occurring over a period of one second, would contain the same amount of A-weighted sound energy as the event.
Frequency Analysis	Analysis of a sound into its frequency components. Commonly 1/1 or 1/3 octave bands
Frequency Spectrum	A graph resulting from frequency analysis and showing different levels of the signal in the various frequency bands.
Octave-bands	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
Noise Index	A method of evaluating or rating a noise, usually by assigning a single number to it, based on some combination of its physical parameters (sound pressure level, frequency, duration) and other factors such as time of day, tonal characteristics and impulsive characteristics.
Leq, T	Otherwise referred to as the 'continuous equivalent noise level' of a period of time (T). This is the steady noise level which contains the same amount of energy as the time varying sound level that was recorded.
Lmax,T	The maximum RMS sound pressure level that occurs within a specified time period. It is used often to describe occasional loud noise events that may have little influence on the Leq but will have an effect on the overall acoustic environment. The time weighting (Fast or Slow) is usually specified.

L90, T	The noise level exceeded for 90% of the specified time period (T). It is often used to characterise the background noise.
L10, T	The noise level exceeded for 10% of the specified time period (T). It is often used to characterise road traffic noise.
Free-Field	A situation where the radiation from a sound source is completely unaffected by the presence of reflective surfaces. In terms of environmental noise measurement, it is usually taken to mean at least 3.5m away from 3.5m away from reflective surfaces with the exception of the ground.
Façade Noise Level	A noise level measured within 3m of a building façade, which contains a contribution arising from reflection of sound at the façade. The difference between the façade level and free-field level is described as the façade correction factor.
Noise Sensitive Receptor	Premises that are used for purposes sensitive to noise and that require protection.
Line Source	A source of sound that as distance increases away from the source it still appears large in one dimension. Attenuation of this form of source occurs at a distance of (a/π) where a is the largest dimension of the source.
Point Source	A source of sound that as distance increases away from the source it appears as a point in space. Attenuation of this form of source occurs at a distance of (b/π) where b is the smallest dimension of the source.
Time Weighting	One of the standard averaging times (Fast, Slow or Impulsive) used for the measurement of RMS sound pressure level in sound level meters, specified in ISO 61671-1.
Rw	Single number quantity which characterises the airborne the airborne sound insulation of a material or building element over a range of frequencies, based on laboratory measurements.
DnT,w + Ctr	A single value that characterises the airborne sound insulation performance using the Ctr: spectrum adaption terms described in BS EN ISO 717-1. The value is based on field measurements and the value represents total sound transmission including flanking sound, not just the partition.

The table below presents an indication of sound levels associated with the environment starting from 0dB (the threshold of hearing) to 140dB (The threshold of pain).

Sound Level	Location/Activity
0 dB(A)	Threshold of Hearing
20 - 30 dB(A)	Inside Quiet Bedroom at Night
30 - 40 dB(A)	Inside a Living Room During the Day
40 - 50 dB(A)	Inside Typical Office
50 - 60 dB(A)	Inside a Car
60 - 70 dB(A)	Typical High Street
70 - 90 dB(A)	Inside Factory
100 - 110 dB(A)	Burglar Alarm at 1m
110 - 130 dB(A)	Jet Aircraft on Take Off
140 dB(A)	Threshold of Pain

The 'A' denotes the A-weighting scale used to replicate the frequency response of the human ear.

Appendix B – Environmental Health Officer Correspondence

From: Dawn Stewart <[redacted]>
Sent: 26 August 2025 09:26
[redacted]
Cc: Adam Cairns [redacted]
Subject: 25/01116/FLL - McDonald's Blairgowrie

Dear Ben,

I am one of the internal consultees for the above application and I have a couple of queries regarding the NIA submitted. Just to clarify – the tables in Sec 6 – the barrier attenuation referred to – is this the 1.1m fence or the recommended 1.8m acoustic barrier?

We would also require further predictions for the internal impact from plant equipment – specifically NR Curves to show compliance with standard conditions – NR35 daytime and NR25 night-time.

When summarising the information provided in the NIA:

Property	Day (Typical worst)	Day (Absolute worst-deliveries/waste)	Night
Lodge	-2	+3	+23
Ardlui	-1	+4	+23
Langdale	-3	+2	+21
Kinvaid	-4	+1	+20
New dwelling 1	-4	+4	+24
New dwelling 2	+1	+9	+27
New dwelling 3	+2	+11	+29
New dwelling 4	+1	+10	+28
New dwelling 5	+2	+9	+28

Based on the above, I would be recommending a condition limiting the operational hours to daytime only. Along with conditions limiting waste/deliveries. Whilst I will be recommending no night-time operations, for completeness could you still include the NR curves predictions for night-time.

Kind Regards
Dawn

Sent: 28 August 2025 11:25
To: Dawn Stewart <[redacted]>
Cc: Adam Cairns [redacted]
Subject: RE: 25/01116/FLL - McDonald's Blairgowrie (A6760)

CAUTION: This email originated from an external organisation. Do not follow guidance, click links, or open attachments unless you have verified the sender and know the content is safe.

Dear Dawn,

Thank you very much for getting in contact.

The tables in section 6 consider the presence of the recommended 1.8m fence.

We are happy to provide NR curve predictions. As I'm sure you can appreciate, this will involve many more calculations if we were to do it manually and therefore, it would take significantly longer to update the report. Subsequently, we would welcome the opportunity to produce a noise model using IMMI software to predict the cumulative plant noise levels per octave band at each receptor, which would enable us to predict the NR curves internally. This may result in some discrepancy between the noise levels from the plant that have been calculated manually, but we can update the report accordingly. It would be much appreciated if you could confirm whether you are satisfied with this approach.

Many thanks,

Ben

Ben Phipps
Acoustic Consultant
BSc (Hons), AMIOA
[redacted]
encon ASSOCIATES

DS Dawn Stewart <[redacted]>
To: Ben Phipps
Cc: Adam Cairns [redacted]
Reply Reply all Forward
Thu 8/28/2025 11:54 AM

Dear Ben,

Happy for you to use the software/modelling for NR curves predictions.

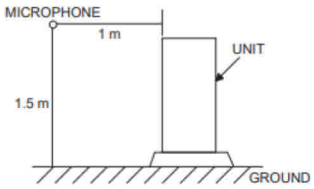
Wonder if you could also predict separately for worst case plus deliveries and worst case plus waste as we do not usually accept over +5dB, so as per your recommendation would be trying to condition waste and deliveries not coinciding but appreciate that events will be short-lived.

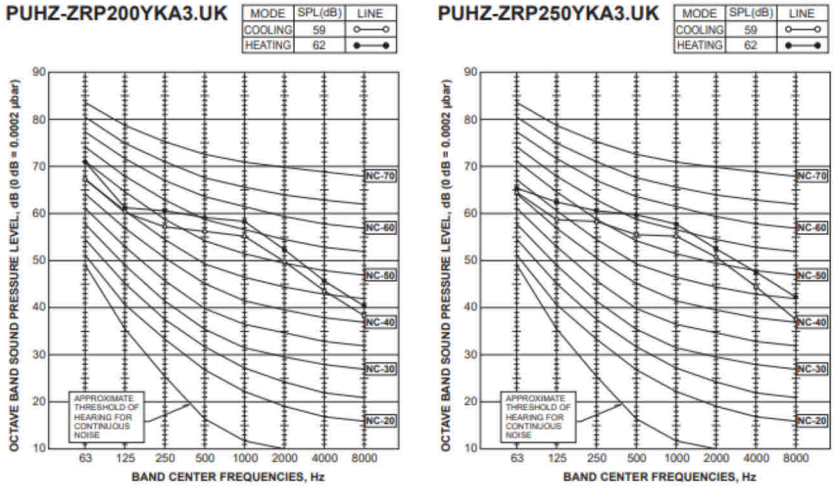
Kind Regards
Dawn

Dawn Stewart AMIOA
Environmental Health Officer
[redacted]

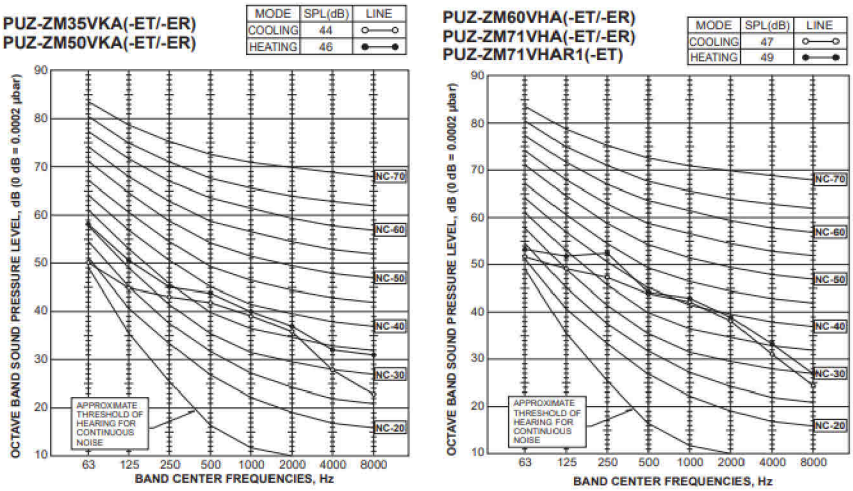
Appendix C – Plant Equipment Sound Data

5-4. NOISE CRITERION CURVES





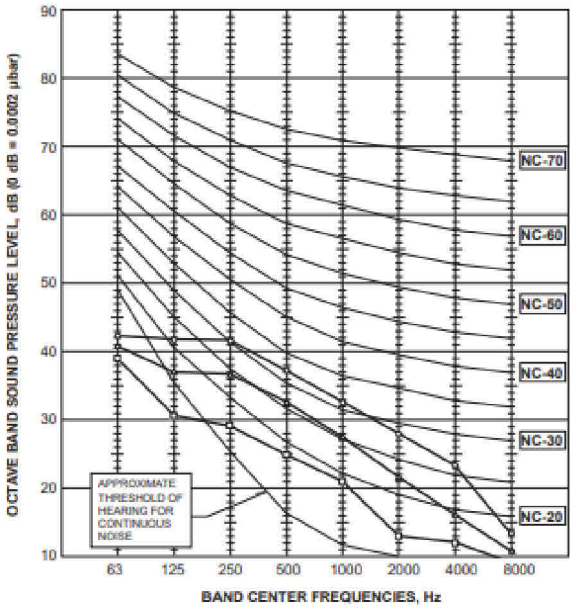
5-3. NOISE CRITERION CURVES



SLZ-M50FA

<50Hz>

NOTCH	SPL(dB)	LINE
High	39	
Medium	34	
Low	27	



Free Air Inlet Combined with Casing (Cabinet) Radiated								Ducted Discharge							
Octave Band Frequency, Hz								Octave Band Frequency, Hz							
63	125	250	500	1000	2000	4000	8000	63	125	250	500	1000	2000	4000	8000
57	55	53	52	47	44	41	37	70	61	58	59	55	50	47	44

Model	Sound Power Levels (db) Mid Octave Bands (Hz)								Sound Pressure dbA at 3m
	63	125	250	500	1000	2000	4000	8000	
CRL202M	39	51	57	63	62	58	50	40	46
CRL252M	49	61	66	73	72	68	60	50	55
CRL254M	40	52	61	61	63	59	51	41	46
CRL314M	41	53	62	62	64	60	52	42	47
CRL314T	42	54	63	63	65	61	53	43	48
CRL354M	47	59	68	68	70	66	58	48	53
CRL354T	47	59	68	68	70	66	58	48	53
CRL404T	48	60	69	69	71	67	59	49	54

SOUND POWER LEVELS

S.W.L (dB) at Fan Reference: 10^{-12} Watts

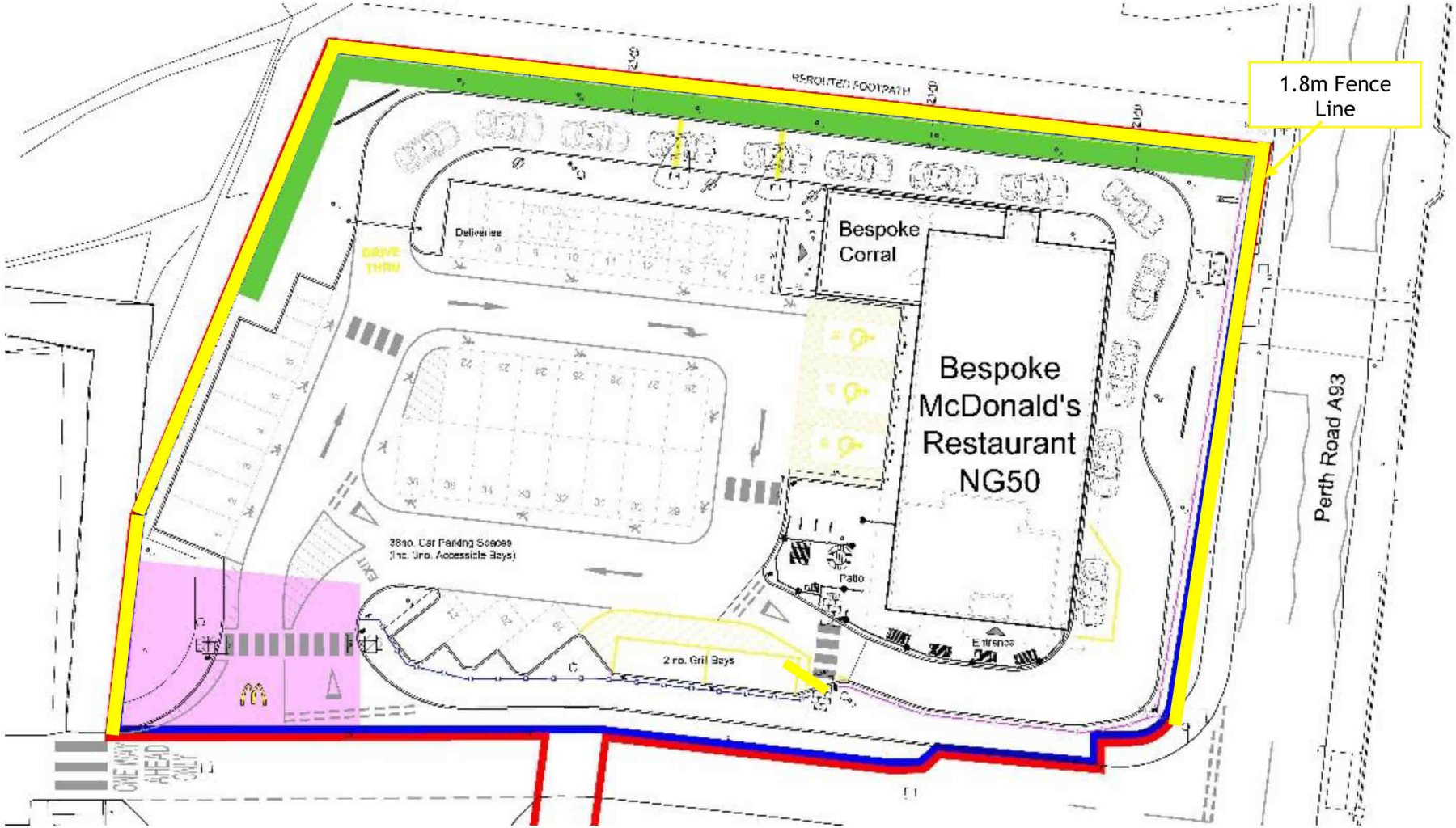
Octave Band Frequency (Hz)	63	125	250	500	1K	2K	4K	8K
Supply Fan Outlet – In Duct	78	85	85	84	81	75	74	71
Supply Fan Inlet	73	80	81	77	72	70	69	67

SOUND POWER LEVELS

S.W.L (dB) at Fan Reference: 10^{-12} Watts

Octave Band Frequency (Hz)	63	125	250	500	1K	2K	4K	8K
Supply Fan Outlet – In Duct	77	83	77	76	74	72	67	60
Supply Fan Inlet	75	80	73	69	66	66	62	55

Appendix D – Proposed 1.8m Fence Line



Glanville
Survey > Plan > Engineer

Issue 7: 07 July 2025

Flood Risk Screening & Drainage Impact Assessment

McDonald's, Blairgowrie (ST2473)

Prepared for: McDonald's Restaurant Ltd

Ref: 001_4240368_HG_DS

Civil Engineering | Structural Engineering | Transport Planning | Highways Engineering | Building Surveying | Geomatics

Document History

Issue	Date	Description	Prepared By	Checked By
1	16 Sept 24	First Issue	Howard Gell	Kevin Jackson
2	08 Nov 24	Updated to new foul drainage connection point	K Jackson	H George
3	18 Dec 24	Updated to reflect revised site layout	K Jackson	H George
4	7 Feb 2025	Further update to site layout	K Jackson	H George
5	20 June 25	Building type and site layout updated	K Jackson	H George
6	25 June 25	Planning policy reference updated	K Jackson	H George
7	07 July 25	Further update to site layout	K Jackson	H George

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1.0 Introduction

Purpose

1.1 This Flood Risk Screening & Drainage Impact Assessment (FRS & DIA) has been prepared by Glanville Consultants Ltd on behalf of McDonald's Restaurants Limited to support a planning application for the development of a greenfield site, to create a new Restaurant. The FRS & DIA aims to identify flood risks and provide an appropriate level of assessment depending on the level of risk, also to provide an assessment of both foul water and surface water drainage impacts. This work is completed in accordance with Scottish Planning Policy and Perch and Kinross Local policies.

Site Location & Description

1.2 The site is approximately located 1.3km southwest of Blairgowrie, as shown in Figure 1. The site is surrounded by a new retail development to the north and south, a new detention pond to the west and Perth Road to the east.

1.3 The site currently is generally unused greenfield land, there is a small parking area in the southwest corner of the site.

Data Sources

1.4 Data used for this report is as follows:

- Topographical survey & sub scan of the site
- On-line Flood Maps -. SEPA
- Drainage record plans – Scottish Water
- Geotechnical & Geo-environmental data
- Google Earth observations - Glanville
- (PAN 61) Planning & Sustainable Urban Drainage Systems
- (PAN 69) Planning & Building Standards Advice on Flooding
- SEPA Policy 41
- Flood Risk & Flood Risk assessments – Perth & Kinross
- Climate Change Allowances for flood risk assessment in land use planning - SEPA

1.5 All the level information quoted in this report refers to the Ordnance Datum Newlyn, defined as the mean sea level recorded at Newlyn in Cornwall.

Site Layout Drawings

1.6 The proposed layouts for the new restaurant shown in this report are outline ones, but accurately reflect the proposal from a drainage impact assessment point of view. The outline drawings exclude signage.

Land Use Vulnerability

1.7 By reference to Table 1 of SEPA's Flood Risk and Land Use Vulnerability Guidance, the proposed restaurant development falls under the 'least vulnerable uses' classification.

2.0 Flood Risk & SuDS Planning Policy

Scottish Administration NPF4 Policy 22

Flood risk and water management

2.1 The Policy intent is:

- To strengthen resilience to flood risk by promoting avoidance as a first principle and reducing the vulnerability of existing and future development to flooding.

2.2 The policy outcomes are that:

- Places are resilient to current and future flood risk.
- Water resources are used efficiently and sustainably.
- Wider use of natural flood risk management benefits people and nature

2.3 One of the key points from this document is listed below:

- Local Development Plans (LDPs) should strengthen community resilience to the current and future impacts of climate change, by avoiding development in areas at flood risk as a first principle. Resilience should also be supported by managing the need to bring previously used sites in built up areas into positive use; planning for adaptation measures; and identifying opportunities to implement improvements to the water environment through natural flood risk management and blue green infrastructure.
  Plans should take into account the probability of flooding from all sources and make use of relevant flood risk and river basin management plans for the area. A precautionary approach should be taken, regarding the calculated probability of flooding as a best estimate, not a precise forecast. For areas where climate change is likely to result in increased flood exposure that becomes unmanageable, consideration should be given to alternative sustainable land use.

2.0 Policy 22c) Development Proposals will:

i) Not increase the risk of surface water flooding to others, or itself be at risk;
ii) Manage all rain and surface water through sustainable urban drainage systems (SuDS), which should form part of and integrate with proposed and existing blue-green infrastructure. All proposals should presume no surface water connection to the combined sewer;
iii) Seek to minimise the area of impermeable surface.

Scottish Water – Standard Advice Note & Process Guidance – Surface Water Policy

2.1 This document explains the types of sewers used in Scotland historically, namely 'Combined Sewers' and the approach used today 'Separate FW and SW systems incorporating SuDS'. A section on SuDS design options includes the following hierarchy of discharge options and acceptable reasons to move down the list: 1 – Rainwater Harvesting, 2 – Infiltration, 3 – Watercourse, 4 – Surface water Sewer, 5 – Combined Sewer. The document explains the principles of 'nil detriment' and 'sewer capacity' in relation to setting maximum discharge rates to Combined Sewers.

Planning History

2.2 This proposed site is located within the wider MU5 Western Blairgowrie site, identified within the LDP2 document. The proposed site was identified within outline planning application 17/00939IPM.

2.3 The approved Drainage Layout indicates the site as part of 'Hotel & Associated Parking In Abeyance', including an allowance of 3430m^2 hard standing of which 1315m^2 is porous paving. The approved drainage layout for the wider development shows surface water being collected by a separate on-site surface water drainage system and discharged via a 2946m^3 Detention Pond to an existing ditch watercourse. The wider site includes some dispersed areas of permeable paving.

2.4 The approved Flood Risk Assessment & Drainage Strategy confirms that the drainage system is designed to accommodate a 1:30 year event plus 30% climate change, in addition the site will contain flood water from storms up to a 1:200 year event plus 30% climate change.

2.5 The Geotechnical Investigation submitted with this planning application identified topsoil/made ground (0.10m-0.40m) over gravel/sand (0.70m-1.80m) over sand or silt (1.00m-1.50m) in six trial pits on the development site. Groundwater was found in each of the three boreholes, the shallowest of these occurring in borehole 1 at 2.70m below ground level (approx. 67.80m AOD).

Local SuDS Policy

Perth & Kinross – Flood Risk & Flood Risk Assessments – Mar 2021

2.6 This document directs the reader to national standards and polices, as well providing detailed local policy and guidance in respect of flood risk and drainage, including SuDS.

3.0 Existing Conditions and Sources of Flooding

Topography

3.1 The site has levels ranging from 72.3m to 69.0m falling from east to west. There is a detention pond outside the site to the west and a new access road outside the site to the south, as per the approved consent for the wider retail park.

Geology

3.2 The British Geological Survey (BGS) mapping indicates Glacio-fluvial gravel, sand and silt (Superficial) over Teith Sandstone Formation (Bedrock). The text from the desktop study and draft results of an intrusive investigation show the ground conditions can be found in Appendix A.

Groundwater Quality

3.3 The Environment Map for Scotland indicates the following classifications in respect of groundwater at the site:

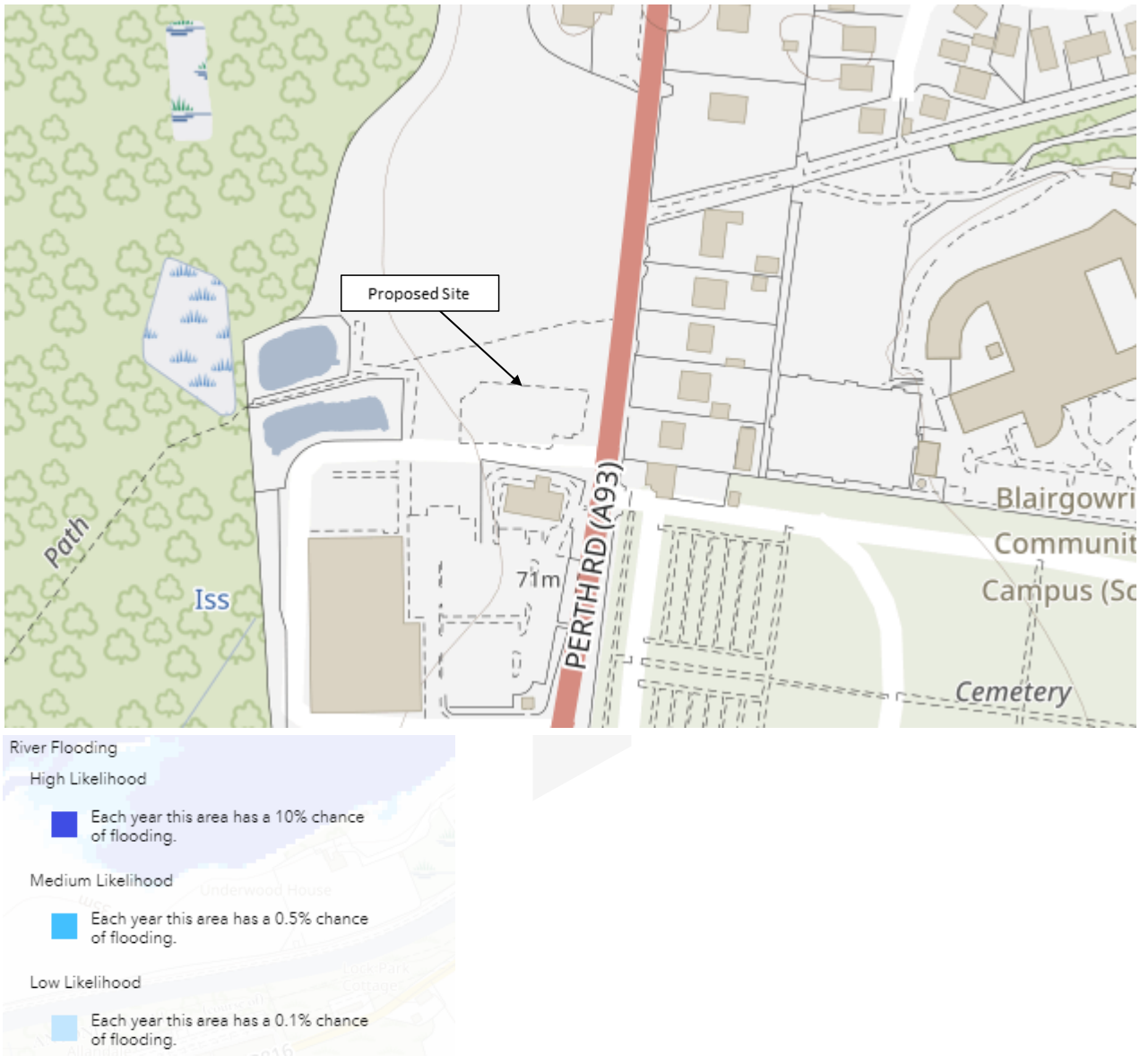
- Groundwater classification — Moderately Productive
- Aquifer classification — MODERATE TO HIGH PRODUCTIVE AQUIFER with FRACTURE FLOW (with minor intergranular flow).

Fluvial Flooding

3.5 The Scotland Environment maps indicate the site lies approximately 1.8km northeast of the watercourse known as Lunan Burn, which is part of the River Tay catchment. Drainage ditches close to the site flow southwest towards Loch's which discharge to the Lunan Burn.

3.6 The SEPA river flood maps indicate that the site and surrounding area are outside of all the fluvial flood risk zones, see Image 1.

Image 1: SEPA River Flood Map



Coastal Flooding

3.6 The SEPA coastal flood maps indicate the site to be located outside of all areas considered to have a high, medium and low likelihood of flooding.

Groundwater Flooding

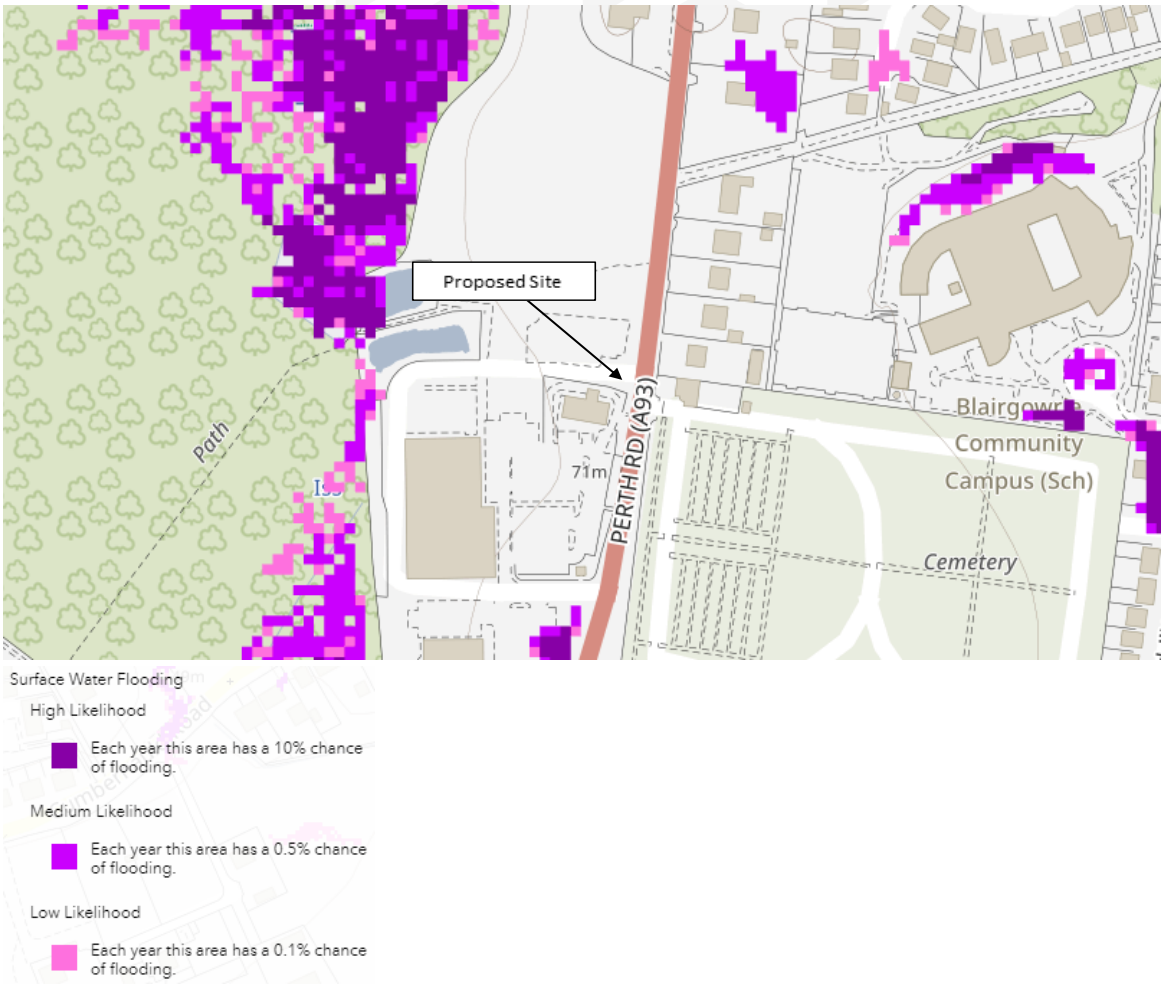
3.7 The SEPA groundwater flood maps indicate the site to be located outside of areas considered to be at risk of flooding, see Image 2.

Image 2: SEPA Groundwater Flood Map

Overland (Pluvial) Flooding

3.9 The SEPA surface water flood maps indicate the site to be located outside all surface water flood risk areas, see Image 3.

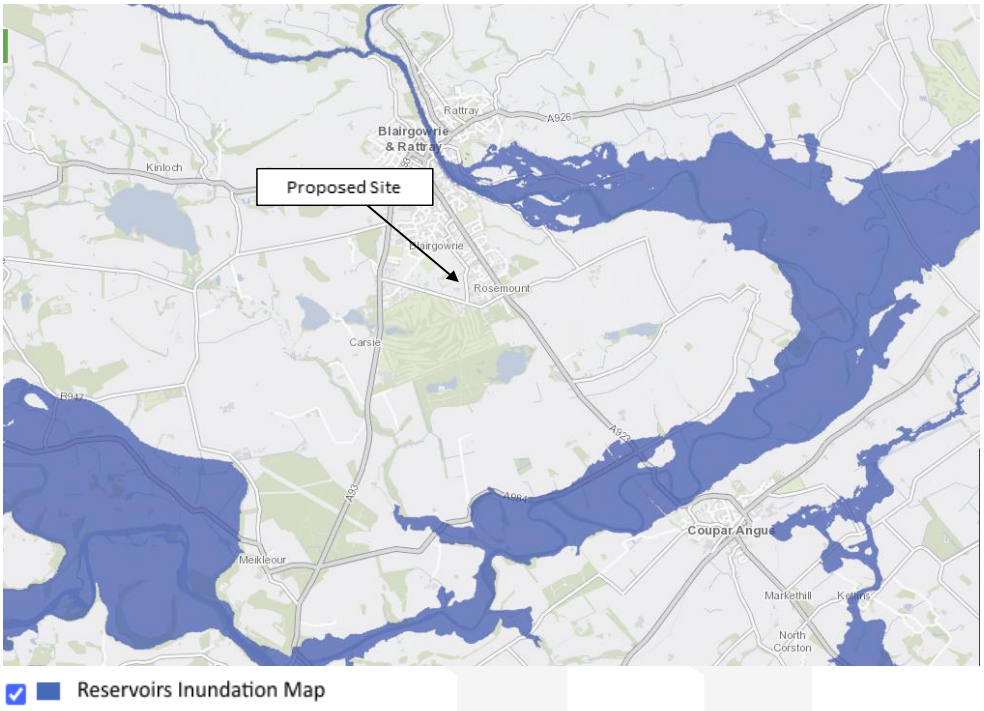
Image 3: SEPA Surface Water Flood Map



Flooding from Reservoirs, Canals and other artificial sources

3.10 The SEPA Reservoirs Inundation map indicates the site to be located outside of any indicative area that may flood from an uncontrolled release of water from all assessed dam failure scenarios see extract in Image 4.

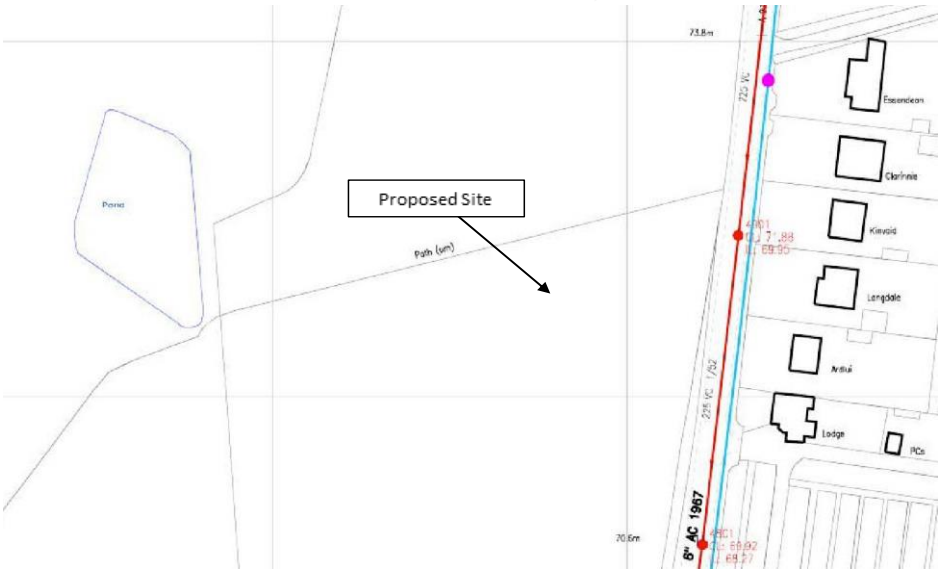
Image 4: SEPA Reservoirs Map



Existing Sewer Flooding

3.12 An extract of the Scottish Water records, see Image 5 shows a 225mm diameter combined sewer under Perth Road.

Image 5: Scottish Water Records



4.0 Development Flood Risk Screening

Development Proposals

4.1 The proposed development consists of a McDonald's Restaurant with associated drive through lane and car park. The development layout can be seen in Figure 3.

Flood Risk Management

4.2 The development design includes flood risk reducing features which are listed in Table 1. The following sub sections of this chapter describe in more detail each of the potential sources of flooding and how the development design features will reduce these risks.

Table 1: Flood Risk Reducing Design Features

Possible Design Features	In this Design	Description of Feature	Flood Risk Reduction
Surface levels & FFL	Yes	Surfaces drained into the SuDS. Exceedance flow routes are checked to ensure they do not create a flood risk.	Pluvial flooding
SuDS Drainage	Yes	1:200 + climate change allowance included within drainage system.	Pluvial /drainage flooding
Flood Resilience Measures	No	Not required, buildings not expected to flood.	N/A
Flood Compensation	No	Not required, not developing in floodplain.	N/A
Flow Control Devices	No	Not required as all surface water is disposed of by infiltration below the car park area.	Drainage flooding
Safe Pedestrian Escape Route	Yes	The site is dry and proposed levels designed to ensure overland surface water flow routes do not create a flood risk.	Pluvial flooding
Safe Escape Route Vehicular	Yes	The site is dry and proposed levels designed to ensure overland surface water flow routes do not create a flood risk.	Pluvial flooding
Dry parking area	Yes	Proposed levels designed to ensure overland surface water flow routes do not create a flood risk.	Pluvial flooding
Flood Plan & Warning	No	Not required, development outside floodplain.	N/A

Fluvial Flooding

4.3 The development is outside the floodplain and therefore no design features are required to address fluvial flood risks to the development. Hence, the risk of fluvial flooding will remain very low.

Groundwater Flooding

4.4 The site level design will ensure that in the unlikely event that any groundwater does flood at surface level, the proposed overland flow routes do not create a risk to the development (see Figure 6).

Overland Surface Water Flooding (Pluvial) On Site

4.5 The proposed overland flow paths and levels are shown in Figure 6 with the existing flow path shown in Figure 2. In addition, the improved on-site drainage and raised building FFL, the site level design will ensure that any pluvial flooding is routed to avoid a risk to the development and to match existing flood routes.

Overland Surface Water Flooding from the Site onto Surrounding Land

4.6 The proposed on-site drainage system will be designed to accommodate a 1 in 200 plus climate change rainfall event, without creating a flood hazard. If an exceedance event occurs (greater magnitude than 1 in 200 plus climate change storm event) then the existing overland flood routes on and off the site will not be changed by the development, so the development cannot adversely impact surrounding land, see Figures 2, 5 and 6.

Flooding from Reservoirs, Canals and other Artificial Sources

4.7 No existing flood risks have been identified and the development will not change this situation.

Sewer Flooding

4.8 The proposed development surface and foul water drainage layouts are shown in Figure 5. The new foul drainage infrastructure on the site will be designed in accordance with Scottish Building Regulations and therefore no significant flood risk is expected from the proposed on-site foul water drainage.

4.9 New on-site surface water drainage is designed to accommodate a 1:200 year plus climate change event without creating a flood hazard and therefore the risk of flooding is low. A flow control device will limit the proposed surface water drainage discharge from the site to ensure local sewers are not overloaded as a result of the development.

4.10 Any flooding from existing sewers will be routed through design of exceedance flow routes to avoid creating a flood risk to the development. See Figure 6.

Flood Impacts, Mitigation and Residual Effects

4.11 Table 2 below rates the different flood risks to the development, taking into account the development design proposals as described in this report. Design proposals are not considered to be mitigation, but any action required in addition to the current design proposals is considered mitigation and listed in the table. We have rated the risks as none, low, medium and high based on our assessment of the facts relating to each source of flooding and the potential hazards.

Table 2: Residual Flood Risk

Type of Flood Risk	**Flood Risk Rating None Low Med High**	**Mitigation required**	**Mitigation Measure**
Fluvial Flooding	None	No	None
Groundwater flooding	Low	No	None
Pluvial (SW) flooding from adjacent land	Low	No	None
Pluvial (SW) flooding onto adjacent land	Low	No	None
Flooding from reservoirs	None	No	None
Flooding from sewers	Low	Yes	Normal maintenance of drainage systems

Flood Screening Summary

4.12 In accordance with Perth and Kinross Planning Policy (Supplementary Guidance – Flood Risk and Flood Risk Assessments), the development proposals and flood risk screening assessment have not found: a watercourse that poses a realistic threat to the development, any historical flooding in this location and the SEPA maps do not show the site to be at risk of flooding from any source. Therefore, a Flood Risk Assessment is not required.

4.13 Furthermore, the development proposals do not create a material increase in the number of buildings at risk of being damaged by flooding and therefore SEPA do not require consultation.

5.0 Existing & Proposed Sustainable Drainage

Site Specific Sustainable Drainage Assessment

5.1 The Ciria SuDS Manual describes the four main categories of benefits that can be achieved by SuDS as water quantity, water quality, amenity and biodiversity: also known as the four Pillars of SuDS. The SuDS Manual Box 1.2 describes the SuDS approach to managing surface water runoff as follows:

- use surface water runoff as a resource
- manage rainwater close to where it falls (at source)
- manage runoff on the surface (above ground)
- allow rainwater to soak into the ground (infiltration)
- promote evapotranspiration
- slow and store runoff to mimic natural runoff rates and volumes
- reduce contamination of runoff through pollution prevention and by controlling the runoff at source
- treat runoff to reduce the risk of urban contaminants causing environmental pollution.

Depending on the characteristics of the site and local requirements, these may be used in combination and to varying degrees.

5.2 Table 3 below is a version of the Ciria SuDS Manual table 1.1 'Types of SuDS Components with a comment on the suitability of each component for this site.

Table 3: SuDS Component Suitability Assessment

Component Type	Description	Suitability for This Site
Rainwater Harvesting	Rainwater collected from roof and paved surfaces in a tank. The system may include treatment elements and should include specific storage provision if it is to be used to manage runoff to a design standard.	The restaurant is of modular construction to a standard design which is not set up for rainwater recycling. Water demand is also high so any recycling would need to be accompanied by a backup water supply and a very large recycling tank, negating the environmental benefits.
Green /Blue Roofs	A planted soil layer constructed on the roof of a building to create a living surface. Water is stored in the soil layer and absorbed by vegetation. Blue roofs store water at roof level, without the use.	The restaurant is a lightweight modular construction, produced in a factory and transported to site. This form of construction has many environment benefits but is not currently capable of supporting green or blue roofs for McDonald's.
Infiltration System	Collects and stores runoff allowing it to infiltrate into the ground. Overlying vegetation and underlying unsaturated soils can offer protection to groundwater from pollution risks.	Infiltration is possible for this site, all surface water is collected through permeable parking areas or piped to the central car parking area..
Proprietary Treatment System	These structures provide treatment of water through the removal of contaminants.	These systems are suitable for this site.
Filter Strips	Runoff from an impermeable area is allowed to flow across a grassed or otherwise densely planted area for sedimentation & filtration.	Space for filter strips is very limited, so they are unlikely to have much benefit.

Filter Drains	Runoff is temporarily stored below the surface in a trench filled with stone, providing attenuation, conveyance & treatment (via filtration).	Are suitable subject to space/layout requirements. As infiltration is not possible, due to made ground and the need to provide the necessary treatment indices, trenches would need to be lined and connected to a positive drainage system.
Swales	A vegetated channel is used to convey & treat runoff (via filtration). These can be "wet", where water will remain permanently at the base of the swale (lined), or "dry" where water is only present temporarily after rainfall events (unlined).	The site area is too small and too steep to accommodate swales effectively.
Bioretention Systems	A shallow landscaped depression allows runoff to pond temporarily on the surface, before filtering through vegetation and underlying soils prior to collection or infiltration. In its simplest form it is often referred to as a rain garden. Engineered soils (gravel and sand layers) and enhanced vegetation may improve treatment performance.	Space for Bioretention systems is very limited, but even small areas may have some benefit.
Rills	Formal linear drainage features in which surface water can be stored or conveyed. They can be incorporated with water features such as ponds or waterfalls where appropriate.	Unsuitable due trip/wheel hazard & high pedestrian & vehicle traffic. Unsuitable for disabled access. Channels with heal guard grating are an acceptable alternative.
Trees	Trees within a range of infiltration SuDS components improve their performance, as root growth & decomposition increase soil infiltration capacity. Alternatively, as standalone features within soil filled tree pits, tree planters or structural soils, collecting and storing runoff and providing treatment (via filtration and phytoremediation.	Soft landscaping is provided where possible around the site permitter and will include vegetation.
Pervious Pavements	Runoff soaks through structural paving. This can be paving blocks with gaps between solid blocks, or porous paving where water filters through the block itself. Water can be stored in the sub-base & potentially allowed to infiltrate into the ground	Porous paving has been proposed in the car parking bays as noted in Figure 5.
Attenuation storage tanks	Large, below-ground voided spaces used to temporarily store runoff before infiltration, controlled release, or use. E.g., a geocellular system, concrete tank, or oversized pipes.	These systems are suitable for this site.
Detention Basins	During a rainfall event, runoff drains to a landscaped depression with an outlet that restricts flows, so that the basin fills and provides attenuation. Generally, basins are dry, except during & immediately following the rainfall event. If vegetated, runoff will be treated as it is conveyed & filtered across the base of the basin.	There is insufficient space for an on-site basin, however the wider site does incorporate a detention basin.
Ponds & Wetlands	Features with a permanent pool of water can provide attenuation & treatment of runoff, where outflows are controlled & water levels are allowed to increase following rainfall. They can support emergent & submerged vegetation along their shoreline & in shallow, marshy zones, which enhances treatment & biodiversity.	Insufficient site area for a significant pond or wetland.

Available Surface Water Discharge Options

5.3 The geotechnical investigation for this site indicates that the underlying site geology is suitable for infiltration. The lowest infiltration rate achieved on site was 3.0 x 10^{-5} m/s.

5.4 There is a small watercourse to the west of the site, which takes the discharge from the recently installed detention basin. The basin was approved and constructed to serve the wider development including the application site. It would therefore be appropriate to discharge run-off to the watercourse via the detention basin.

5.5 There is a combined sewer under Perth Road, but Scottish water will not accept a surface water discharge where other options area available.

5.6 Given the above it is concluded that the most suitable option is to use infiltration, with a Type 3 sub-base below the permeable parking spaces / impermeable parking spaces and aisle within the car parking area. Surface water from the drive thru lane and building roof will be collected in a kerb drain / rainwater pipes and piped to discharge into the car park area a minimum of 5 metres from the building.

Selected Sustainable Drainage Measures

5.7 The selection of SuDS techniques for this site has followed the SuDS management train concept explained in the SuDS Manual. The concept is to use drainage techniques in series to incrementally reduce pollution, flow rates and volumes. The hierarchy of techniques to be used are as follows:

- Prevention - prevent runoff & pollution e.g., filter drains, porous paving with infiltration , attenuation and flow controls.
- Source Control - control runoff at or near its source e.g., local infiltration methods.
- Site Control - routing water to site controls e.g., oversize pipes , and a detention basin.

5.8 The proposed surface water drainage layout is shown in Figure 5 and includes the following features:

- Rainfall will be collected from roofs by rainwater pipes and gullies, and piped into a permeable sub base under the permeable car park surfacing via diffuser boxes.
- Rainfall will be collected from the main car park /patio by permeable paving and will be attenuated within the permeable sub base.
- Rainwater falling on the drive thru lane will be collected by the adjacent Bio-Retention strip. This will overflow into the sub base of the permeable pavement, via catchpit manholes.
- The permeable pavement sub base, will discharge to the Detention pond, which discharges to the watercourse.

5.9 These sustainable drainage measures have been selected for the site conditions and are suitable for the constant use and daily maintenance required for a McDonald's site. These systems are tried and tested on similar sites where permeability is poor, and the site area cannot accommodate larger open drainage features.

Climate Change

5.10 Climate change allowances for peak rainfall intensity until 2100, have been set at 39%, in accordance with SEPA document 'Climate change allowances for flood risk assessments in land use planning' for the 'Tay' river basin region.

Flow Rates & Attenuation

5.11 Existing and proposed impermeable areas have been calculated and are shown in Figure 4. These areas have been used to calculate the existing and proposed discharge from the site for a range of storm events.

5.12 The drainage system has been designed using Flood Estimation Handbook 2013 (FEH) Rainfall Rates in Microdrainage design software to cater for storm events up to and including the 1 in 200yr storm event plus 39% climate change. The full calculation results are shown in Appendix B.

5.13 The voided (porous) sub-base under the car parking area has been designed to accept and attenuate flows from 1600m^2 of impermeable paving from the McDonald's site. The sub-base is sized to provide storage ahead of infiltration to the sub-soils at a minimum rate of 3.0 x 10^{-5} m/s.

Pollution Control

5.14 Ciria pollution treatment measures have been applied to ensure treatment of the surface water. The pollution control measures are designed to minimise the transmittal of any pollutants, collected by runoff flowing over hard paved areas, to the public sewers and to ground. Pre-treatment is provided with gulley's and catchpit manholes to remove silt and prolong the life of the pollution control treatment media. Pollution control measures on this site include:

- Porous Paving

5.15 The suitability of the pollution control measures is quantified in accordance with CIRIA 753, pollution hazard indices. Comparing the pollution hazard indices in Table 4, for each catchment type, with the total pollution mitigation indices in Table 5, it can be seen that the suggested drainage system will be sufficient to mitigate the expected pollution from roofs and paved areas with additional treatment provided, by the filter drains, porous paving and basin. See mitigation formula below and Appendix C for the product details.

Total SuDS Mitigation Index must be ≥ Each Catchment's Pollution Hazards Index (For each contaminant type)

Total SuDS Mitigation Index = 1st Stage Mitigation Index + 0.5 (2nd Stage Mitigation Index)

Table 4: Pollution Hazard Indices

Catchment Type	Pollution Hazard Level	Requirements for Discharge to Groundwater	Pollution Hazard Indices		
			Suspended solids	Metals	Hydrocarbons
Restaurant Roof	low	Simple index approach	0.30	0.40	0.05
Restaurant parking	Medium	Simple index approach	0.70	0.60	0.70

Table 5: Total Pollution Mitigation Indices for discharge to Groundwaters

Type of Pollution Mitigation (SuDS)	Pollution Mitigation Indices		
	Suspended solids	Metals	Hydrocarbons
1 – Permeable pavement	0.70	0.60	0.70
2 – Permeable sub-base	0.40	0.40	0.40
3 –Permafilter geotextile on formation	0.50	0.20	0.50
4 - Sub soil below formation, min. 300mm deep	0.40	0.30	0.30
Total treatment indices (2)+(3)+(4) : Drive thru run-off	0.85 (0.4+0.5/2+(0.4/2))	0.65 (0.4+0.2/2+0.3/2)	0.80 (0.4+0.5/2+0.3/2)
Total treatment indices (2)+(3)+(4) : Roof	0.85 (0.4+0.5/2+0.4/2)	0.65 (0.4+0.2/2+0.3/2)	0.80 (0.4+0.5/2+0.3/2)
Total treatment indices (1)+(3)+(4) : Car park	1.15 (0.7+0.5/2+0.4/2)	0.85 (0.6+0.2/2+0.3/2)	1.10 (0.7+0.5/2+0.3/2)

Maintenance

5.16 Refer to the separate Glanville report entitled 'Drainage Maintenance Plan'.

Foul Water (FW) Drainage Strategy

5.17 The development will connect FW flows, via gravity, to the existing private foul water drainage network installed as part of the wider commercial area development. This includes a foul water pump station that discharges by gravity to the combined sewer under Perth Road. This is the nearest practical point of connection, as invert levels do not allow a direct gravity connection to the adopted sewer.

5.18 The on-site foul water drainage and connection route to the retail park foul water drainage network are shown on Figure 5.

5.19 The restaurant drainage includes an alarmed grease trap for all the kitchen waste pipework to ensure drains do not lose capacity due to grease build up and to prevent grease entering the public sewers.

5.20 A pre-development application has been submitted to Scottish water and a response is awaited.

6.0 Further Investigations & Approvals

6.1 Scottish Water's response is awaited to the Pre-Development Inquiry. This response should include recommendations regarding the point of discharge.

6.2 The information in this report is sufficient to demonstrate the suitability of the proposed development in respect of Flood Risk and Sustainable Drainage. It is expected that planning conditions will be imposed requiring drainage proposals to be in accordance with this FRS & DA, and that details of the on-site foul and surface water drainage designs will be provided prior to commencement of works.

6.3 The detailed drainage design must comply with the Building (Scotland) Regulations and approval will be required from a qualified Building Inspector.

6.4 Prior to construction a formal application will need to be submitted to obtain consent for physical connections (direct or indirect) and the discharge of flows to the Scottish Water Sewers. This applies to both foul water flows from this development.

7.0 Conclusion

7.1 The development proposals have been designed after consideration of national and local planning policy and best practice guidance, in the context of the proposed use and site conditions.

7.2 Flood risks within the site have been assessed and are minimal. The proposed design ensures that flood risks are not increased by the development.

7.3 The development's surface water drainage strategy follows sustainable drainage guidance. Infiltration is not suitable but there is a watercourses nearby, therefore runoff is discharged to the watercourse via the wider site's Detention basin

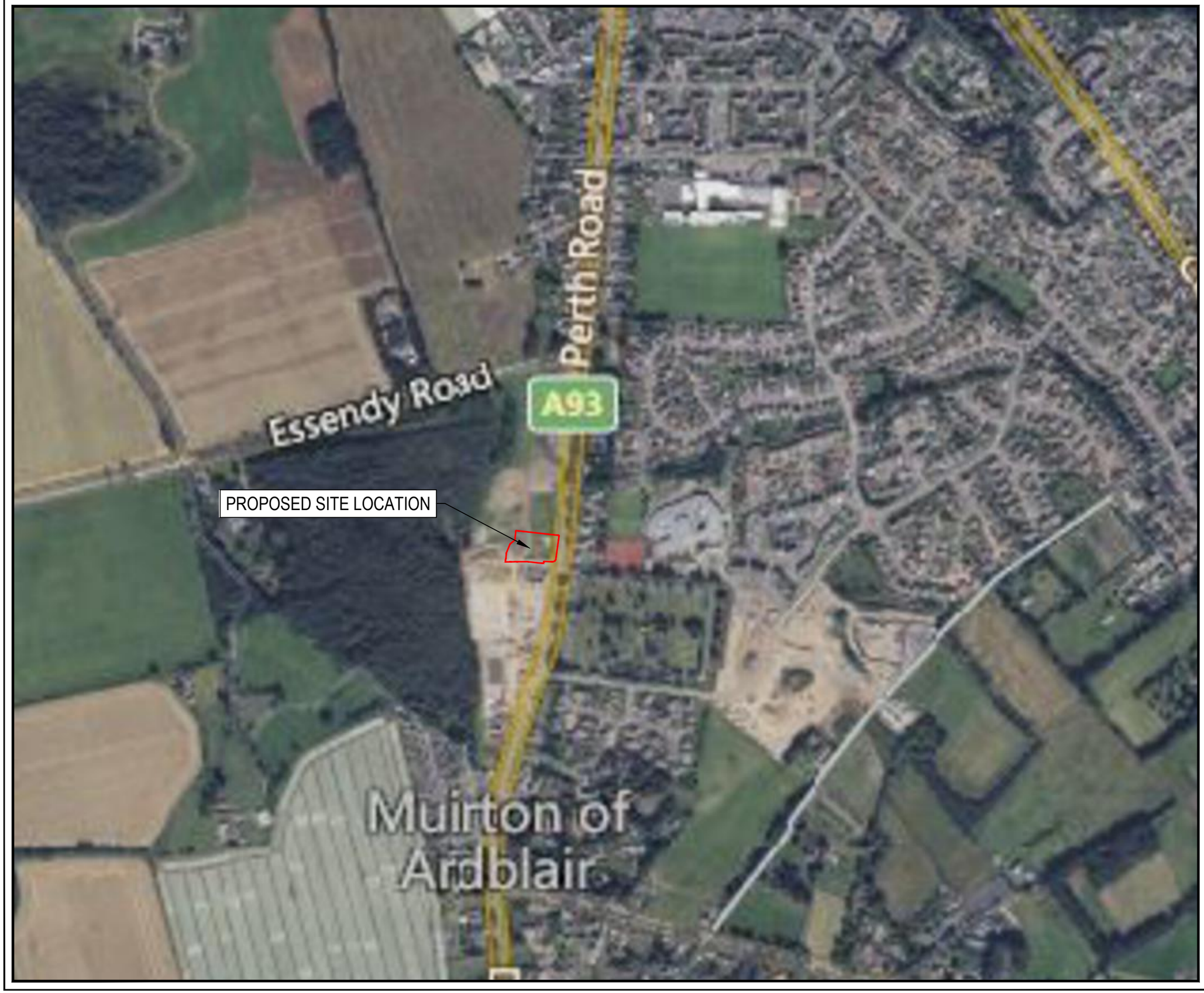
7.4 The sustainable surface water drainage system is designed to accommodate a 1:200-year event plus the appropriate climate change allowance for this site, without flooding.

7.5 A SuDS maintenance schedule has been provided to demonstrate adoption and maintenance proposals in a separate Glanville report entitled 'Drainage Maintenance Plan'.

7.6 The development's foul water drainage strategy utilises gravity to take effluent to the nearest foul sewer adjacent to the site. The design includes many access points for maintenance and an alarmed grease trap to ensure downstream sewers are protected from cooking waste / grease.

7.7 In summary, the development proposals comply with relevant standards for flood risk and sustainable drainage.

Figures



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KEY

PROPOSED SITE BOUNDARY

FOR INFORMATION ONLY

FIGURE 1

Rev.	Description	Date	By	Chkd
I1	ISSUED FOR PLANNING	16.09.24	KJ	HBG

Glanville
Survey > Plan > Engineer
Civil Engineering | Highways Engineering
Structural Engineering | Building Surveying
Transport Planning | Geomatics
Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

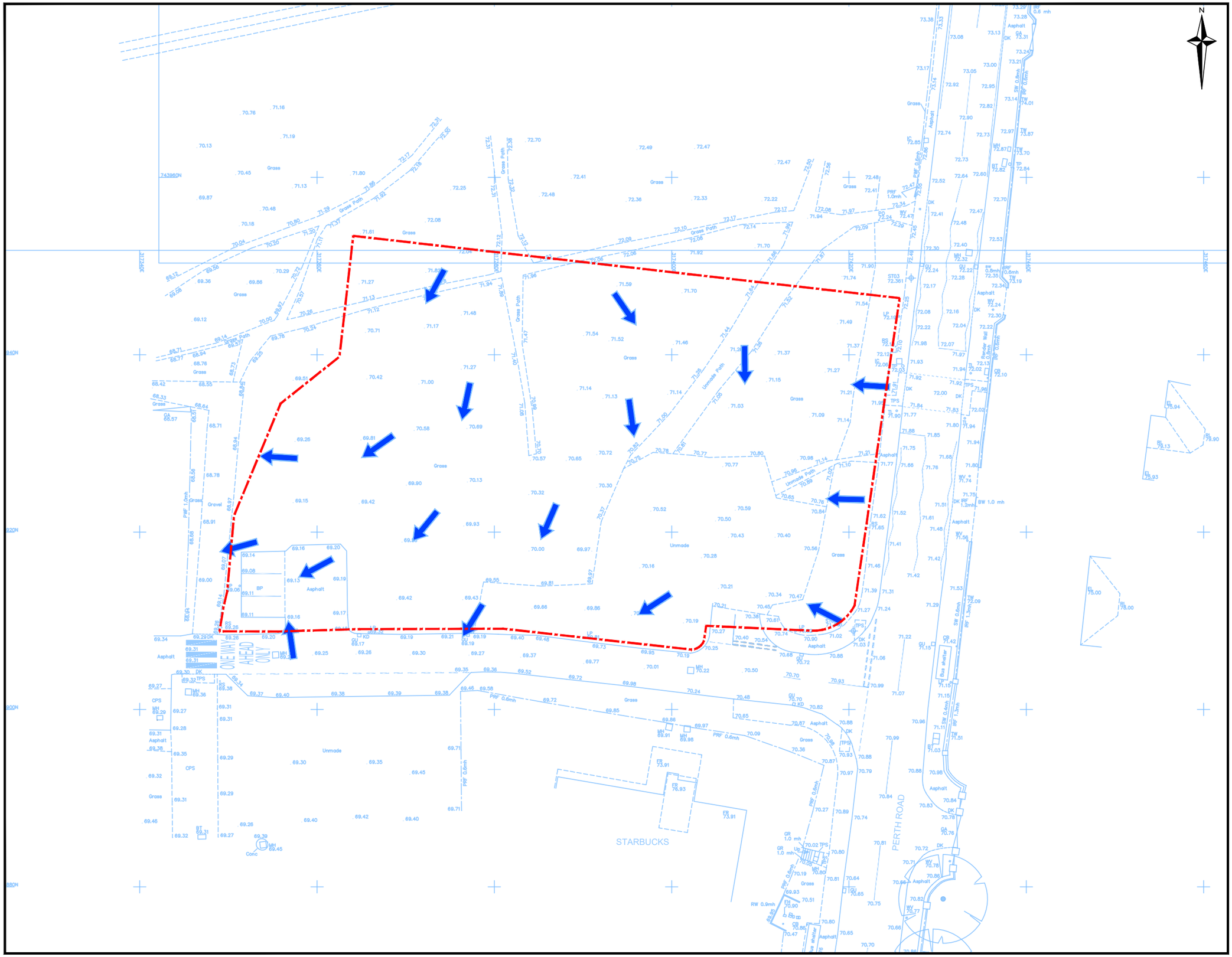
Client : McDonald's RESTAURANT

Project : McDONALDS RESTAURANT
PERTH STREET, BLAIRGOWRIE
PH10 6FW [ST 2473]

Title : SITE LOCATION PLAN

Engineer : KJ | Date : AUGUST 2024
Director : HBG | Scale : 1:2500 @ A1
Status : INFORMATION

Drawing No. 4240368-SK01 | Rev I1



EXISTING SITE LAYOUT

Scale 1:200

NOTES

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KEY

- PROPOSED SITE BOUNDARY
- TOPOGRAPHICAL SURVEY
- OVERLAND FLOW ROUTE

FOR INFORMATION ONLY

FIGURE 2

I1	ISSUED FOR PLANNING	16.09.24	KJ	HBG
Rev.	Description	Date	By	Chkd

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Structural Engineering | Building Surveying
Transport Planning | Geomatics
Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

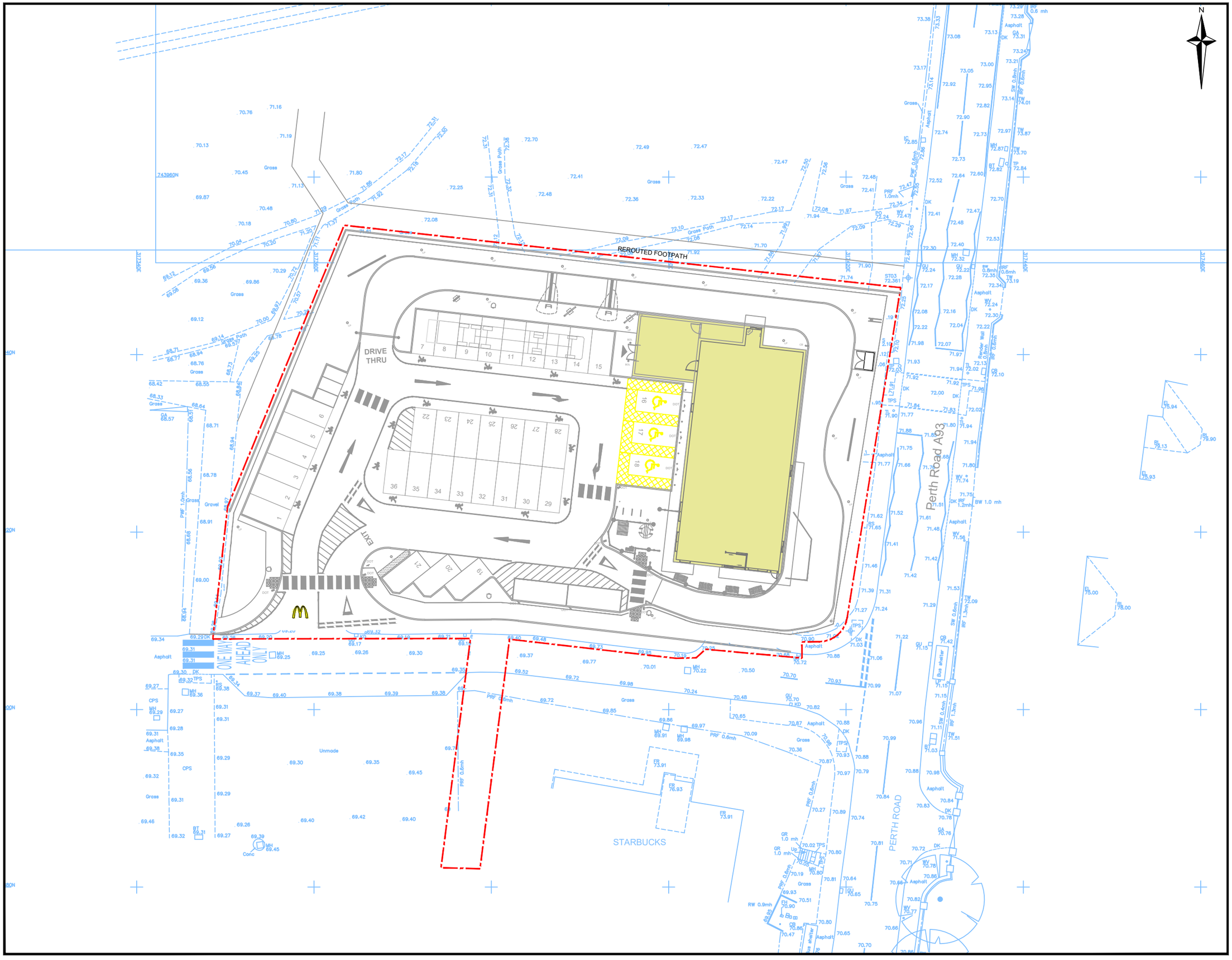
Client : McDonald's Restaurant

Project : McDONALDS RESTAURANT
PERTH ROAD, BLAIRGOWRIE
PH10 6FW [ST 2473]

Title : EXISTING SITE PLAN

Engineer : KJ	Date : AUGUST 2024
Director : HBG	Scale : 1:200 @ A1
Status :	INFORMATION

Drawing No.	Rev
4240368-SK02	I1



PROPOSED SITE LAYOUT

Scale 1:200

NOTES

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KEY

PROPOSED SITE BOUNDARY

TOPOGRAPHICAL SURVEY

PROPOSED SITE LAYOUT

FOR INFORMATION ONLY

FIGURE 3

Rev.	Description	Date	By	Chkd
I5	FURTHER UPDATE TO SITE LAYOUT	07.07.25	KJ	HBG
I4	BUILDING TYPE AND SITE LAYOUT UPDATED	19.06.25	KJ	HBG
I3	FURTHER UPDATE TO SITE LAYOUT	07.02.25	KJ	HBG
I2	SITE LAYOUT UPDATED	13.12.24	KJ	HBG
I1	ISSUE FOR PLANNING	16.09.24	KJ	HBG

Glanville
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Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client : McDonald's Restaurant

Project : McDONALDS RESTAURANT
PERTH ROAD, BLAIRGOWRIE
PH10 6FW [ST 2473]

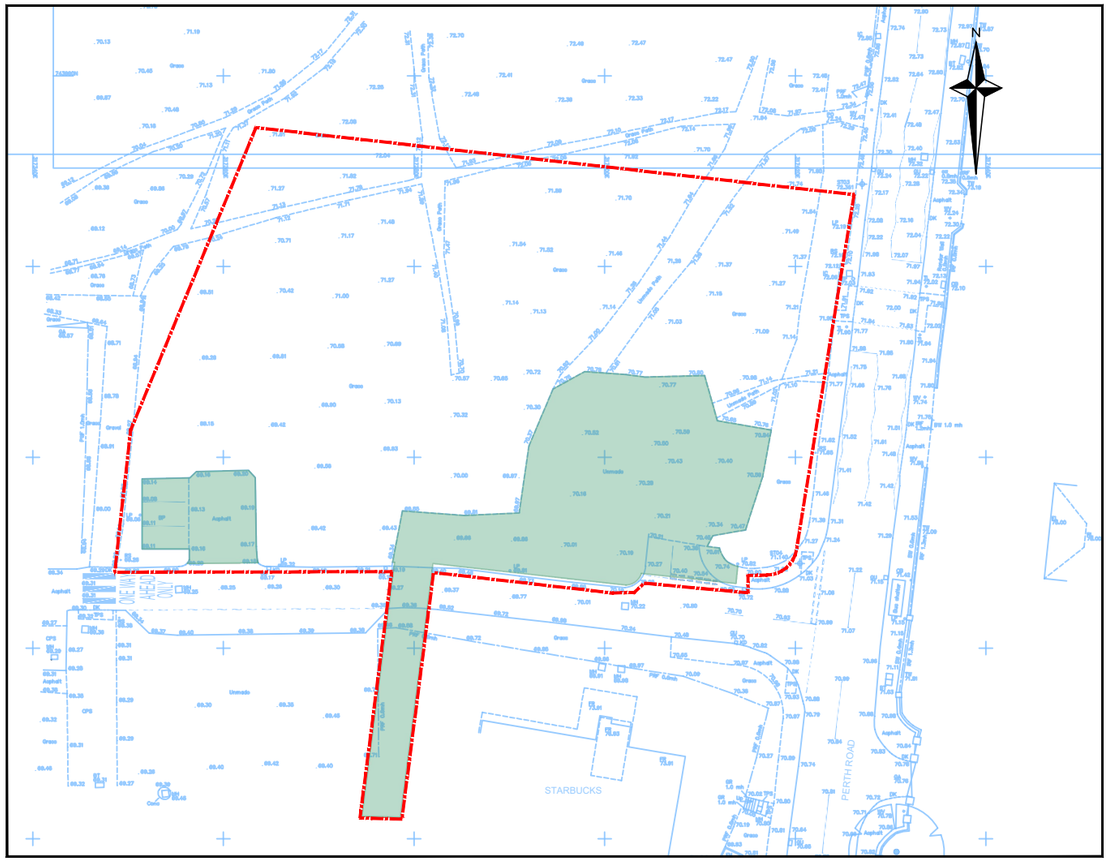
Title : PROPOSED SITE PLAN

Engineer : KJ | Date : AUGUST 2024

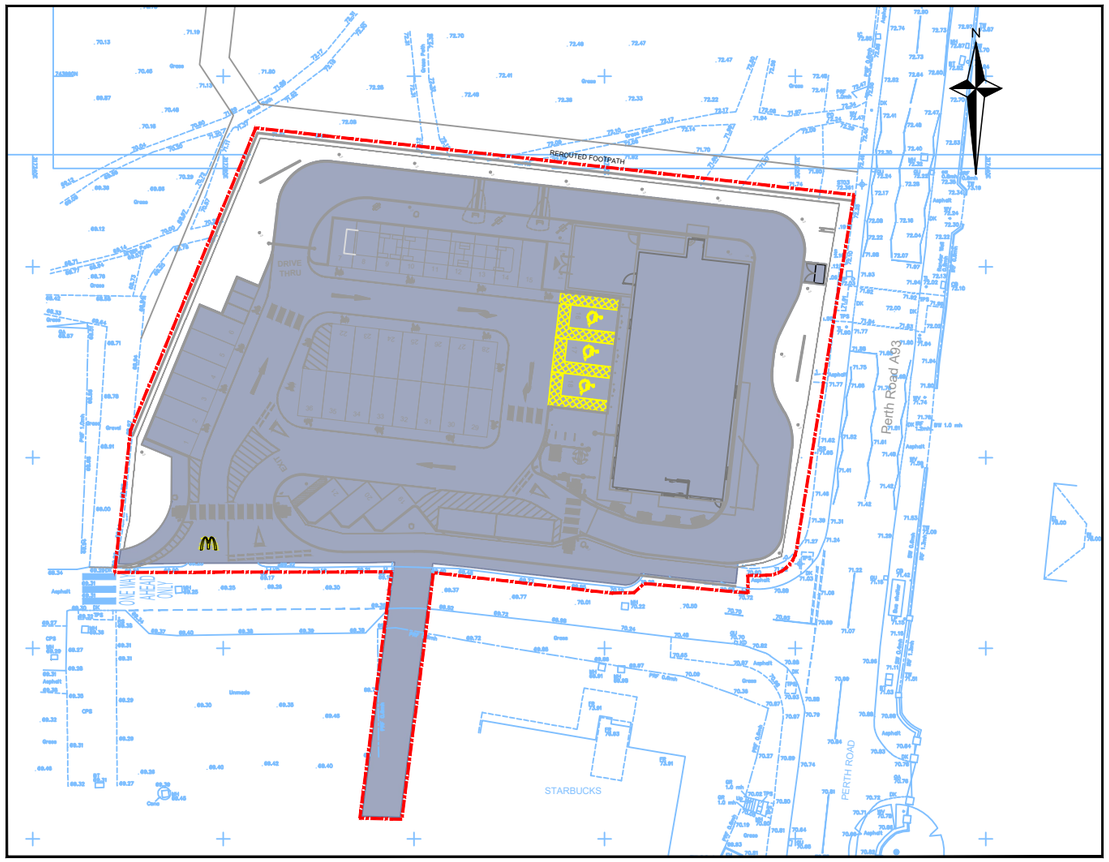
Director : HBG | Scale : 1:200 @ A1

Status : INFORMATION

Drawing No. 4240368-SK03 | Rev I5



EXISTING SITE PLAN
Scale NTS



PROPOSED SITE PLAN
Scale NTS

NOTES

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KEY

- PROPOSED SITE BOUNDARY
- PROPOSED IMPERMEABLE AREA (0.261ha)
- EXISTING IMPERMEABLE AREA (0.075ha)

FOR INFORMATION ONLY

FIGURE 4

Rev.	Description	Date	By	Chkd
I5	FURTHER UPDATE TO SITE LAYOUT	07.07.25	KJ	HBG
I4	BUILDING TYPE AND SITE LAYOUT UPDATED	18.06.25	KJ	HBG
I3	FURTHER UPDATED TO SITE LAYOUT	07.02.25	KJ	HBG
I2	SITE LAYOUT AND B'RY UPDATED	13.12.24	KJ	HBG
I1	ISSUED FOR PLANNING	16.09.24	KJ	HBG

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Structural Engineering | Building Surveying
Transport Planning | Geomatics
Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client : McDonald's RESTAURANT

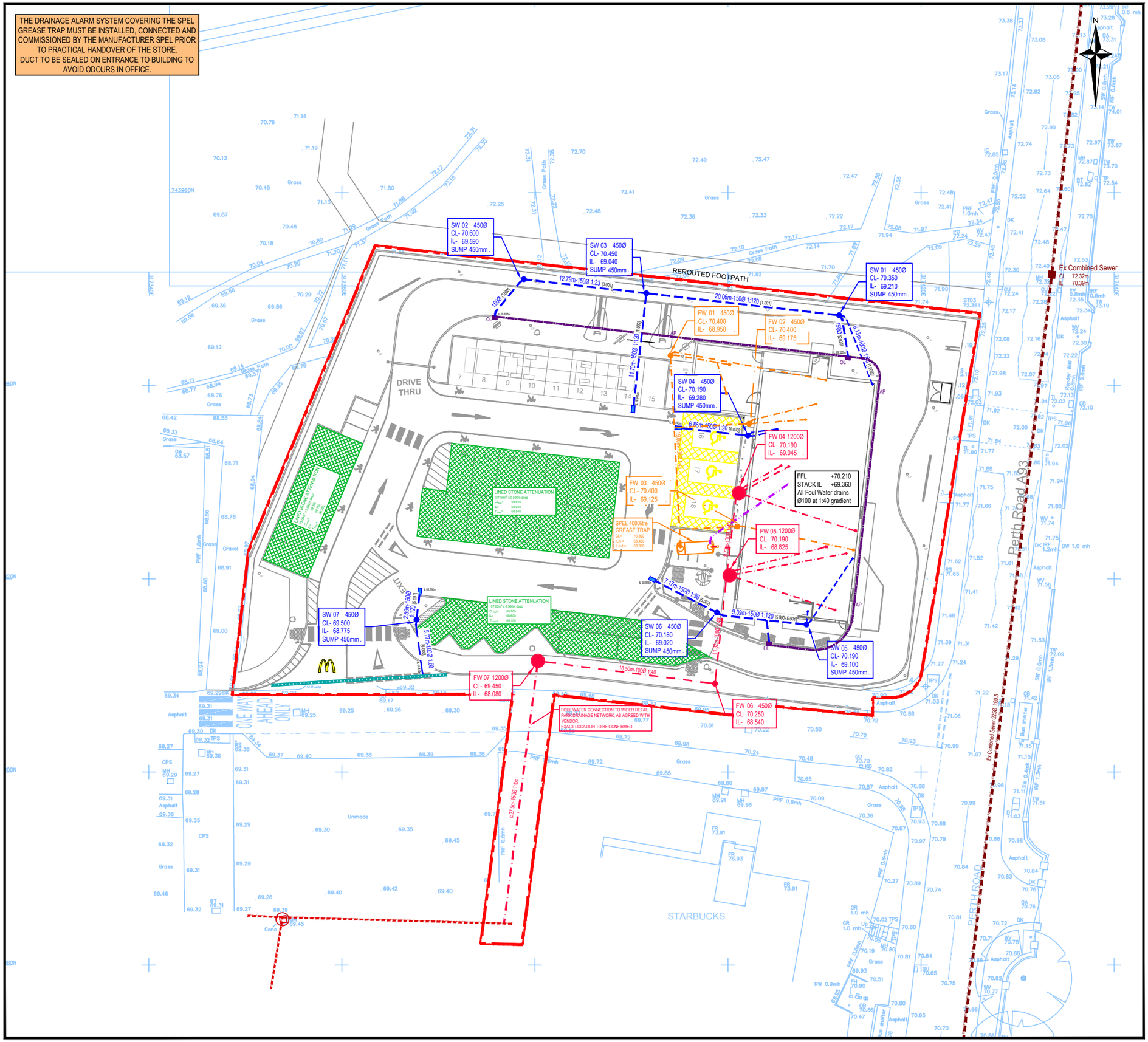
Project : McDONALDS RESTAURANT
PERTH ROAD, BLAIRGOWRIE
PH10 6FW [ST 2473]

Title : EXISTING AND PROPOSED IMPERMEABLE AREAS

Engineer : KJ | Date : AUGUST 2024
Director : HBG | Scale : NTS @ A1
Status : INFORMATION

Drawing No. 4240368-SK04 | Rev I5

THE DRAINAGE ALARM SYSTEM COVERING THE SPEL GREASE TRAP MUST BE INSTALLED, CONNECTED AND COMMISSIONED BY THE MANUFACTURER SPEL PRIOR TO PRACTICAL HANDOVER OF THE STORE.
DUCT TO BE SEALED ON ENTRANCE TO BUILDING TO AVOID ODOURS IN OFFICE.



LEGEND

- SITE BOUNDARY
- EXISTING SURVEY
- PROPOSED SITE LAYOUT
- DRAINAGE LABEL
- PROPOSED SURFACE WATER DRAINAGE PIPEWORK SHOWING LENGTH, PIPE DIAMETER, GRADE AND PIPE NUMBER
- PROPOSED BUILDING SURFACE WATER CATCHPIT CHAMBER 450mm / 600mm DIAMETER
- SURFACE WATER DIFFUSER
- PROPOSED FOUL WATER DRAINAGE PIPEWORK SHOWING LENGTH, PIPE DIAMETER AND GRADE
- PROPOSED BUILDING FOUL WATER DRAINAGE MANHOLE / INSPECTION CHAMBER
- ACO KERBDRAIN 305 DRAINAGE KERB WITH ACCESS POINT AND OUTLETS
- ALARMED 2OOO litre SPEL GREASE TRAP WITH HARD WIRE TO MANAGERS OFFICE
- 110Ø DUCTS FOR GREASE TRAP/ CABLES TO INCOMING ELECTRICS CUPBOARD
- SVP SOIL VENT PIPE (WC)
- SS STUB STACK PIPE(DP)
- G FLOOR GULLY
- PERMEABLE ASPHALT CAR PARKING SPACES
- ACO MONO DRAIN PD100D U.N.O 10.0 DRAINAGE CHANNEL (BLACK)
- EXISTING RETAIL PARK FOUL WATER SEWER
- EXISTING PUBLIC COMBINED WATER SEWER

NOTES

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5. ALL DRAINAGE TO BE INSTALLED TO THE SCOTTISH TECHNICAL HANDBOOK.
6. ALL DRAINAGE TO BS8582:2013 - CODE OF PRACTICE FOR SURFACE WATER MANAGEMENT FOR DEVELOPMENT SITES.
7. BUILDING INSPECTOR TO INSPECT ALL FOUL DRAINAGE INSTALLATION.
8. **ALL DRAINAGE ALARM SYSTEMS COVERING GREASE TRAPS AND TREATMENT UNITS MUST BE INSTALLED, CONNECTED AND COMMISSIONED BY THE GROUNDWORK CONTRACTOR PRIOR TO PRACTICAL HANDOVER OF THE STORE.**

FOR INFORMATION ONLY

FIGURE 5

Rev.	Description	Date	By	Chkd
I5	FURTHER UPDATE TO SITE LAYOUT	07.07.25	KJ	HBG
I4	BUILDING TYPE AND SITE LAYOUT UPDATED	20.06.25	KJ	HBG
I3	SITE LAYOUT UPDATED	07.02.25	KJ	HBG
I2	FOUL WATER OFF-SITE CONNECTION TO RETAIL PARK UPDATED	08.11.24	KJ	HBG
I1	ISSUED FOR PLANNING	16.09.24	KJ	HBG

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Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client : McDonald's RESTAURANT

Project : McDONALDS RESTAURANT
PERTH ROAD, BLAIRGOWRIE
PH10 6FW [ST 2473]

Title : PROPOSED DRAINAGE LAYOUT

Engineer : KJ | Date : AUGUST 2024

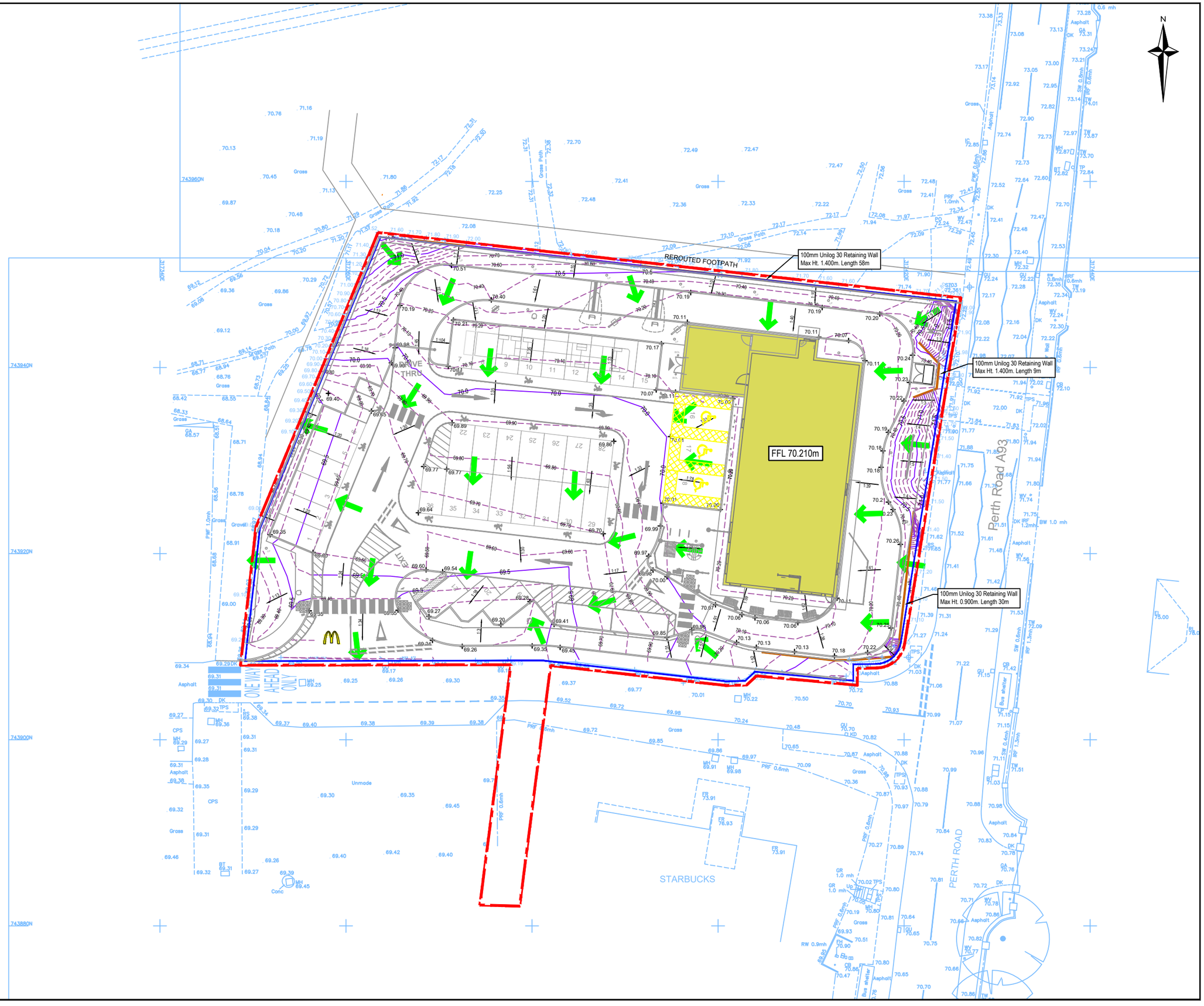
Director : HBG | Scale : 1:200 @ A1

Status : INFORMATION

Drawing No. 4240368-SK06 | Rev I5

PROPOSED DRAINAGE LAYOUT
Scale 1:200

0m 1m 2m 3m 4m 5m 10m 20m
Scale 1:200 @ A1



PROPOSED LEVELS LAYOUT

Scale 1:200

NOTES

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KEY

- SITE BOUNDARY
- TOPOGRAPHICAL SURVEY
- PROPOSED SITE LAYOUT
- PROPOSED FINISHED LEVELS
- OVERLAND FLOW ROUTE

FOR INFORMATION ONLY

FIGURE 6

Rev.	Description	Date	By	Chkd
I5	FURTHER UPDATE TO SITE LAYOUT	07.07.25	KJ	HBG
I4	BUILDING TYPE AND SITE LAYOUT UPDATED	20.06.25	KJ	HBG
I3	FURTHER UPDATE TO SITE LAYOUT	07.02.25	KJ	HBG
I2	SITE LAYOUT UPDATED	13.12.24	KJ	HBG
I1	ISSUED FOR PLANNING	16.09.24	KJ	--

Glanville
Survey > Plan > Engineer
Civil Engineering | Highways Engineering
Structural Engineering | Building Surveying
Transport Planning | Geomatics
Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client : McDonald's RESTAURANT

Project : McDONALDS RESTAURANT
PERTH ROAD, BLAIRGOWRIE
PH10 6FW [ST 2473]

Title : PROPOSED LEVELS AND OVERLAND FLOW ROUTES

Engineer : KJ | Date : AUGUST 2024

Director : HBG | Scale : 1:200 @ A1

Status : INFORMATION

Drawing No. 4240368-SK05 | Rev I5

Appendices

Appendix A

Geotechnical Investigation

Southern Testing
Environmental & Geotechnical

ST Consult
Environmental & Geotechnical

Phase I Contaminative Uses Desk Study

Project Name: McDonalds Blairgowrie

Location: Perth Road, Blairgowrie, Perthshire and Kinross, PH10 6UZ

Client: Glanville Consultants (on behalf of McDonalds)

Project ID: J15761-DS

Report Date: 10 July 2024

Report Issue: 1

SUMMARY

The site is approximately 1.1km to the southwest of Blairgowrie, to the west of Perth Road, and extends to approximately 0.3Ha. The site currently comprises an undeveloped parcel of land and it is proposed to redevelop the site with a new McDonald's restaurant, together with associated car parking and a drive-thru lane, with very limited areas of soft-landscaping around some of the periphery.

Geological records indicate the site to be underlain by the superficial Glaciofluvial Deposits (Gravel, Sand and Silt) over the Teith Sandstone Formation (Sandstone).

A desk study was carried out and indicates that the site has a history of agricultural/rural use and has for most of its time been located on the outskirts of Blairgowrie town, which has since begun to encroach close to the site.

An Unexploded Ordnance (UXO) risk assessment was undertaken by a specialist subcontractor as part of this desk study report. The findings of this assessment has concluded a relatively low risk and states that specialist UXO supervision or works are not required prior to ground investigation/construction works. The assessment was made with specific regard to the proposed investigation works/site works and its conclusions may not be appropriate to other activities.

The investigation was conducted and this report has been prepared for the sole internal use and reliance of McDonalds and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Southern Testing Laboratories Ltd. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

The findings within this Desk Study report are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Ltd. believes are reliable. Nevertheless, Southern Testing Laboratories Ltd. cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

The recommendations contained in this report are made in respect of the particular context of the investigation as described in the report and may not be appropriate to alternative development schemes. This report should be considered in its entirety and Southern Testing Laboratories Ltd accepts no responsibility for and excludes liability in respect of any omission or alteration made by others, and any use of the report for any purpose other than that for which it was produced.

Author	M Sadler BSc (Hons) MSc FGS	
Check / Review	J N Race BSc MSc CGeol FGS	
	C Lennard BEng (Hons)	

For and on behalf of Southern Testing Laboratories Limited

DOCUMENT HISTORY AND STATUS

Issue No.	Date	Purpose or Status	Author	Check / Review
1	01/07/2024	First issue	MS	JNR/CL

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APPENDIX C
Phase 1 Desk Study – Environmental Database Search Results & Mapping

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Contaminated Land Risk Assessment Methodology

APPENDIX E
UXO Risk Assessment

A INTRODUCTION

1 Authority

Our authority for carrying out this work is contained in an email confirmation by Mr H George of Glanville Consultants Ltd. in reference to Southern Testing Quote No. Q24-0825-1.

2 Location

The site is located approximately 1.1km to the southwest of Blairgowrie Town Centre, on the west side of Perth Road, as indicated on Figure 1 within Appendix A. The approximate National Grid Reference of the site is NO 17403 43929.

3 Proposed Construction

It is proposed to construct a new McDonald's restaurant on site, together with associated car parking and a drive-thru lane, with very limited areas of soft-landscaping around some of the periphery. A feasibility layout has been provided as per drawing 13638_AEW_2473_F002, Rev D included in Appendix A.

In the absence of an applicable generic land use, for the purposes of the contamination risk assessment in relation to the proposed development, a combined Public Open Space (Park) and commercial/Industrial classification has been used in the CLEA Model Ref [1]/ C4SL Report Ref [2].

The gas sensitivity of the proposed development is rated as Low CIRIA C665 Ref [3].

4 Object

This is a Phase 1 Desk Study only.

The object of this report was to review the historic and cotemporary use of the site and surrounding area, and assess the likely nature and extent of any soil, groundwater and soil gas contamination, based on desk study information only.

5 Scope

This report presents our desk study findings and our interpretation of these data. No intrusive investigation has been carried out by ourselves to date.

The Desk Study has been completed with reference to BS 5930 Ref [4] and BS 10175 Ref [5].

The findings and opinions conveyed via this desk study are based on information obtained from a variety of sources as detailed within this report, and which Southern Testing Laboratories Ltd. believes are reliable. Nevertheless, Southern Testing Laboratories Ltd. cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

This desk study was conducted and this report has been prepared for the sole internal use and reliance of McDonalds and their appointed engineers. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Southern Testing Laboratories Ltd. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

The recommendations contained in this report may not be appropriate to alternative development schemes.

B DESK STUDY AND WALKOVER SURVEY

6 Sources

A desk study has been carried out. Reference has been made to the following information sources.

- Online Geological Maps Ref [6] & Ref [7]
- Online Hydrogeological Maps Ref [8]
- Aerial Photographs
- Historical Ordnance Survey Maps
- Environmental Databases
- BGS Online Historical Borehole Records Ref [9]
- Search on Local Authority Planning Portal for planning history
- Scottish Environmental Protection Agency (SEPA) Online Portal
- Gov.UK Website Flood Risk Ref [10]
- UK Radon Ref [11] and BRE Radon Ref [12]
- Google Earth (for old aerial photographs)

The environmental databases search report compiled for this desk study contains site-specific environmental data drawn from data sets that comprise publicly available information together with data from third parties, some of which is under review. Accordingly, Southern Testing Laboratories Limited does not warrant its accuracy, reliability or completeness.

The full report is included in Appendix B and C, a summary of the salient features is included in the following sections of this report.

6.1 Geology

The British Geological Survey Map No. 56 (Scotland - Blairgowrie), and BGS online mapping indicates that the site geology consists of Superficial Glaciofluvial Deposits (Gravel, Sand and Silt) over the Teith Sandstone Formation (Sandstone).

6.1.1 Glaciofluvial Deposits

The deposits comprise sediments transported and deposited by glacial meltwater, either sub-glacially, en-glacially, supra-glacially or downstream of glaciers via meltwater channels and/or glacial outwash events. Deposits are formed via number of processes and therefore vary greatly in depth. Sediments commonly comprise of sand and gravel, with moderate sorting and bedding. Fines including clay have generally been washed out leaving the sand and gravel which is commonly non-cohesive and highly permeable, a good bearing capacity and low settlement is common. However, lenses of silt, clay or organic material can be locally present.

6.1.2 Teith Sandstone Formation

The Teith Sandstone Formation comprises reddish-brown, grey, purple and brown, cross-bedded, fine to medium-grained, sandstone locally interbedded with siltstone and mudstone intercalations (Locally red mudstones with traces of roots also occur towards the top of the formation), conglomerate members and interbeds are common in the Highland Border area. Mudstone and siltstone rip-up clasts are locally abundant, especially near the base of individual sedimentary cycles.

6.2 Historical Borehole Records

A search of historic exploratory hole records, both from the Local Authority planning portal and the online British Geological Survey database [9], revealed several records within the near vicinity of this site, all from the BGS database. These are summarised below.

A previous site investigation report undertaken by Bayne Stevenson Associates Ltd dated 26th October 2018 was obtained from the planning portal for the wider site area (also see Section 6.13). However, one cable percussive borehole and two trial pits, listed below, were determined to lie within the boundaries of the subject site. The soils in this area comprise sands and gravels over gravelly clay to depths of 7.20m, at which point the borehole refused on either a boulder or the bedrock.

From the BGS database a series of shallow boreholes and trial pits relating to development of Blairgowrie School approximately 100m east of the site reveal the soils to consist of sandy gravels of weathered rock and gravelly sands to depths of 11.50m in this area.

BH Reference	Final Depth (mbgl)	Distance from site (m) & Direction	Remarks
CP13	7.20	On site	**0 – 0.40m** - Topsoil **0.40 – 2.20m** - Medium dense gravelly fine to coarse SAND **2.20 – 4.50m** – Medium dense silty SAND **4.50 – 7.20m** – Firm sandy gravelly CLAY with cobbles *Borehole refusal on bedrock or boulder* *Water strike at 2.40m rising to 2.0m in 20 minutes during drilling*
TP13	3.5	On site	**0 – 0.40m** - Topsoil **0.40 – 1.50m** – Silty SAND and GRAVEL **1.50 – 3.50m** – Silty gravelly SAND
TP14	3.5	On site	**0 – 0.35m** - Topsoil **0.35 – 1.40m** – Silty SAND and GRAVEL **1.40 – 3.50m** – Silty gravelly SAND
NO14SE5	11.5	100m E	**0 – 0.30m** - Topsoil **0.30 – 2.20m** - Slightly clayey very gravelly SAND **2.20 – 11.50m** – Medium dense to dense SANDs *SI relating to Blairgowrie School. No groundwater encountered.*
NO14SE15	1.5	110m NE	**0 – 1.50m** – Sandy GRAVEL of basalt, granite, quartz and sandstone *SI relating to Blairgowrie School. No groundwater encountered.*
NO14SE13	4.5	130m E	**0 – 0.10m** – Topsoil **0.10 – 1.50m** – Sandy GRAVEL of basalt, granite and sandstone **1.50 – 4.50m** – Slightly gravelly SAND. Gravel of basalt *SI relating to Blairgowrie School. No groundwater encountered.*

6.3 Geological Hazards and Mining Activities

Data from various sources relating to potential geological hazards at the site are summarised below. The Hazard Potentials listed for the BGS data are as presented in the Envirocheck report, derived from various generic BGS sources, **which are not considered as site-specific**. It is important that this information is considered in context of the actual site topography, ground conditions encountered during future investigation, and development proposals.

Data Source	Hazard	Hazard Potential to Site	Remarks
BGS	Potential for Collapsible Ground Stability Hazard	Very low	
	Potential for Compressible Ground Stability Hazard	No Hazard (on site)	39m to the northwest the Envirocheck report records a Moderate Hazard, within an area mapped as Alluvium on BGS records
	Potential for Ground Dissolution Stability Hazard	None	
	Potential for Landslide Ground Stability Hazard	Very low	
	Potential for Running Sand Ground Stability Hazard	Low	A Low to Moderate hazard is considered more appropriate, given the mapped presence of superficial sand/gravel (subject to the actual depth to groundwater).
	Potential for Swelling or Shrinkage Clay Ground Stability Hazard	Very low	
	Shallow Mining Hazard	N	
	BGS recorded mineral site	N	No *BGS Recorded Mineral Sites* within 250m of the site.
PBA	Natural & Mining Cavities	N	

6.4 Radon Risk

With reference to the Envirocheck report, UK Radon Ref [11] and BRE Radon Ref [12] guidance: no radon protection is required on this site.

6.5 Hydrology and Hydrogeology

Data from the SEPA and other information relating to controlled waters is summarised below.

Data		Remarks	Possible Hazard to/from Site (Y/ N)
Aquifer Designations*	Superficial Deposits	The superficial deposits on site are classified as Moderate to High Productivity with Intergranular flow.	**Y**
	Bedrock	The bedrock strata on site is classified as Moderate to Very High Productivity with Fracture flow (with minor Intergranular flow).	**Y**
Groundwater Classification*		The underlying bedrock (part of the Strathmore Group) is classified as a Moderately Productive aquifer where flow is virtually all through fractures and other discontinuities.	**Y**

Data		Remarks	Possible Hazard to/from Site (Y/ N)
Abstractions	Surface Water	The Envirocheck datasheet lists no *Surface Water Abstractions* from surface water within 1000m	N
	Groundwater	The Envirocheck datasheet lists no *Groundwater Abstractions* from surface water within 1000m	N
Source Protection Zones		The site is not mapped to lie within a groundwater Source Protection Zone (SPZ).	N
Surface Watercourses		The nearest record is located 92m southwest for an Inland River which forms part of the catchment for the River Tay.	N
Groundwater Flood Risk**		Limited potential for groundwater flooding to occur.	**Y**
Surface Water Flood Risk**		The site is not shown within an area mapped as being at risk. However immediately west, within the ancient woodland is mapped as a high risk on the SEPA online portal.	**Y**
Marine / Fluvial Flood Risk**		The site is not shown within an area mapped as being at risk.	N
Reservoir Flood Risk**		The site is not shown within an area mapped as being at risk.	N
Discharge Consents		The Envirocheck datasheet lists no *Discharge Consents* within 1000m of the site.	N

** Based on data from Scotland's Environment website (https://map.environment.gov.scot/sewebmap/)*

*** These sections are provided for information only, this report does not constitute a formal flood risk assessment and specialist advice should be sought in relation to potential flooding issues.*

At this stage, the risk to groundwater from the site is considered moderate due to the highly permeable glaciofluvial deposits (sands and gravels) over the highly permeable sandstones of the Teith Formation (sandstones). The site is, however, not recorded as being within a source protection zone and no ground or surface water abstractions are recorded within 1km of the site.

6.6 Historical Ordnance Survey Maps

Copy extracts of historical Ordnance Survey plans dating from 1866 to 2024 were obtained and are presented in Appendix H. A summary of the salient features is presented below.

The subject site has remained undeveloped since the earliest available maps (1866) having been fields with a footpath running east-west, across the northern part of the site and Perth Road forming the eastern boundary.

From the first edition maps (1866) the surrounding area predominantly comprised open fields and woodland. The small wooded area west of the site contained two "curling ponds", which are approximately 70m to the west and 120m to the north west. Subsequently, post WWII these both appear to gradually become areas of pond/marsh, indicating that they gradually became silted up. The most notable feature of the surrounding area is the large cemetery, approximately 30m to the southeast, which first appeared on the 1901 mapping and remains present today. It appears that the burials within the west of the cemetery, ie. closest to the subject site, are the oldest and, therefore, over 100 years old.

Gradual residential development (predominantly low-density) occurred in the local area on the subsequent maps, with properties to the east of Perth Road from around WWII and slightly more significant development from the 1980/90s. Current street view and OS map records (2024) show a large, new development of a retail park adjacent to the site (south) – see Section 6.7 below.

6.7 Satellite/Aerial and Street View Images

Aerial/satellite images dated 2010-2020 show that the site remained undeveloped/open fields with a footpath in the north. The next image (dated Apr 2021) indicates that a series of archaeological trenches had been undertaken across the subject site and wider area, most likely associated with the forthcoming retail park development (see Section 6.13). The latest available image (dated July 2021) shows the commencement of the construction of the retail park to the south, with some ground disturbance/soil deposited on the subject site.

Street view images also confirm that the site was vacant on the images dated 2009-2020 and by Sept 2021 construction was underway on the retail park to the south with a stockpile of soil placed in approximately the centre of the subject site at this time. See Section 6.12 for latest streetview information.

6.8 Environmental Databases

Data Source	Distance (m)	Direction	Details	Possible Hazard to Site (Y/N)
Historical Industrial Land Use	17	SE	One record for a cemetery/graveyard.	Y
Current Industrial Land Use	59 - 174	S	The Envirocheck datasheet lists three *Contemporary Trade Directory Entries* with 250m of the site. The two active records are 59m northeast for Plant & Machinery Repairs and 175m northwest for garage services (Auto Repair & Service). An inactive record 130m north is for garage services. None of these are considered a significant potential risk to the subject site.	N
Current and Historical Landfills	The Envirocheck datasheet lists no *Current of Historical Landfills* within 250m of the site.			N
Fuel Sites	125	N	The Envirocheck datasheet lists one *Fuel Station Entry* within 250m of the site. This is an obsolete record for a Motor Engineers. A previous report undertaken in 2018 by Bayne Stevenson Associates Ltd dated 26th October 2018 obtained A Petroleum Officers report from 2015 indicating that four 1000 gallon and one 3000 gallon underground tanks are present on this site, used for petrol & diesel.	N
Pollution Incidents	The Envirocheck datasheet lists no *Pollution Incidents* within 250m of the site.			N
IPPC/LAPPC Authorisations	The Envirocheck datasheet lists no *IPPC/LAPPC Authorisations* within 250m of the site.			N
Hazardous Substances Consents	The Envirocheck datasheet lists no *Hazardous Substances Consents* within 250m of the site.			N

6.9 Planning Application History

Perth and Kinross Council planning application online mapping portal contains no records of any planning applications for this individual parcel of land. Applications for development of the area west of Perth Road (including the subject site) have been approved for development, both commercial and residential.

6.10 Ground Gas Risk

No significant potential sources of land gas have been identified during this desk study.

6.11 UXO Risk Management

A preliminary UXO risk assessment has been prepared by 1st Line Defence. The assessment was made with specific regard to the proposed investigation works and its conclusions may not be appropriate to other activities.

The findings of this assessment has concluded a relatively low risk and states that specialist UXO supervision or works are not required prior to ground investigation/construction works.

The possibility of unexploded ordnance (UXO) being encountered on a site falls within the category of a low risk and should be addressed as a legal duty under the Construction (Design and Management) Regulations by the Client as early as possible in a project.

The CIRIA publication C681 Ref [13] has been developed to provide a consistent framework for the management of potential risks posed by UXO during site investigation and groundwork phases of construction. The process adopts a tiered approach, divided into four distinct stages; Preliminary risk assessment, Detailed risk assessment, Risk mitigation and Implementation.

6.12 Site Description

At this stage, no formal walkover survey has been undertaken as part of this desk study report, however, the following description has been composed utilising reference to various online sources including satellite and 'Streetview' imagery (dated April 2023).

The site is an approximately rectangular parcel of land measuring about 70×45m.

The above sources indicate that the site comprises a vacant parcel of land, with a small area of compacted granular material on the surface (near the entrance in the southeast) with the remainder apparently comprising soil/low vegetation and no/very little residual soil remaining from the adjacent retail park construction.

The site is bounded to the west and north by open undeveloped grassland and woodland, to the east by Perth Road which runs north-south (beyond which are residential properties and a cemetery to the southeast) and to the south is an access road and modern retail park.

The topography of the site is generally flat and level, which appears to gently slopes downwards towards the west/southwest site. No drainage can be observed within the site boundaries, however it is noted that two attenuation ponds are present off-site to the west of the subject site associated with drainage relating to the retail park south of the site.

No notable vegetation is noted on site other than short-medium rough grass patches. The most notable vegetation is approximately 60m west in the form of a large woodland.

The site is situated on the edge of a mixed residential/retail/rural area.

6.13 Other Information Sources

6.13.1 Bayne Stevenson Associates Ltd Report 2018

A site investigation report/contamination risk assessment was undertaken for a larger proposed development site (Westpark); which included this subject site in 2018. No made ground was identified within the site area during this investigation. The findings of the geoenvironmental screening results indicated no concentrations of contaminants across the site as above the assessment criteria for residential with home-grown produce end use. An enquiry with the local Petroleum Officer in 2015 identified a garage site 125m to the north containing three 1000L and one 3000L underground tanks previously used for petrol & diesel distribution, which have are no longer in use. The desk study also identified the infilled pond/marsh area to the northwest of the site. It has also been noted that gas monitoring was not possible within the lower lying areas within this study area due to waterlogged conditions.

C PRELIMINARY SITE MODELS

7 Conceptual Site Model

In the context of this report, the conceptual site model (CSM) summarises the potential pollutant linkages identified for the site and forms the basis of the risk assessment for the site. The preliminary model comprises the potential sources of contamination, receptors that could be harmed and exposure pathways identified from the desk study and walkover survey. These potential linkages form the basis upon which the investigation is designed and reported, and are presented in the tables below and further information about the risk classification scheme is included within Appendix D, with reference to CIRIA C552 *'Contaminated Land Risk Assessment – a guide to good practice.*

A tabulated version of the preliminary CSM based on the desk study and observation is present in Table 16.3.

8 Potential Sources of Contamination

Based on the available desk study information, the site has a history of agricultural/rural use and has for most of its time been located on the outskirts of Blairgowrie town, which has since begun to encroach close to the site.

Only limited potentially contaminative uses have been identified on site, being potential made ground associated with recent construction works to the south and historical agricultural usage.

8.1 On-Site Sources

Potential Source	Potential Contaminants
Made Ground	Unknown composition but may include elevated Heavy Metals, PAH's, Petroleum Hydrocarbons
Agricultural Land Use	Pesticides & Herbicides

The site has a history of agricultural use and most recently, since around 2021, the site appears to have been subject to some archaeological excavation and utilised (for materials stockpiling/storage) as part of the construction of the adjacent retail park. Therefore, there is a possibility that some residual pesticide/herbicide contamination may be present (if historically used) and some made ground/reworked materials could still be present within this area following the site usage as a compound/storage during construction of the retail park. The potential risk to the subject site is considered Very Low to Low given that the proposed development comprises almost entirely building/ hardstanding areas (ie. eliminating a potential pathway to end users).

8.2 Off-Site Sources

Off-site, no significant potential sources of contamination have been identified which may affect the subject site.

Whilst the some nearby off-site historic land uses are acknowledged (ie. the cemetery 30m to the southwest and fuel filling station 125m to the north) the risk of potential contamination to the subject site is considered negligible from these sources, given the distance/age and the proposed development comprises almost entirely building/ hardstanding areas (ie. eliminating a potential pathway to end users).

8.3 Relevant Pollution Linages

Receptors	Likely hazard to Site
Human Heath	
• Construction Workers	• Dermal Contact with soil or dust. • Ingestion of soil and/ or dust. • Inhalation of soil and/ or dust. • Migration & accumulation of ground gases in enclosed spaces leading to inhalation or explosion.
• Future Site Users (restaurant staff and customers)	
• Intrusive Maintenance Workers	
Controlled Water	
• High Permeability Glaciofluvial Deposits & underlying permeable sandstone	• Very Low
Property	
• Underground Utilities	• Direct Contact. • Migration & accumulation of ground gases in enclosed spaces leading fire or explosion.
• Building Structures	

8.4 Preliminary Conceptual Site Model

The table below assess the risk for the possible potential pollutant linkages that could exist during, and following, the proposed development works. This risk estimation assumes no mitigation has been undertaken.

Source		Pathway	Potential Receptor		Probability	Consequence	Risk Category	Explanation
On site Sources of Contamination in Section 8.1*	**Affects Soils:** Metals, petroleum hydrocarbons, Pesticides & Herbicides	**Inhalation, Ingestion Dermal Contact & Plant uptake**	**Humans**	Future Site Workers and Maintenance workers	*Unlikely*	*Mild*	*Low*	Limited potential sources of on-site contamination have been identified, associated with the recent construction works (ie. the potential for made ground) and past agricultural use. The proposed commercial site usage does somewhat mitigate the risk to the end users, however.
				Construction Workers	*Low Likelihood*	*Mild*	*Low*	Exposure to maintenance and construction workers can be mitigated by the use of appropriate PPE and maintaining good hygiene levels.
		Run-Off Leaching Direct Contact	**Controlled Waters**	Groundwater – High permeability deposits	*Low Likelihood*	*Mild*	*Low*	There are no groundwater abstraction licenses recorded nearby. However, both the superficial deposits and bedrock strata are designated as moderately to highly permeable aquifers.
				Surface water - None	--	--	*n/a*	There are no surface watercourses near enough to site to be considered a risk.
		Direct Contact	**Property**	**Infrastructure -** Water Supply Pipes	*Unlikely*	*Minor*	*Very Low*	Organic contamination (if present) may affect pipes is possible, but the pipe could be upgraded to mitigate the risk – this is common on Brownfield sites.
				Structures - Substructures/ foundations	*Unlikely*	*Minor*	*Very Low*	Potential impact on buried structures with corrosive contaminants in soil and groundwater.

	Very Low		Low		Low/Moderate		Moderate		High		Very High

*No **off site Sources of potential contamination have been identified. See section 8.2.**

Conceptual Site Model Key:

PROBABILITY	
Classification	**Definition**
Unlikely	Circumstances are such that it is improbably that an event would occur even in the very long term.
Low Likelihood	Circumstances are such that it is by no means certain that an event would occur even over a longer period, and it is less likely in the short term.
Likely	Circumstances are such that such an event is not inevitable, but is possible in the short term and is likely over the long term.
High Likelihood	Circumstances are such that an event appears very likely in t short term or almost inevitable in the long term. or there is already evidence that such an event has occurred.

CONSEQUENCE	
Classification	**Definition**
Minor	• Easily preventable, non-permanent health effect on humans, or no effects. • Minor, low level & localised contamination of onsite soils. • Easily repairable damage to crops/ buildings/property/ infrastructure.
Mild	• Easily preventable, permanent health effects on humans. • Pollution of non-sensitive water resources. • Localised damage to crops/ buildings/property/ infrastructure (on or off site).
Medium	• Medium/ long-term (chronic) risks to human health. • Medium/ long-term risk of pollution of sensitive water resources or ecosystems. • Significant damage to crops/ buildings/ property/ infrastructure (on or off site). • Contamination of off-site soils.
Severe	• Short-term (acute) risk to human health. • Short-term risk of pollution of sensitive water resources or ecosystems. • Catastrophic damage to crops/buildings/infrastructure, including off-site soils.

RISK CLASSIFICATION MATRIX

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High	High	Moderate	Moderate/ Low
	Likely	High	Moderate	Moderate/ Low	Low
	Low Likelihood	Moderate	Moderate/ Low	Low	Very Low
	Unlikely	Moderate/ Low	Low	Very Low	Very Low

RISK CATEGORY	
Category	**Definition & Likely actions required**
Very Low	• Harm to a defined receptor is unlikely, and would be minor at worst. • No liabilities are likely to arise. • Further Investigation is not required at this stage. • Remediation is very unlikely to be required.
Low	• Harm to a defined receptor is possible, but is likely to be mild at worst. • Liabilities could theoretically arise, but are unlikely. • Further investigation is not required at this stage. • Remediation is unlikely to be required.
Moderate	• Harm to a defined receptor is possible, but severe harm is unlikely. • Investigation is likely to be required to clarify the level of potential liability & risk. • Some remediation may be required in the longer term.
High	• Harm to a defined receptor is likely. • The risk, if realised, may result in a substantial liability. • Urgent investigation (if not already undertaken) is likely to be required. • Remediation is likely to be required in the long term, possibly sooner.
Very High	• Severe hard to a defined receptor is very likely, or has already occurred. • The risk is likely to results in a substantial liability. • Urgent investigation (if not already undertaken) is likely to be required. • Urgent remediation is likely to be required.

9 Conclusions and Recommendations

9.1 Risk of Soil Contamination

Based on the available desk study information, there is considered to be a low risk of contamination, particularly given that the proposed development comprises almost entirely of building/hardstanding areas (ie. eliminating a potential pathway to end users).

General laboratory testing of the site soil, to assess the conceptual model as part of a future Phase II site investigation, is recommended to confirm both the suitability for reuse within the proposed development and any remediation strategy (if required).

9.2 Risk of Groundwater Contamination

No significant risk to groundwater has been identified at this stage.

9.3 Risk from Ground Gases

No significant potential sources of land gas have been identified during the desk study process.

Appendix B

Drainage Calculations

Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by:	Kevin Jackson
Site name:	McD
Site location:	Blairgowrie

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013) , the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	56.58005° N
Longitude:	3.34635° W
Reference:	725619230
Date:	Sep 16 2024 12:11

Runoff estimation approach

IH124

Site characteristics

Total site area (ha):	0.251

Methodology

Q_{BAR} estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

Soil characteristics

	Default	Edited
SOIL type:	3	3
HOST class:	N/A	N/A
SPR/SPRHOST:	0.37	0.37

Hydrological characteristics

	Default	Edited
SAAR (mm):	740	740
Hydrological region:	1	1
Growth curve factor 1 year:	0.85	0.85
Growth curve factor 30 years:	1.95	1.95
Growth curve factor 100 years:	2.48	2.48
Growth curve factor 200 years:	2.84	2.84

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates

	Default	Edited

Q_{BAR} (l/s):	0.77	0.77
1 in 1 year (l/s):	0.65	0.65
1 in 30 years (l/s):	1.5	1.5
1 in 100 year (l/s):	1.91	1.91
1 in 200 years (l/s):	2.19	2.19

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement , which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

Design Settings

Rainfall Methodology	FEH-22	Maximum Time of Concentration (mins)	30.00	Preferred Cover Depth (m)	0.800
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0	Include Intermediate Ground	x
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00	Enforce best practice design rules	x
CV	0.950	Connection Type	Level Soffits		
Time of Entry (mins)	6.00	Minimum Backdrop Height (m)	0.200		

Nodes

	Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Manhole Type	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
✓	RWP	0.006	6.00	70.210	Manhole	Adoptable	100	317414.967	743940.150	0.850
✓	Kerb 1	0.018	6.00	70.070	Manhole	Adoptable	150	317412.438	743943.082	0.750
✓	SW 01			70.350	Manhole	Adoptable	450	317411.519	743947.300	1.140
✓	Kerb 2	0.011	6.00	70.400	Manhole	Adoptable	150	317375.863	743947.246	0.770
✓	SW 02			70.600	Manhole	Adoptable	450	317378.841	743951.025	1.010
✓	SW 03			70.450	Manhole	Adoptable	450	317391.547	743949.574	1.410
✓	Diffuser 1			70.030	Manhole	Adoptable	150	317390.146	743937.246	1.085
✓	SW 04	0.012	6.00	70.190	Manhole	Adoptable	450	317402.049	743934.838	0.910
✓	Diffuser 2			70.050	Manhole	Adoptable	150	317394.527	743935.693	1.105
✓	SW 05	0.012	6.00	70.190	Manhole	Adoptable	450	317408.133	743915.269	1.090
✓	Jnctn 1	0.016	6.00	70.200	Sealed Manhole	Adoptable	150	317404.008	743915.718	1.135
✓	SW 06			70.180	Manhole	Adoptable	450	317398.865	743916.503	1.160
✓	Diffuser 3			69.970	Manhole	Adoptable	150	317391.853	743920.102	1.025
✓	Channel 1	0.020	6.00	69.240	Manhole	Adoptable	150	317368.382	743910.042	0.390
✓	SW 07			69.500	Manhole	Adoptable	450	317367.737	743915.761	0.725
✓	Diffuser 4			69.600	Manhole	Adoptable	150	317368.110	743919.041	0.850
✓	Car Park Inf Base	0.142	6.00	69.770	Manhole	Adoptable	150	317370.835	743929.086	1.070
✓	Outfall			69.770	Manhole	Adoptable	1	317368.351	743929.369	1.070

Links (Input)

	Name	US Node	DS Node	Length (m)	ks (mm) / n	Velocity Equation	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	Link Type	T of C (mins)	Rain (mm/hr)
?	1.000	RWP	SW 01	7.938	0.600	Colebrook-White	69.360	69.260	0.100	79.4	100	Circular	6.15	50.0
?	2.000	Kerb 1	SW 01	4.317	0.600	Colebrook-White	69.320	69.210	0.110	39.2	150	Circular	6.04	50.0
?	1.001	SW 01	SW 03	20.101	0.600	Colebrook-White	69.210	69.040	0.170	118.2	150	Circular	6.52	50.0
?	3.000	Kerb 2	SW 02	4.811	0.600	Colebrook-White	69.630	69.590	0.040	120.3	150	Circular	6.09	50.0
✓	3.001	SW 02	SW 03	12.789	0.600	Colebrook-White	69.590	69.040	0.550	23.3	150	Circular	6.19	50.0
?	1.002	SW 03	Diffuser 1	12.407	0.600	Colebrook-White	69.040	68.945	0.095	130.6	150	Circular	6.75	50.0
✓	1.003	Diffuser 1	Car Park Inf Base	20.964	0.600	Colebrook-White	68.945	68.700	0.245	85.6	150	Circular	7.07	50.0
?	4.000	SW 04	Diffuser 2	7.570	0.600	Colebrook-White	69.280	68.945	0.335	22.6	150	Circular	6.06	50.0
✓	4.001	Diffuser 2	Car Park Inf Base	24.596	0.600	Colebrook-White	68.945	68.700	0.245	100.4	150	Circular	6.47	50.0
?	5.000	SW 05	Jnctn 1	4.149	0.600	Colebrook-White	69.100	69.065	0.035	120.0	150	Circular	6.08	50.0
?	5.001	Jnctn 1	SW 06	5.203	0.600	Colebrook-White	69.065	69.020	0.045	115.6	150	Circular	6.17	50.0
?	5.002	SW 06	Diffuser 3	7.882	0.600	Colebrook-White	69.020	68.945	0.075	105.1	150	Circular	6.30	50.0
✓	5.003	Diffuser 3	Car Park Inf Base	22.858	0.600	Colebrook-White	68.945	68.700	0.245	93.3	150	Circular	6.67	50.0
?	6.000	Channel 1	SW 07	5.755	0.600	Colebrook-White	68.850	68.775	0.075	76.7	100	Circular	6.11	50.0
?	6.001	SW 07	Diffuser 4	3.301	0.600	Colebrook-White	68.775	68.750	0.025	132.0	150	Circular	6.17	50.0
?	6.002	Diffuser 4	Car Park Inf Base	10.408	0.600	Colebrook-White	68.750	68.700	0.050	208.2	150	Circular	6.42	50.0
?	1.004	Car Park Inf Base	Outfall	2.500	0.600	Colebrook-White	68.700	68.700	0.000	0.0	50	Circular	7.11	50.0

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	7.938	79.4	100	Circular	70.210	69.360	0.750	70.350	69.260	0.990
2.000	4.317	39.2	150	Circular	70.070	69.320	0.600	70.350	69.210	0.990
1.001	20.101	118.2	150	Circular	70.350	69.210	0.990	70.450	69.040	1.260
3.000	4.811	120.3	150	Circular	70.400	69.630	0.620	70.600	69.590	0.860
3.001	12.789	23.3	150	Circular	70.600	69.590	0.860	70.450	69.040	1.260
1.002	12.407	130.6	150	Circular	70.450	69.040	1.260	70.030	68.945	0.935
1.003	20.964	85.6	150	Circular	70.030	68.945	0.935	69.770	68.700	0.920
4.000	7.570	22.6	150	Circular	70.190	69.280	0.760	70.050	68.945	0.955
4.001	24.596	100.4	150	Circular	70.050	68.945	0.955	69.770	68.700	0.920
5.000	4.149	120.0	150	Circular	70.190	69.100	0.940	70.200	69.065	0.985
5.001	5.203	115.6	150	Circular	70.200	69.065	0.985	70.180	69.020	1.010
5.002	7.882	105.1	150	Circular	70.180	69.020	1.010	69.970	68.945	0.875

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	RWP	100	Manhole	Adoptable	SW 01	450	Manhole	Adoptable
2.000	Kerb 1	150	Manhole	Adoptable	SW 01	450	Manhole	Adoptable
1.001	SW 01	450	Manhole	Adoptable	SW 03	450	Manhole	Adoptable
3.000	Kerb 2	150	Manhole	Adoptable	SW 02	450	Manhole	Adoptable
3.001	SW 02	450	Manhole	Adoptable	SW 03	450	Manhole	Adoptable
1.002	SW 03	450	Manhole	Adoptable	Diffuser 1	150	Manhole	Adoptable
1.003	Diffuser 1	150	Manhole	Adoptable	Car Park Inf Base	150	Manhole	Adoptable
4.000	SW 04	450	Manhole	Adoptable	Diffuser 2	150	Manhole	Adoptable
4.001	Diffuser 2	150	Manhole	Adoptable	Car Park Inf Base	150	Manhole	Adoptable
5.000	SW 05	450	Manhole	Adoptable	Jnctn 1	150	Sealed Manhole	Adoptable
5.001	Jnctn 1	150	Sealed Manhole	Adoptable	SW 06	450	Manhole	Adoptable
5.002	SW 06	450	Manhole	Adoptable	Diffuser 3	150	Manhole	Adoptable

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Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
5.003	22.858	93.3	150	Circular	69.970	68.945	0.875	69.770	68.700	0.920
6.000	5.755	76.7	100	Circular	69.240	68.850	0.290	69.500	68.775	0.625
6.001	3.301	132.0	150	Circular	69.500	68.775	0.575	69.600	68.750	0.700
6.002	10.408	208.2	150	Circular	69.600	68.750	0.700	69.770	68.700	0.920
1.004	2.500	0.0	50	Circular	69.770	68.700	1.020	69.770	68.700	1.020

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
5.003	Diffuser 3	150	Manhole	Adoptable	Car Park Inf Base	150	Manhole	Adoptable
6.000	Channel 1	150	Manhole	Adoptable	SW 07	450	Manhole	Adoptable
6.001	SW 07	450	Manhole	Adoptable	Diffuser 4	150	Manhole	Adoptable
6.002	Diffuser 4	150	Manhole	Adoptable	Car Park Inf Base	150	Manhole	Adoptable
1.004	Car Park Inf Base	150	Manhole	Adoptable	Outfall	1	Manhole	Adoptable

Simulation Settings

Rainfall Methodology	FEH-22	Winter CV	0.950	Drain Down Time (mins)	240	Check Discharge Rate(s)	x
Rainfall Events	Singular	Analysis Speed	Normal	Additional Storage (m³/ha)	20.0	Check Discharge Volume	x
Summer CV	0.950	Skip Steady State	x	Starting Level (m)			

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	39	0	0
2	0	0	0	200	39	0	0
30	0	0	0				

Node Car Park Inf Base Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Width (m)	5.000	Depth (m)	0.600
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	68.800	Length (m)	66.400	Inf Depth (m)	
Safety Factor	2.0	Time to half empty (mins)	0	Slope (1:X)	300.0		

Node Car Park Inf Base Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.10800	Safety Factor	2.0	Invert Level (m)	68.700
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	726.0	726.0	0.100	726.0	735.6

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	67.640	19.140	2 year 60 minute summer	44.216	11.685
1 year 15 minute winter	47.467	19.140	2 year 60 minute winter	29.376	11.685
1 year 30 minute summer	44.422	12.570	2 year 120 minute summer	29.566	7.813
1 year 30 minute winter	31.173	12.570	2 year 120 minute winter	19.643	7.813
1 year 60 minute summer	30.908	8.168	2 year 180 minute summer	23.630	6.081
1 year 60 minute winter	20.535	8.168	2 year 180 minute winter	15.360	6.081
1 year 120 minute summer	22.027	5.821	2 year 240 minute summer	19.165	5.065
1 year 120 minute winter	14.634	5.821	2 year 240 minute winter	12.733	5.065
1 year 180 minute summer	18.113	4.661	2 year 360 minute summer	15.129	3.893
1 year 180 minute winter	11.774	4.661	2 year 360 minute winter	9.834	3.893
1 year 240 minute summer	14.947	3.950	2 year 480 minute summer	12.202	3.225
1 year 240 minute winter	9.931	3.950	2 year 480 minute winter	8.106	3.225
1 year 360 minute summer	12.047	3.100	2 year 600 minute summer	10.165	2.780
1 year 360 minute winter	7.831	3.100	2 year 600 minute winter	6.946	2.780
1 year 480 minute summer	9.824	2.596	2 year 720 minute summer	9.178	2.460
1 year 480 minute winter	6.527	2.596	2 year 720 minute winter	6.168	2.460
1 year 600 minute summer	8.245	2.255	2 year 960 minute summer	7.667	2.019
1 year 600 minute winter	5.633	2.255	2 year 960 minute winter	5.079	2.019
1 year 720 minute summer	7.486	2.006	2 year 1440 minute summer	5.680	1.522
1 year 720 minute winter	5.031	2.006	2 year 1440 minute winter	3.817	1.522
1 year 960 minute summer	6.311	1.662	30 year 15 minute summer	236.304	66.866
1 year 960 minute winter	4.181	1.662	30 year 15 minute winter	165.828	66.866
1 year 1440 minute summer	4.720	1.265	30 year 30 minute summer	160.304	45.360
1 year 1440 minute winter	3.172	1.265	30 year 30 minute winter	112.494	45.360
2 year 15 minute summer	95.675	27.073	30 year 60 minute summer	110.995	29.333
2 year 15 minute winter	67.140	27.073	30 year 60 minute winter	73.743	29.333
2 year 30 minute summer	63.506	17.970	30 year 120 minute summer	66.944	17.691
2 year 30 minute winter	44.565	17.970	30 year 120 minute winter	44.476	17.691

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Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
30 year 180 minute summer	51.320	13.206	100 year +39% CC 600 minute summer	36.335	9.938
30 year 180 minute winter	33.360	13.206	100 year +39% CC 600 minute winter	24.826	9.938
30 year 240 minute summer	40.670	10.748	100 year +39% CC 720 minute summer	32.441	8.694
30 year 240 minute winter	27.020	10.748	100 year +39% CC 720 minute winter	21.802	8.694
30 year 360 minute summer	31.291	8.052	100 year +39% CC 960 minute summer	26.653	7.018
30 year 360 minute winter	20.340	8.052	100 year +39% CC 960 minute winter	17.656	7.018
30 year 480 minute summer	24.852	6.568	100 year +39% CC 1440 minute summer	19.312	5.176
30 year 480 minute winter	16.511	6.568	100 year +39% CC 1440 minute winter	12.979	5.176
30 year 600 minute summer	20.485	5.603	200 year +39% CC 15 minute summer	489.199	138.426
30 year 600 minute winter	13.996	5.603	200 year +39% CC 15 minute winter	343.298	138.426
30 year 720 minute summer	18.345	4.917	200 year +39% CC 30 minute summer	335.811	95.023
30 year 720 minute winter	12.329	4.917	200 year +39% CC 30 minute winter	235.657	95.023
30 year 960 minute summer	15.140	3.987	200 year +39% CC 60 minute summer	232.074	61.330
30 year 960 minute winter	10.029	3.987	200 year +39% CC 60 minute winter	154.185	61.330
30 year 1440 minute summer	11.044	2.960	200 year +39% CC 120 minute summer	138.299	36.548
30 year 1440 minute winter	7.422	2.960	200 year +39% CC 120 minute winter	91.882	36.548
100 year +39% CC 15 minute summer	425.244	120.329	200 year +39% CC 180 minute summer	105.496	27.148
100 year +39% CC 15 minute winter	298.417	120.329	200 year +39% CC 180 minute winter	68.575	27.148
100 year +39% CC 30 minute summer	291.630	82.521	200 year +39% CC 240 minute summer	83.318	22.018
100 year +39% CC 30 minute winter	204.653	82.521	200 year +39% CC 240 minute winter	55.354	22.018
100 year +39% CC 60 minute summer	201.541	53.261	200 year +39% CC 360 minute summer	63.712	16.395
100 year +39% CC 60 minute winter	133.899	53.261	200 year +39% CC 360 minute winter	41.415	16.395
100 year +39% CC 120 minute summer	120.411	31.821	200 year +39% CC 480 minute summer	50.235	13.276
100 year +39% CC 120 minute winter	79.998	31.821	200 year +39% CC 480 minute winter	33.375	13.276
100 year +39% CC 180 minute summer	91.989	23.672	200 year +39% CC 600 minute summer	41.144	11.254
100 year +39% CC 180 minute winter	59.795	23.672	200 year +39% CC 600 minute winter	28.112	11.254
100 year +39% CC 240 minute summer	72.774	19.232	200 year +39% CC 720 minute summer	36.648	9.822
100 year +39% CC 240 minute winter	48.349	19.232	200 year +39% CC 720 minute winter	24.630	9.822
100 year +39% CC 360 minute summer	55.893	14.383	200 year +39% CC 960 minute summer	30.012	7.903
100 year +39% CC 360 minute winter	36.332	14.383	200 year +39% CC 960 minute winter	19.881	7.903
100 year +39% CC 480 minute summer	44.234	11.690	200 year +39% CC 1440 minute summer	21.638	5.799
100 year +39% CC 480 minute winter	29.388	11.690	200 year +39% CC 1440 minute winter	14.542	5.799

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Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RWP	11	69.381	0.021	0.6	0.0031	0.0000	OK
15 minute summer	Kerb 1	11	69.345	0.025	1.7	0.0124	0.0000	OK
15 minute summer	SW 01	11	69.248	0.038	2.3	0.0060	0.0000	OK
15 minute summer	Kerb 2	10	69.657	0.027	1.0	0.0081	0.0000	OK
15 minute summer	SW 02	11	69.607	0.017	1.0	0.0027	0.0000	OK
15 minute summer	SW 03	11	69.088	0.048	3.3	0.0076	0.0000	OK
15 minute summer	Diffuser 1	11	68.999	0.054	3.3	0.0010	0.0000	OK
15 minute summer	SW 04	11	69.298	0.018	1.1	0.0075	0.0000	OK
15 minute summer	Diffuser 2	10	68.976	0.031	1.1	0.0006	0.0000	OK
15 minute summer	SW 05	12	69.126	0.026	1.1	0.0100	0.0000	OK
15 minute summer	Jnctn 1	11	69.108	0.043	2.6	0.0128	0.0000	OK
15 minute summer	SW 06	11	69.061	0.041	2.6	0.0065	0.0000	OK
15 minute summer	Diffuser 3	10	68.995	0.050	2.6	0.0009	0.0000	OK
15 minute summer	Channel 1	11	68.888	0.038	1.9	0.0392	0.0000	OK
15 minute summer	SW 07	11	68.814	0.039	1.9	0.0062	0.0000	OK
15 minute summer	Diffuser 4	10	68.800	0.050	1.9	0.0009	0.0000	OK
180 minute summer	Car Park Inf Base	112	68.720	0.020	10.5	14.8316	0.0000	OK
180 minute summer	Outfall	112	68.712	0.012	0.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	RWP	1.000	SW 01	0.6	0.528	0.088	0.0090	
15 minute summer	Kerb 1	2.000	SW 01	1.7	0.643	0.060	0.0117	
15 minute summer	SW 01	1.001	SW 03	2.3	0.552	0.141	0.0839	
15 minute summer	Kerb 2	3.000	SW 02	1.0	0.627	0.062	0.0078	
15 minute summer	SW 02	3.001	SW 03	1.0	0.382	0.027	0.0381	
15 minute summer	SW 03	1.002	Diffuser 1	3.3	0.628	0.211	0.0659	
15 minute summer	Diffuser 1	1.003	Car Park Inf Base	3.3	1.289	0.174	0.0634	
15 minute summer	SW 04	4.000	Diffuser 2	1.1	0.617	0.029	0.0144	
15 minute summer	Diffuser 2	4.001	Car Park Inf Base	1.1	0.923	0.063	0.0353	
15 minute summer	SW 05	5.000	Jnctn 1	1.1	0.365	0.068	0.0129	
15 minute summer	Jnctn 1	5.001	SW 06	2.6	0.651	0.158	0.0208	
15 minute summer	SW 06	5.002	Diffuser 3	2.6	0.601	0.150	0.0354	
15 minute summer	Diffuser 3	5.003	Car Park Inf Base	2.7	1.191	0.145	0.0609	
15 minute summer	Channel 1	6.000	SW 07	1.9	0.687	0.275	0.0159	
15 minute summer	SW 07	6.001	Diffuser 4	1.9	0.456	0.123	0.0145	
15 minute summer	Diffuser 4	6.002	Car Park Inf Base	1.9	0.877	0.158	0.0279	
180 minute summer	Car Park Inf Base	1.004	Outfall	0.1	0.187	0.052	0.0014	0.4
180 minute summer	Car Park Inf Base	Infiltration		4.4				

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Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	RWP	11	69.384	0.024	0.8	0.0035	0.0000	OK
15 minute summer	Kerb 1	11	69.350	0.030	2.4	0.0148	0.0000	OK
15 minute summer	SW 01	11	69.255	0.045	3.2	0.0071	0.0000	OK
15 minute summer	Kerb 2	10	69.662	0.032	1.4	0.0096	0.0000	OK
15 minute summer	SW 02	10	69.610	0.020	1.4	0.0032	0.0000	OK
15 minute summer	SW 03	11	69.098	0.058	4.6	0.0092	0.0000	OK
15 minute summer	Diffuser 1	11	69.009	0.064	4.6	0.0011	0.0000	OK
15 minute summer	SW 04	11	69.301	0.021	1.6	0.0090	0.0000	OK
15 minute summer	Diffuser 2	10	68.981	0.036	1.6	0.0007	0.0000	OK
15 minute summer	SW 05	11	69.132	0.032	1.6	0.0120	0.0000	OK
15 minute summer	Jnctn 1	11	69.117	0.052	3.7	0.0156	0.0000	OK
15 minute summer	SW 06	11	69.070	0.050	3.7	0.0079	0.0000	OK
15 minute summer	Diffuser 3	10	69.003	0.058	3.7	0.0011	0.0000	OK
15 minute summer	Channel 1	11	68.895	0.045	2.6	0.0471	0.0000	OK
15 minute summer	SW 07	11	68.822	0.047	2.6	0.0075	0.0000	OK
15 minute summer	Diffuser 4	10	68.807	0.057	2.6	0.0010	0.0000	OK
120 minute summer	Car Park Inf Base	78	68.726	0.026	17.6	19.1894	0.0000	OK
120 minute summer	Outfall	80	68.716	0.016	0.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	RWP	1.000	SW 01	0.8	0.572	0.118	0.0111	
15 minute summer	Kerb 1	2.000	SW 01	2.4	0.707	0.084	0.0149	
15 minute summer	SW 01	1.001	SW 03	3.2	0.599	0.196	0.1076	
15 minute summer	Kerb 2	3.000	SW 02	1.4	0.694	0.087	0.0099	
15 minute summer	SW 02	3.001	SW 03	1.4	0.412	0.038	0.0490	
15 minute summer	SW 03	1.002	Diffuser 1	4.6	0.695	0.295	0.0829	
15 minute summer	Diffuser 1	1.003	Car Park Inf Base	4.6	1.384	0.241	0.0794	
15 minute summer	SW 04	4.000	Diffuser 2	1.6	0.686	0.043	0.0181	
15 minute summer	Diffuser 2	4.001	Car Park Inf Base	1.6	0.990	0.092	0.0458	
15 minute summer	SW 05	5.000	Jnctn 1	1.6	0.400	0.099	0.0168	
15 minute summer	Jnctn 1	5.001	SW 06	3.7	0.706	0.224	0.0273	
15 minute summer	SW 06	5.002	Diffuser 3	3.7	0.667	0.214	0.0447	
15 minute summer	Diffuser 3	5.003	Car Park Inf Base	3.8	1.289	0.205	0.0760	
15 minute summer	Channel 1	6.000	SW 07	2.6	0.736	0.377	0.0203	
15 minute summer	SW 07	6.001	Diffuser 4	2.6	0.506	0.169	0.0179	
15 minute summer	Diffuser 4	6.002	Car Park Inf Base	2.6	0.957	0.216	0.0335	
120 minute summer	Car Park Inf Base	1.004	Outfall	0.2	0.233	0.094	0.0020	0.6
120 minute summer	Car Park Inf Base	Infiltration		5.7				

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Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RWP	11	69.399	0.039	2.0	0.0058	0.0000	OK
15 minute summer	Kerb 1	11	69.370	0.050	5.9	0.0251	0.0000	OK
15 minute summer	SW 01	11	69.283	0.073	7.9	0.0117	0.0000	OK
15 minute summer	Kerb 2	11	69.681	0.051	3.6	0.0155	0.0000	OK
15 minute summer	SW 02	11	69.622	0.032	3.6	0.0050	0.0000	OK
15 minute summer	SW 03	11	69.144	0.104	11.5	0.0165	0.0000	OK
15 minute summer	Diffuser 1	11	69.047	0.102	11.5	0.0018	0.0000	OK
15 minute summer	SW 04	11	69.313	0.033	3.9	0.0138	0.0000	OK
15 minute summer	Diffuser 2	10	69.000	0.055	3.9	0.0010	0.0000	OK
15 minute summer	SW 05	11	69.160	0.060	3.9	0.0228	0.0000	OK
15 minute summer	Jnctn 1	11	69.155	0.090	9.1	0.0269	0.0000	OK
15 minute summer	SW 06	11	69.105	0.085	9.1	0.0136	0.0000	OK
15 minute summer	Diffuser 3	10	69.036	0.091	9.1	0.0016	0.0000	OK
15 minute summer	Channel 1	11	68.939	0.089	6.5	0.0931	0.0000	OK
15 minute summer	SW 07	11	68.856	0.081	6.5	0.0129	0.0000	OK
15 minute summer	Diffuser 4	10	68.833	0.083	6.5	0.0015	0.0000	OK
60 minute summer	Car Park Inf Base	46	68.761	0.061	60.3	44.3480	0.0000	SURCHARGED
60 minute summer	Outfall	46	68.735	0.035	0.8	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	RWP	1.000	SW 01	2.0	0.734	0.295	0.0216	
15 minute summer	Kerb 1	2.000	SW 01	5.9	0.866	0.207	0.0297	
15 minute summer	SW 01	1.001	SW 03	7.9	0.733	0.484	0.2167	
15 minute summer	Kerb 2	3.000	SW 02	3.6	0.912	0.223	0.0192	
15 minute summer	SW 02	3.001	SW 03	3.6	0.489	0.097	0.1004	
15 minute summer	SW 03	1.002	Diffuser 1	11.5	0.903	0.740	0.1601	
15 minute summer	Diffuser 1	1.003	Car Park Inf Base	11.6	1.626	0.603	0.1554	
15 minute summer	SW 04	4.000	Diffuser 2	3.9	0.939	0.104	0.0327	
15 minute summer	Diffuser 2	4.001	Car Park Inf Base	4.0	1.182	0.223	0.0970	
15 minute summer	SW 05	5.000	Jnctn 1	3.9	0.446	0.241	0.0365	
15 minute summer	Jnctn 1	5.001	SW 06	9.1	0.853	0.552	0.0555	
15 minute summer	SW 06	5.002	Diffuser 3	9.1	0.868	0.526	0.0845	
15 minute summer	Diffuser 3	5.003	Car Park Inf Base	9.2	1.531	0.502	0.1471	
15 minute summer	Channel 1	6.000	SW 07	6.5	0.913	0.941	0.0409	
15 minute summer	SW 07	6.001	Diffuser 4	6.5	0.670	0.422	0.0326	
15 minute summer	Diffuser 4	6.002	Car Park Inf Base	6.5	1.191	0.535	0.0624	
60 minute summer	Car Park Inf Base	1.004	Outfall	0.8	0.436	0.411	0.0043	2.7
60 minute summer	Car Park Inf Base	Infiltration		10.9				

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Results for 100 year +39% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RWP	12	69.464	0.104	3.5	0.0155	0.0000	SURCHARGED
15 minute summer	Kerb 1	12	69.457	0.137	10.5	0.0681	0.0000	OK
15 minute summer	SW 01	12	69.438	0.228	13.6	0.0362	0.0000	SURCHARGED
30 minute summer	Kerb 2	18	69.700	0.070	6.5	0.0212	0.0000	OK
30 minute summer	SW 02	18	69.632	0.042	6.5	0.0067	0.0000	OK
15 minute summer	SW 03	12	69.314	0.274	18.8	0.0436	0.0000	SURCHARGED
15 minute summer	Diffuser 1	12	69.135	0.190	18.8	0.0034	0.0000	SURCHARGED
15 minute summer	SW 04	11	69.324	0.044	7.0	0.0186	0.0000	OK
15 minute summer	Diffuser 2	10	69.018	0.073	7.0	0.0013	0.0000	OK
15 minute summer	SW 05	11	69.233	0.133	7.0	0.0504	0.0000	OK
15 minute summer	Jnctn 1	11	69.224	0.159	16.3	0.0478	0.0000	SURCHARGED
15 minute summer	SW 06	11	69.159	0.139	16.2	0.0221	0.0000	OK
15 minute summer	Diffuser 3	10	69.074	0.129	16.2	0.0023	0.0000	OK
15 minute summer	Channel 1	11	69.168	0.318	11.7	0.3321	0.0000	FLOOD RISK
15 minute summer	SW 07	11	68.893	0.118	11.4	0.0188	0.0000	OK
15 minute summer	Diffuser 4	11	68.860	0.110	11.4	0.0020	0.0000	OK
120 minute summer	Car Park Inf Base	90	68.823	0.123	71.9	90.1341	0.0000	SURCHARGED
120 minute summer	Outfall	90	68.745	0.045	1.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	RWP	1.000	SW 01	3.5	0.820	0.515	0.0621	
15 minute summer	Kerb 1	2.000	SW 01	10.1	0.951	0.354	0.0744	
15 minute summer	SW 01	1.001	SW 03	12.8	0.793	0.786	0.3539	
30 minute summer	Kerb 2	3.000	SW 02	6.5	1.074	0.400	0.0292	
30 minute summer	SW 02	3.001	SW 03	6.4	0.512	0.174	0.1387	
15 minute summer	SW 03	1.002	Diffuser 1	18.8	1.067	1.211	0.2184	
15 minute summer	Diffuser 1	1.003	Car Park Inf Base	18.9	1.604	0.985	0.2703	
15 minute summer	SW 04	4.000	Diffuser 2	7.0	1.135	0.186	0.0482	
15 minute summer	Diffuser 2	4.001	Car Park Inf Base	7.1	1.292	0.400	0.1684	
15 minute summer	SW 05	5.000	Jnctn 1	6.9	0.457	0.427	0.0707	
15 minute summer	Jnctn 1	5.001	SW 06	16.2	0.923	0.984	0.0901	
15 minute summer	SW 06	5.002	Diffuser 3	16.2	0.993	0.937	0.1307	
15 minute summer	Diffuser 3	5.003	Car Park Inf Base	16.3	1.595	0.888	0.2459	
15 minute summer	Channel 1	6.000	SW 07	11.4	1.454	1.648	0.0450	
15 minute summer	SW 07	6.001	Diffuser 4	11.4	0.793	0.738	0.0475	
15 minute summer	Diffuser 4	6.002	Car Park Inf Base	11.4	1.282	0.933	0.1060	
120 minute summer	Car Park Inf Base	1.004	Outfall	1.5	0.764	0.761	0.0048	10.9
120 minute summer	Car Park Inf Base	Infiltration		10.9				

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Results for 200 year +39% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	RWP	13	69.584	0.224	4.0	0.0334	0.0000	SURCHARGED
15 minute summer	Kerb 1	12	69.577	0.257	12.1	0.1282	0.0000	SURCHARGED
15 minute summer	SW 01	12	69.550	0.340	15.3	0.0540	0.0000	SURCHARGED
15 minute summer	Kerb 2	11	69.705	0.075	7.4	0.0228	0.0000	OK
15 minute summer	SW 02	11	69.636	0.046	7.4	0.0072	0.0000	OK
15 minute summer	SW 03	12	69.403	0.363	20.9	0.0577	0.0000	SURCHARGED
15 minute summer	Diffuser 1	12	69.189	0.244	20.6	0.0044	0.0000	SURCHARGED
15 minute summer	SW 04	11	69.327	0.047	8.1	0.0200	0.0000	OK
15 minute summer	Diffuser 2	10	69.024	0.079	8.1	0.0014	0.0000	OK
15 minute summer	SW 05	12	69.316	0.216	8.1	0.0818	0.0000	SURCHARGED
15 minute summer	Jnctn 1	12	69.303	0.238	18.6	0.0713	0.0000	SURCHARGED
15 minute summer	SW 06	12	69.221	0.201	18.2	0.0319	0.0000	SURCHARGED
15 minute summer	Diffuser 3	12	69.110	0.165	17.8	0.0030	0.0000	SURCHARGED
30 minute summer	Channel 1	19	69.240	0.390	13.5	0.4068	0.0792	FLOOD
15 minute summer	SW 07	11	68.904	0.129	12.6	0.0205	0.0000	OK
30 minute summer	Diffuser 4	20	68.869	0.119	12.6	0.0021	0.0000	OK
120 minute summer	Car Park Inf Base	92	68.844	0.144	82.7	106.6507	0.0000	SURCHARGED
120 minute summer	Outfall	92	68.747	0.047	1.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	RWP	1.000	SW 01	3.8	0.799	0.565	0.0621	
15 minute summer	Kerb 1	2.000	SW 01	11.5	0.939	0.404	0.0760	
15 minute summer	SW 01	1.001	SW 03	14.0	0.814	0.860	0.3539	
15 minute summer	Kerb 2	3.000	SW 02	7.4	1.115	0.458	0.0321	
15 minute summer	SW 02	3.001	SW 03	7.4	0.560	0.200	0.1414	
15 minute summer	SW 03	1.002	Diffuser 1	20.6	1.168	1.326	0.2184	
15 minute summer	Diffuser 1	1.003	Car Park Inf Base	20.7	1.605	1.079	0.2923	
15 minute summer	SW 04	4.000	Diffuser 2	8.1	1.184	0.215	0.0533	
15 minute summer	Diffuser 2	4.001	Car Park Inf Base	8.2	1.318	0.462	0.1936	
15 minute summer	SW 05	5.000	Jnctn 1	7.8	0.460	0.479	0.0730	
15 minute summer	Jnctn 1	5.001	SW 06	18.2	1.033	1.103	0.0916	
15 minute summer	SW 06	5.002	Diffuser 3	17.8	1.009	1.026	0.1388	
15 minute summer	Diffuser 3	5.003	Car Park Inf Base	17.8	1.579	0.968	0.2989	
30 minute summer	Channel 1	6.000	SW 07	12.6	1.610	1.824	0.0450	
15 minute summer	SW 07	6.001	Diffuser 4	12.6	0.815	0.817	0.0511	
30 minute summer	Diffuser 4	6.002	Car Park Inf Base	12.6	1.165	1.026	0.1381	
120 minute summer	Car Park Inf Base	1.004	Outfall	1.7	0.849	0.846	0.0048	13.9
120 minute summer	Car Park Inf Base	Infiltration		10.9				

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Appendix C

Product Details

RE: McDonald's projects

AB
Angelina Belgrave <Angelina.Belgrave@polypipe.com>
To Kevin Jackson
Cc Trevor Andrews

Reply | Reply All | Forward

Wed 09/10/2024 14:08

You replied to this message on 09/10/2024 14:13.

CAUTION: This email originated from outside of the organisation. Do not click or open attachments, if you suspect the content may not be safe.

Good Afternoon Kevin,

Firstly, we apologise for the delay answering your email.

I am writing to confirm that the mitigation indices of our Permafilter oil treating geotextile have the same values as our Biomat geocellular crates.

The Permafilter fleece is built into the Biomat during manufacture to capture and treat and acts as a self-regulating ecosystem to break down hydrocarbons and protozoa through the life expectancy of the installation.

The same chemistry happens when either wrapping the geocellular crates in Permafilter when acting as a soakaway, adding additional treatment when installed on to of a geocellular tank when working in tandem with porous paving and/or connected to our Permatreat channels adding a further level of secondary treatment.

Kind Regards,

Angelina Belgrave
Specification Sales Manager Yorkshire & North
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SURFACE WATER POLLUTION MITIGATION INDICES Polypipe Treatment Products	*Pollution Mitigation Indices* Total Suspended Solids	Metals	Hydrocarbons	*COMMENT 1*	*COMMENT 2*
Permachannel/ Permakerb	0.8	0.4	0.9	SuDS components can only be assumed to deliver these indices if drained area to each 1m channel length <30sq.m and >1:500 longfall.	Please note that the Britsh Water/ Environement Agency assessment code of practice for stormwater treatment devices has yet to be published. Therefore full testing in accordnace with Chapter 14 of SuDS manual,with particlar regard to Heavy metals removal, is yet to be completed.
Permachannel Slotdrain	0.8	0.4	0.9	SuDS components can only be assumed to deliver these indices if drained area to each 1m channel length <50sq.m and >1:500 longfall.	Please note that the Britsh Water/ Environement Agency assessment code of practice for stormwater treatment devices has yet to be published. Therefore full testing in accordnace with Chapter 14 of SuDS manual,with particlar regard to Heavy metals removal, is yet to be completed.
Permaceptor	0.8	0.3	0.9	SuDS components can only be assumed to deliver these indices if drained area to each Permaceptor unit is <150sq.m	Please note that the Britsh Water/ Environement Agency assessment code of practice for stormwater treatment devices has yet to be published. Therefore full testing in accordnace with Chapter 14 of SuDS manual,with particlar regard to Heavy metals removal, is yet to be completed.
Permavoid with BioMat	0.5	0	0.6	SuDS components can only be assumed to deliver these indices if drained area to each 1m length of conduit <30sq.m and >1:500 longfall.	Please note that the Britsh Water/ Environement Agency assessment code of practice for stormwater treatment devices has yet to be published. Therefore full testing in accordnace with Chapter 14 of SuDS manual is yet to be completed.
Polystorm Tank with BioMat and encapsuated in Permafilter treatment geotextile	0.5	0.2	0.5	SuDS components can only be assumed to deliver TSS & Heavy Metal removal indices if peak flow verlocity through tank <1m/s	Please note that the Britsh Water/ Environement Agency assessment code of practice for stormwater treatment devices has yet to be published. Therefore full testing in accordnace with Chapter 14 of SuDS manual is yet to be completed.
Filter Gully	0.7	0	0	SuDS components can only be assumed to deliver these indices if drained area to each Filter Gully unit is <100sq.m	Please note that the Britsh Water/ Environement Agency assessment code of practice for stormwater treatment devices has yet to be published. Therefore full testing in accordnace with Chapter 14 of SuDS manual is yet to be completed.
Back Inlet Gully (with internal filter screen)/ Podium Deck Chamber	0.7	0	0	SuDS components can only be assumed to deliver these indices if drained area to each Back Inlet Gully/ Podium Deck Chamber unit is <300sq.m	Please note that the Britsh Water/ Environement Agency assessment code of practice for stormwater treatment devices has yet to be published. Therefore full testing in accordnace with Chapter 14 of SuDS manual is yet to be completed.
750mm dia Catchpit insprction chamber	0.5	0	0	SuDS components can only be assumed to deliver these indices if outlet pipe verlocity <1m/s	Please note that the Britsh Water/ Environement Agency assessment code of practice for stormwater treatment devices has yet to be published. Therefore full testing in accordnace with Chapter 14 of SuDS manual is yet to be completed.

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Issue 5: 07 July 2025

DRAINAGE MAINTENANCE PLAN

McDonald's, Blairgowrie (ST2473)

Prepared for: McDonald's Restaurants Ltd

Ref: 002_4240368_KJ_DMP

Document History

Issue	Date	Description	Prepared By	Checked By
1	16 Sept 2024	First Issue	K Jackson	H George
2	08 Nov 2024	Updated to new foul drainage connection point	K Jackson	H George
3	07 Feb 2025	Site Layout updated	K Jackson	H George
4	20 June 2025	Building type and site layout updated	K Jackson	H George
5	07 July 2025	Further update to site layout	K Jackson	H George

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2.0 Drainage Maintenance Responsibility & Training....1
3.0 Drainage Inspection and Maintenance Requirements and Frequency....1
4.0 Drainage Inspection and Maintenance Records....4

Figures

Figure 1: Proposed Drainage Maintenance Plan

Appendices

Appendix A: Surface Water Treatment
Appendix B: Grease Trap
Appendix C: Maintenance Schedule

1.0 Introduction

1.1 This Sustainable Drainage Maintenance Plan has been prepared by Glanville Consultants Ltd on behalf of McDonald's Restaurants Limited.

1.2 The site is located to the west of the A93 Perth Road approximately 250m south of its junction with the B947 Essendy Road. The site is surrounded by unmanaged fields the north, a retail area to the south, a residential area to the east and drainage ponds associated with the retail park and an established wooded area beyond to the west.

2.0 Drainage Maintenance Responsibility & Training

2.1 The McDonald's site and all associated drainage is privately owned and maintained by McDonald's. It is the store manager's responsibility to ensure that the drainage system is regularly inspected and maintained, in accordance with this plan. Figure 1 shows the layout of the drainage system including the location of each of the items requiring maintenance, listed in this plan and a summary of the maintenance requirements.

2.2 The majority of tasks can be completed by McDonald's staff trained for each specific task. Training should include manual handling, for lifting manhole covers. Manholes & chambers can be dangerous due to trapped harmful gases and should not be entered unless staff are confined space trained and issued with appropriate equipment. Entering confined spaces should not normally be required and should be controlled by a permit to enter system administered by the store manager. It may be appropriate to rely on non-store based, specialist staff, on the rare occasions when confined space entry is required.

3.0 Drainage Inspection and Maintenance Requirements and Frequency

Catchpit Manholes (Figure 1 - Ref A)

3.1 Catchpit manholes are designed to trap silt, leaves and other debris before it reaches more sensitive parts of the drainage system where it could reduce drainage efficiency. Catchpit manholes are located prior to the cellular storage tank and adjacent to surface drainage channels.

3.2 Catchpit manholes need to be inspected on a monthly basis except during the autumn leaf fall when they may require inspections to be increased to fortnightly.

3.3 Equipment required for inspection includes moveable barriers and cones to guard openings, manhole keys, gloves, and a torch. A minimum of two people is required.

3.4 Catchpit manholes need to be emptied once the sump becomes half full. Emptying should be performed using a gulley emptying vacuum truck or similar device which does not require man entry.

Foul Water Manholes and Inspection Chambers (Figure 1 - Ref B)

3.5 Foul water manholes and inspection chambers need to be inspected on a monthly basis or immediately if foul odours are present or there is a suspected blockage.

3.6 Equipment required for inspection includes moveable barriers and cones to guard openings, manhole keys, gloves, and a torch. A minimum of two people is required.

3.7 If manholes show any signs of blockage, specialist contractors should be called for clearance work, without delay.

Drainage Channel & Kerb Outlets (Figure 1 - Ref C)

3.8 Drainage channel and kerb outlets need to be inspected on a monthly basis except during the autumn when leaf fall, may require inspections to be increased to fortnightly.

3.9 Equipment required for inspection includes moveable barriers and cones to guard openings, lifting tools, gloves, and a torch. A minimum of two people is required.

3.10 Silt, leaves and debris should be cleared from the channel / kerb outlets during each inspection.

Surface Water Diffuser Unit (Figure 1- Ref D)

3.11 Catchpit manholes and trapped gullies and kerb drain trapped outlets are located upstream of the Diffuser Units to prolong their life and optimise maintenance visits.

3.12 Equipment required for inspection includes: moveable barriers and cones to guard openings, manhole keys, gloves, wire ties and cutters and a torch. A minimum of two people are required.

3.13 Staff should have appropriate training for these inspections, and sumps should be emptied when half full using a gulley emptying vacuum truck or similar device which does not require man entry.

Grease Trap (Figure 1 - E)

3.14 The Grease Trap should be inspected on a monthly basis, by lifting the inspection cover. Any signs of a malfunction or blockage should be reported immediately to the external specialist maintenance company.

3.15 The Grease Trap has an alarm hard wired into the Store Manager's office with a visual and audible warning system. If the alarm is triggered the external specialist maintenance company should be called out immediately. See also the manufacturer's guidelines in Appendix C.

3.16 The Restaurant above ground grease removal unit in the kitchen (connected to the three sink and dishwasher) shall be emptied multiple times a day. Please note the release of the dishwasher discharge shall be delayed for an hour to ensure the water has cooled sufficiently to prevent "washing" grease through the grease removal unit.

Permeable Paving (Figure 1 – F)

3.17 The asphalt permeable paving should be inspected after heavy rainfall and any pollution incidents to ensure that the surface is allowing surface water to freely pass into the lower asphalt layers and voided sub-base.

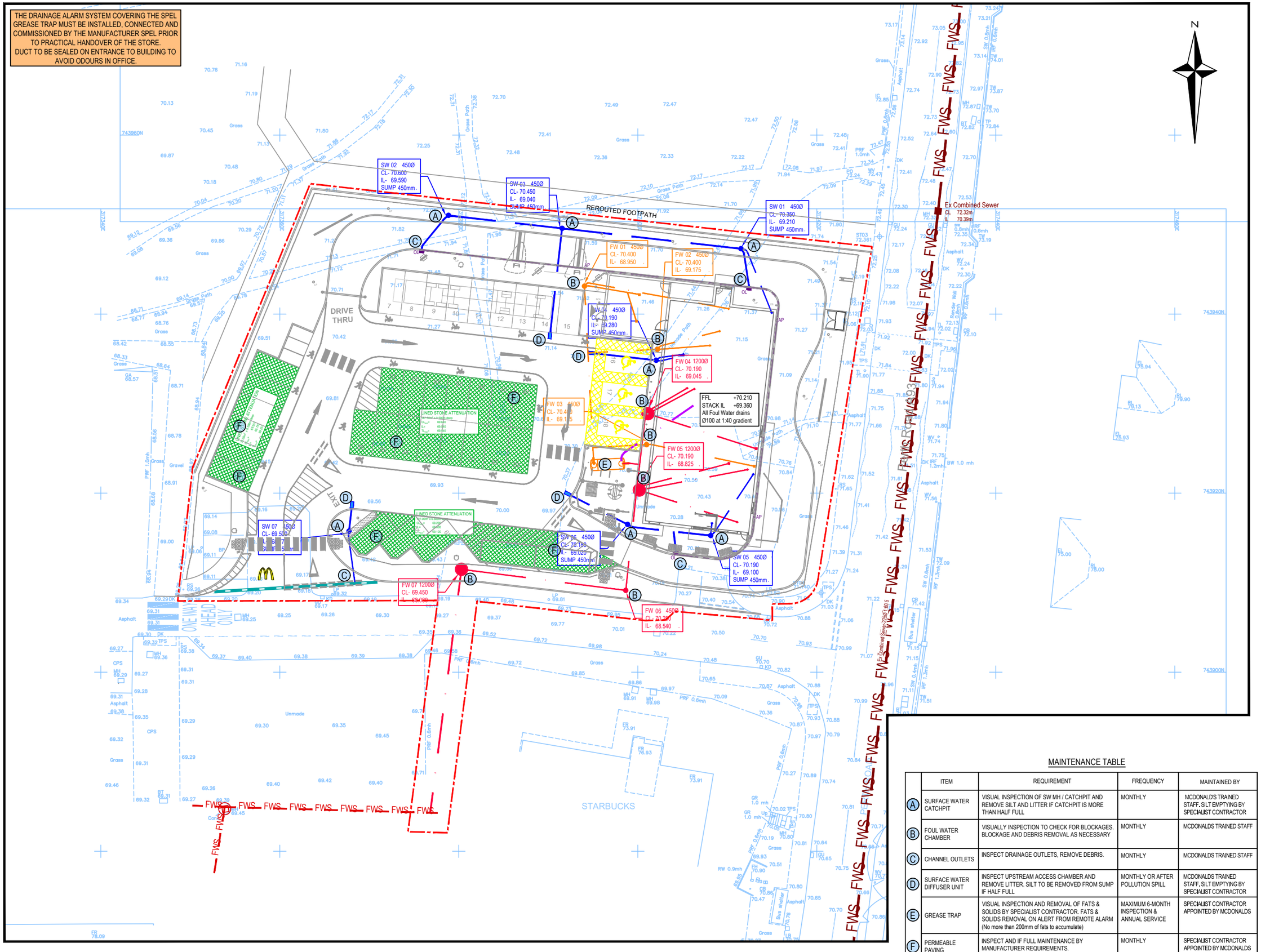
3.18 Should blockages be identified the asphalt should be cleaned in accordance with the manufacturer's written instructions which could include mechanical sweeping and / or jet washing with any silts disturbed during this process removed to tip.

4.0 Drainage Inspection and Maintenance Records

4.1 Appendix D includes the annual drainage record log sheet. Copies should be taken of the log sheet for use for each year's records. Each inspection should be recorded on the log sheet for that year by the store manager. The log sheet shall be kept with this manual.

Figures

THE DRAINAGE ALARM SYSTEM COVERING THE SPEL GREASE TRAP MUST BE INSTALLED, CONNECTED AND COMMISSIONED BY THE MANUFACTURER SPEL PRIOR TO PRACTICAL HANDOVER OF THE STORE.
DUCT TO BE SEALED ON ENTRANCE TO BUILDING TO AVOID ODOURS IN OFFICE.



DRAINAGE MAINTENANCE PLAN

Scale 1:200

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS, DOCUMENTS AND SPECIFICATIONS. ANY DISCREPANCIES BETWEEN INFORMATION SHOWN ON THIS AND ANY OTHER DRAWING SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
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5. ALL DRAINAGE TO BE INSTALLED TO THE SCOTTISH TECHNICAL HANDBOOK.
6. ALL DRAINAGE TO BS8582:2013 - CODE OF PRACTICE FOR SURFACE WATER MANAGEMENT FOR DEVELOPMENT SITES.
7. BUILDING INSPECTOR TO INSPECT ALL FOUL DRAINAGE INSTALLATION.
8. **ALL DRAINAGE ALARM SYSTEMS COVERING GREASE TRAPS AND TREATMENT UNITS MUST BE INSTALLED, CONNECTED AND COMMISSIONED BY THE GROUNDWORK CONTRACTOR PRIOR TO PRACTICAL HANDOVER OF THE STORE.**

KEY

- SITE BOUNDARY
- TOPOGRAPHICAL SURVEY
- PROPOSED SITE LAYOUT

FOR INFORMATION ONLY

FIGURE 1

MAINTENANCE TABLE

	ITEM	REQUIREMENT	FREQUENCY	MAINTAINED BY
A	SURFACE WATER CATCHPIT	VISUAL INSPECTION OF SW MH / CATCHPIT AND REMOVE SILT AND LITTER IF CATCHPIT IS MORE THAN HALF FULL	MONTHLY	MCDONALD'S TRAINED STAFF, SILT EMPTYING BY SPECIALIST CONTRACTOR
B	FOUL WATER CHAMBER	VISUALLY INSPECTION TO CHECK FOR BLOCKAGES. BLOCKAGE AND DEBRIS REMOVAL AS NECESSARY	MONTHLY	MCDONALDS TRAINED STAFF
C	CHANNEL OUTLETS	INSPECT DRAINAGE OUTLETS, REMOVE DEBRIS.	MONTHLY	MCDONALDS TRAINED STAFF
D	SURFACE WATER DIFFUSER UNIT	INSPECT UPSTREAM ACCESS CHAMBER AND REMOVE LITTER. SILT TO BE REMOVED FROM SUMP IF HALF FULL	MONTHLY OR AFTER POLLUTION SPILL	MCDONALDS TRAINED STAFF, SILT EMPTYING BY SPECIALIST CONTRACTOR
E	GREASE TRAP	VISUAL INSPECTION AND REMOVAL OF FATS & SOLIDS BY SPECIALIST CONTRACTOR. FATS & SOLIDS REMOVAL ON ALERT FROM REMOTE ALARM (No more than 200mm of fats to accumulate)	MAXIMUM 6-MONTH INSPECTION & ANNUAL SERVICE	SPECIALIST CONTRACTOR APPOINTED BY MCDONALDS
F	PERMEABLE PAVING	INSPECT AND IF FULL MAINTENANCE BY MANUFACTURER REQUIREMENTS.	MONTHLY	SPECIALIST CONTRACTOR APPOINTED BY MCDONALDS

Rev.	Description	Date	By	Chkd
I5	FURTHER UPDATE TO SITE LAYOUT	07.07.25	KJ	HBG
I4	BUILDING TYPE AND SITE LAYOUT UPDATED	20.06.25	KJ	HBG
I3	SITE LAYOUT UPDATE	07.02.25	KJ	HBG
I2	UPDATED TO REFLECT REVISED FOUL DRAINAGE CONNECTION LINE	08.11.24	KJ	HBG
I1	ISSUED FOR PLANNING	16.09.24	KJ	HBG

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Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client : McDonald's RESTAURANT

Project : McDONALD'S RESTAURANTS
PERTH ROAD, BLAIRGOWRIE
PH10 6FW [ST2473]

Title : PROPOSED DRAINAGE MAINTENANCE PLAN

Engineer : KJ | Date : AUGUST 2024
Director : HBG | Scale : 1:200@A1
Status : INFORMATION

Drawing No. 4230334-SK08 | Rev I5

Appendices

Appendix A

Surface Water Treatment

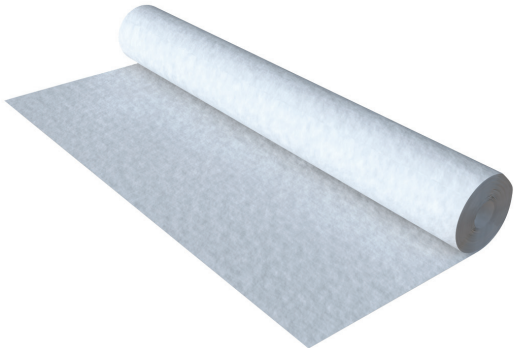
Permafilter Geotextile

Data Sheet

PRODUCT INFORMATION **P1** **ISSUE 3 - JUNE 2018**

Product code: PV23002

Permafilter Geotextile is a non-woven, dimpled, needle punched geotextile that has been specifically designed for hydrocarbon pollution treatment in sustainable drainage systems (SuDS) and other civil engineering applications.



Applications

Permafilter Geotextile is suitable for a wide range of applications including podium decks, cycle paths, infiltration tanks, tree protection, bio-retention, swales, permeable paving, filter drain and filter strips.

Key Benefits

- Captures residual hydrocarbons
- Removes pollutants by biodegradation
- Enhances water quality when used as part of a source control sustainable drainage system and eliminates the need for end of line petrol/oil interceptors
- 100% recyclable
- Designed to be self-maintaining for the life of the installation

Performance

The dimpled Geotextile comprises a proprietary blend of polyester fibres that incorporates hydrophilic (water attracting and oil repellent) and hydrophobic (oil attracting and water repellent) properties to achieve superior oil retention. Permafilter Geotextile is capable of retaining oil contamination ranging from daily car drip losses up to catastrophic spillages, i.e. originating from car oil-sump failures. The entrapped hydrocarbons are biodegraded by naturally occurring microorganisms providing a self cleansing mechanism.

Installation

Permafilter will be laid to suit site specific requirements. Overlaps shall be a minimum of 300mm or heat sealed. Ensure geotextile is clean and debris free before installing Permavoid.

Technical Support

Detailed guidance and assistance is available.
For further information, please contact our Technical Team on **+44 (0) 1509 615 100** or email **civils@polypipe.com** or visit **www.polypipe.com/civils-technical-hub**

ELEMENT	VALUE
PHYSICAL PROPERTIES	
Weight	300g/m²
Roll length	100m
Roll width	2.4m
Roll weight	72kg
MECHANICAL PROPERTIES	
Tensile strength EN10319 (md/cmd)	9/12kN/m
Static puncture (CBR test) EN12236	1575N
HYDRAULIC PROPERTIES	
Water permeability EN ISO 11058	57 l/m²/s
OTHER PROPERTIES	
Air permeability	1000 l/m²/s
Max. oil retention	6L /10m²
Effluent discharge at max. spacing oil loading	10ppm
Material	Modified polyester

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Polypipe

Permafilter Geotextile

Data Sheet

Permafilter Geotextile can be utilised in these SuDS techniques

TECHNIQUES													
Blue-Green roofs	Podium Decks	Trees	Sports Pitches	Cycle Paths	Permeable Paving (sub base & podium)	Bioretention & Rain Gardens	Attenuation Storage Tanks	Infiltration	Swales	Filter Drains	Detention Basins	Ponds & Wetlands	Filter Strips
	✓	✓	✓	✓	✓	✓		✓	✓	✓			✓

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Appendix B

Grease Trap

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19.9.2014
D15622Be

GA-1

Grease Separator Alarm Device

Installation and Operating Instructions

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2.3 Installation Accessories 5
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SYMBOLS

Warning / Attention

Device is protected by double or reinforced insulation

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1 GENERAL

GA-1 is an alarm device for monitoring the thickness of the grease layer accumulating in a grease separator.

The system consists of GA-1 control unit, GA-SG1 sensor and a cable joint.

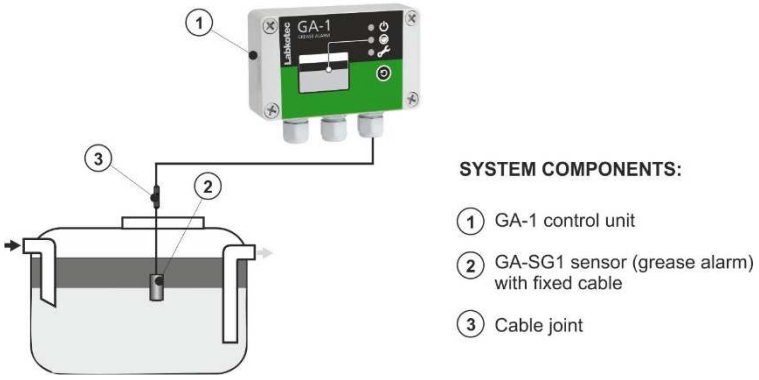

Figure 1. Grease separator supervision with GA-1 alarm device

GA-SG1 sensor is installed into the grease separator and it supervises thickness of grease layer.

The LED indicators, push button and interfaces of the GA-1 control unit are described in figure 2.

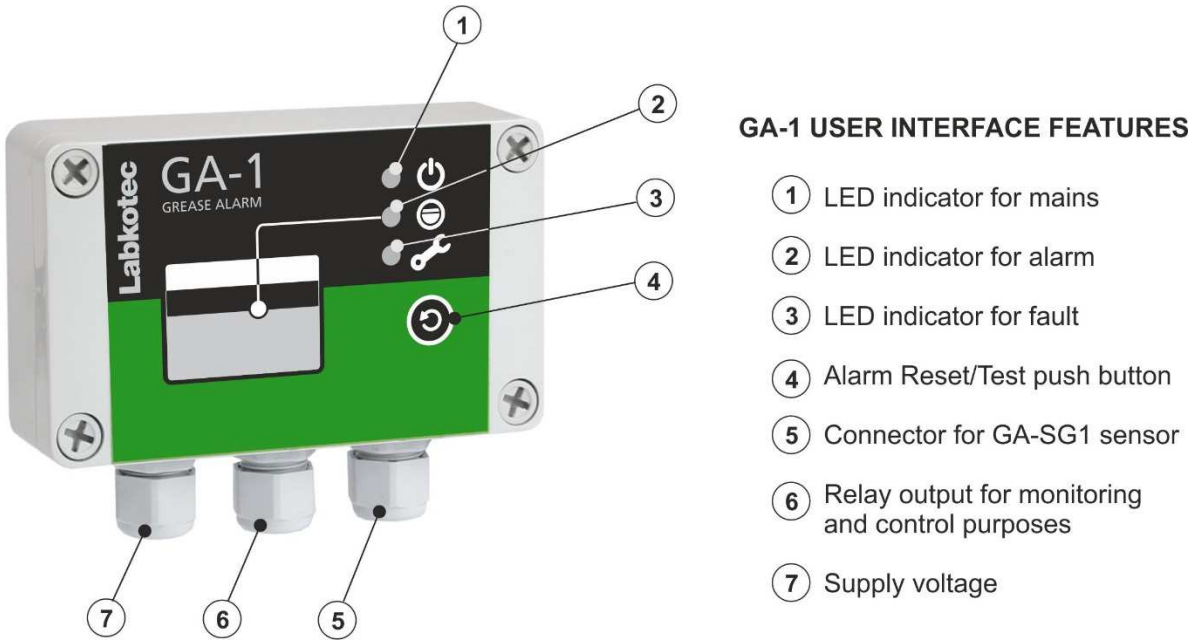

Figure 2. GA-1 control unit – features

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2 INSTALLATION

2.1 GA-1 control unit

GA-1 control unit can be wall-mounted. The mounting holes are located in the base plate of the enclosure, beneath the mounting holes of the front cover.

The cover of the enclosure must be tightened so, that the edges touch the base frame. Only then does the push button function properly and the enclosure is tight.

Before installation, please read the safety instructions in chapter 6!

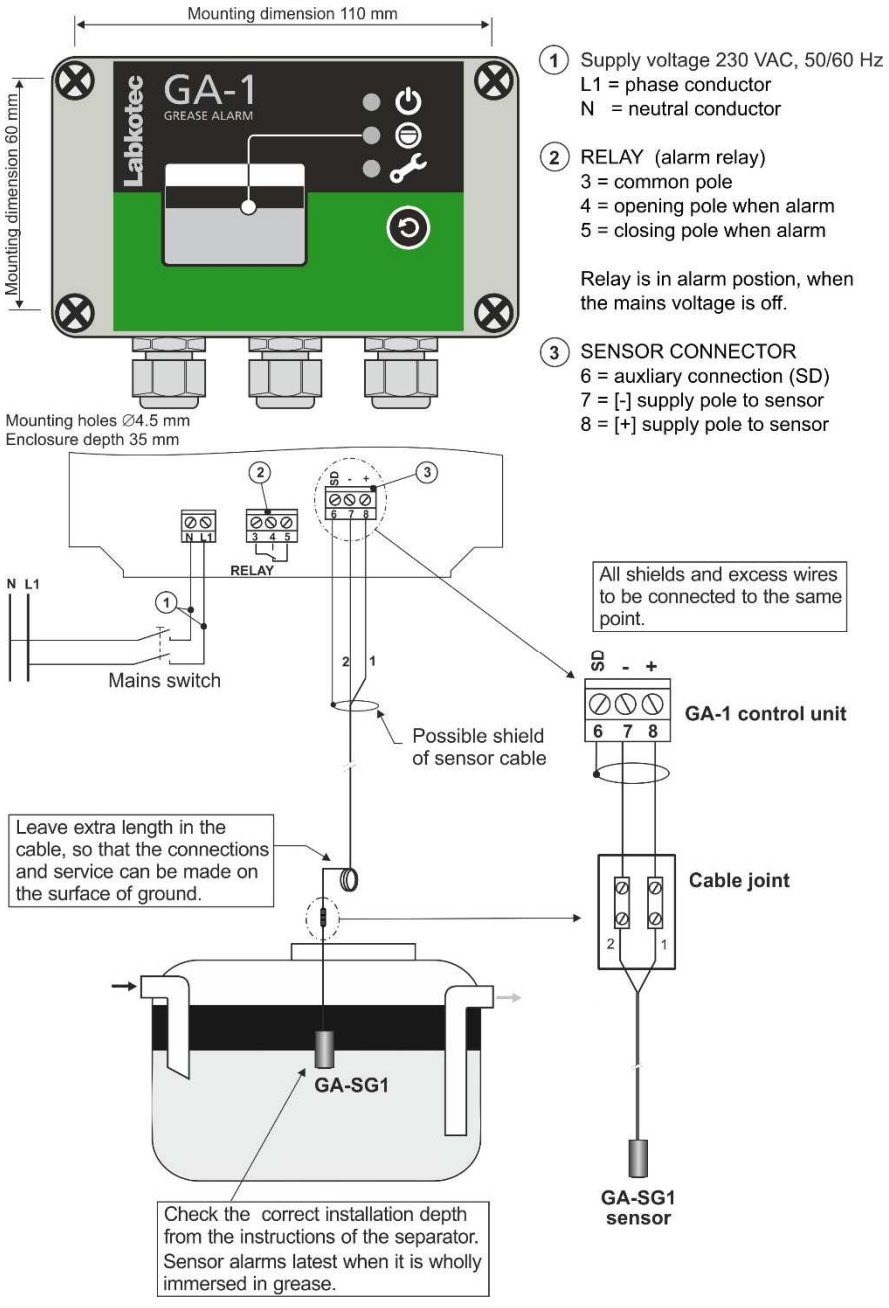

Figure 3. GA-1 alarm device installation.

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2.2 GA-SG1 sensor

GA-SG1 sensor should be installed as described in figure 3.

The sensor gives an alarm latest when it is wholly immersed in grease.

Please check the correct installation depth also from the instructions of the grease separator.

2.3 Installation Accessories

The delivery includes a cable joint (figure 4), fixing accessories (figure 5) for installation of the control unit and the sensor. In figure 6 is an installation example of cable with suspension hook.

Connections of the sensor cable inside the cable joint are explained in figure 3. If shielded cable is used cable shields and possible excess wires need to be connected to the same point in galvanic contact.

IP rating of the cable joint is IP68. Make sure, that the cable joint is closed properly.

Figure 4 Cable joint

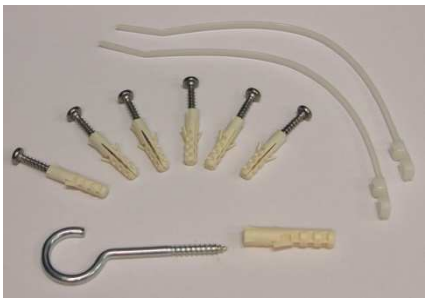

Figure 5. Fixing accessories

Figure 6. Cable installation example

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3 OPERATION

The operation of the alarm device should be checked always after the installation. Also check the operation always when emptying the separator or at least once every six months.

Functionality test

1. Immerse the sensor into water. The device should be in normal mode.
2. Lift the sensor up in air or grease. A grease alarm should be generated (see chapter 3.1 for more detailed description).
3. Clean up the sensor.
4. Immerse the sensor back into water. The alarm should go off after a delay of 10 sec.

A more detailed description of the operation is provided in chapter 3.1.
If the operation is not as described here, check connections and cabling. If necessary contact a representative of the manufacturer.

3.1 Modes of operation

Normal mode – no alarms

Sensor is totally immersed in water.

Mains LED indicator is on.
Other LED indicators are off.
Relay is energized.

Grease alarm

Sensor is immersed in grease. (the sensor gives an alarm latest when it is wholly immersed in grease).

Mains LED indicator is on.
Grease Alarm LED indicator is on.
Buzzer on after 10 sec delay.
Relay de-energize after 10 sec delay.
(Note. The same alarm takes place when GA-SG1 sensor is in the air.)

After removal of an alarm, the Grease Alarm LED indicator and buzzer will be off, and relay will be energized after 10 sec delay.

Fault alarm

Sensor cable break, short circuit or a broken sensor.

Mains LED indicator is on.
Sensor circuit Fault LED indicator is on after 10 sec delay.
Buzzer is on after 10 sec delay.
The relay de-energize after 10 sec delay.

Reset of an alarm

When pressing the Reset/Test push button.

Buzzer will go off.
Relay and LED indicator will not change their position until the alarm or fault situation is removed.
If the buzzer is not reset, it goes off automatically after three days.

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TEST FUNCTION

Test function provides an artificial alarm, which can be used to test the function of the GA-1 alarm device and the function of other equipment, which are connected to GA-1 via its relay.

Attention! Before pressing the Reset/Test button, make sure that the change of relay status does not cause hazards elsewhere!

Normal situation	*When pressing the Reset/Test push button:* *Grease Alarm and Fault LED indicators are immediately on.* *Buzzer is immediately on.* *Relay de-energize after 2 sec of continuous pressing.* *When the Reset/Test push button is released:* *LED indicators and buzzer go immediately off.* *Relay energize immediately.*
Alarm on	*When pressing the Reset/Test push button for the first time:* *Buzzer will go off.* *When pressing the Reset/Test push button after that:* *Fault LED indicator is immediately on.* *Grease Alarm LED indicator remains on.* *Buzzer remains on. If it has been reset earlier, it will return to be on.* *When the Reset/Test push button is released:* *The device returns right away to the preceding status.*
Fault alarm on	*When pressing the Reset/Test push button:* *The device does not react to the test at all.*

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4 TROUBLE-SHOOTING

Problem:	***No alarm when sensor in grease or air, or the alarm will not go off***
Possible reason:	*Sensor is dirty.*
To do:	*1. Clean-up the sensor and check the operation again.*

The following operations must be performed only by a qualified electrician!

Problem:	***MAINS LED indicator is off***
Possible reason:	*Device doesn't get supply voltage.*
To do:	*1. Check that power separation switch is not switched off.* *2. Measure the voltage between poles N and L1. It should be 230 VAC + 10 %.*

Problem:	***FAULT LED indicator is on***
Possible reason:	*Current in sensor circuit too low (cable break or out of connector) or too high (cable in short circuit). The sensor might also be broken.*
To do:	*1. Make sure, that the sensor cable has been connected correctly to the GA-1 control unit.* *2. Measure the voltage separately between the poles 7 and 8. The voltages should be between 7,0 - 8,5 V. Note! The voltage alternates between the sensor connectors in 1 second intervals.* *3. Measure sensor current when the sensor is in the air or in grease. The measured current should be 7,0 – 8,5 mA.* *4. Measure current when the sensor is in the water. Measured current should be 2,5 – 3,5 mA*

If the problem can not be solved with the above instructions, please contact Labkotec Oy's service.

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5 REPAIR AND SERVICE

The sensor should be cleaned and the operation should also be tested when emptying or maintaining the grease separator or at least once every six months. The easiest way to check the operation is to lift the sensor up in the air and to put it back to the separator. The operation is described in chapter 3.

For cleaning, a mild detergent (e.g. washing-up liquid) and a scrubbing brush can be used.

In case of queries, please contact Labkotec Oy's service:

service@labkotec.fi.

6 SAFETY INSTRUCTIONS

The device does not include a mains switch. A two pole mains switch (250 VAC 1 A), which isolates both lines (L1, N) must be installed in the main power supply lines in the vicinity of the unit. This switch facilitates maintenance and service operations and it has to be marked to identify the unit.

If opening of housing's cover is needed, only a qualified electrician is allowed to install or to maintain the device.

If the device is used against the manufacturer's instructions, the protection provided by the device may be damaged.

The device is not allowed to install in hazardous areas.

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7 TECHNICAL DATA

GA-1 control unit	
Dimensions	125 mm x 75 mm x 35 mm (L x H x D)
Weight	250 g Package 0,8 kg (control unit + sensor + cable joint)
Enclosure	IP 65, material polycarbonate Cable glands adjustment range is 6 – 10mm
Operation temperature	-30 ºC…+50 ºC
Supply voltage	230 VAC ± 10 %, 50/60 Hz The device is not equipped with a mains switch
Power consumption	5 VA
Sensors	GA-SG1 sensor
Relay output	Potential-free relay output 250 V, 5 A Operational delay 10 sec. Relay de-energize at trigger point.
Electrical safety	IEC/EN 61010-1, Class II ⧈, CAT II
EMC Emission Immunity	 IEC/EN 61000-6-3 IEC/EN 61000-6-1
Manufacturing year: Please see the serial number on the type plate	xxx x xxxxx xx **YY** x where YY = manufacturing year (e.g. 14 = 2014)

GA-SG1 sensor	
Principle of operation	Capacitive
Material	POM, PUR, AISI 316
Weight	350 g (sensor + fixed cable)
IP-classification	IP68
Operation temperature	0 ºC…+90 ºC
Cable	Fixed cable 2 x 0.75 mm^2. Standard length 5 m, other lengths optional. The max. length of the fixed cable is 15 m, can be extended. Maximum cable loop resistance is 75 Ω.
EMC Emission Immunity	 IEC/EN 61000-6-3 IEC/EN 61000-6-1
Manufacturing year: Please see the serial number from the bottom of sensor	GAxxxxx**YY** where YY = manufacturing year (e.g. 14 = 2014)

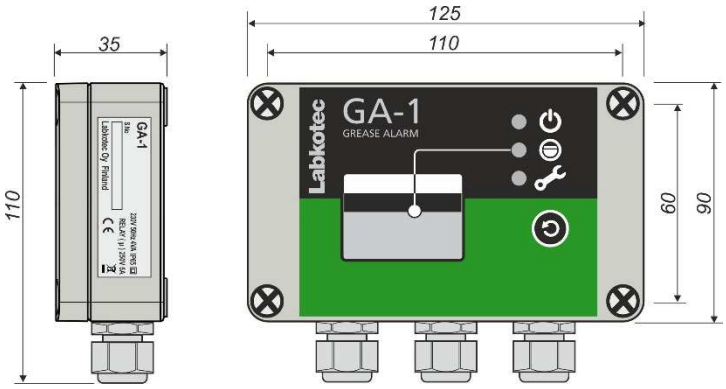

Figure 7. GA-1 control unit

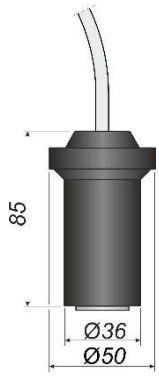

Figure 8. GA-SG1 sensor

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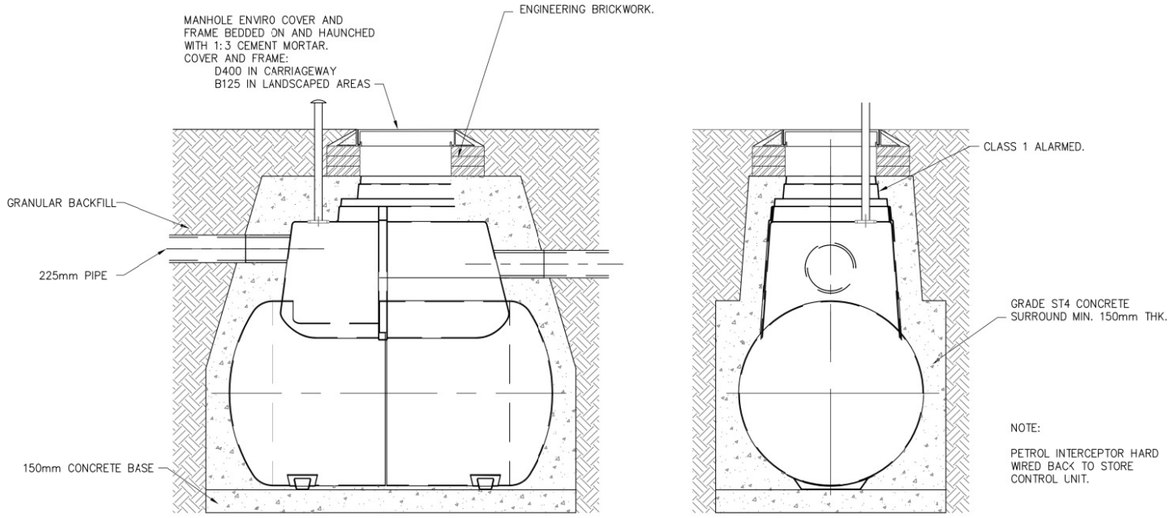
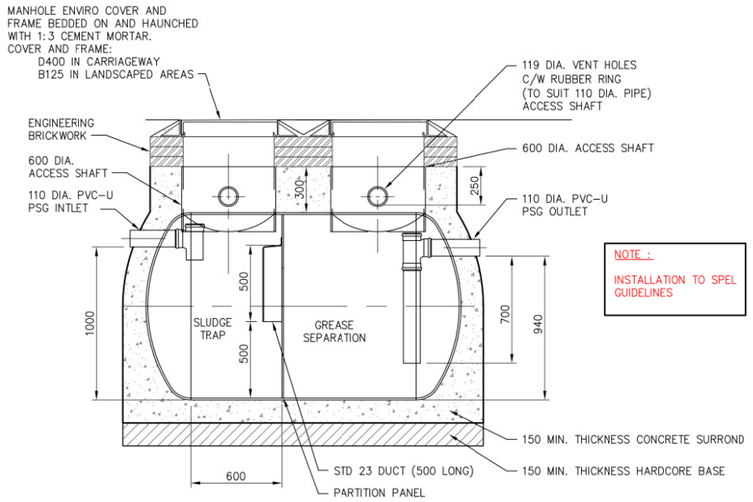
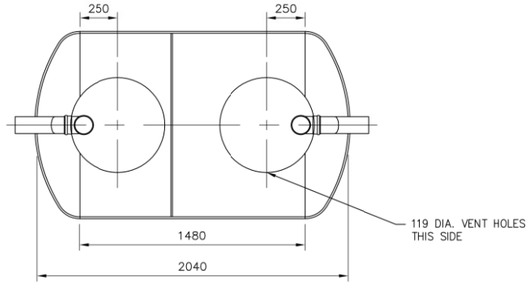


SPEL 206 C1 PETROL INTERCEPTOR (OR SIMILAR APPROVED). CONCRETE SURROUND

Scale 1:20



SECTION



PLAN

2000L SPEL GREASE INTERCEPTOR WITH TELEMETRY ALARM

SCALE 1:20

0mm 40mm 80mm

ORIGINAL
SHEET SIZE A1

This drawing should not be scaled. For construction purposes, work to figured dimensions only

McDonald's ™

FOR INFORMATION ONLY

Rev.	Description	Date	Chkd

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Client : McDonald's RESTAURANT

Project : McDONALD'S RESTAURANT

Title : PROPOSED GREASE TRAP & PETROL INTERCEPTOR

Project Engineer :	J.H.	Scale :	AS SHOWN
Project Director :	J.B.	Date :	APR' 2014
Status :	INFORMATION		

Drawing No G' TRAP & P'INTERCEPT Rev P1

Labkotec
INDUTRADE GROUP

L15624_e
F15625_e

Declaration of Conformity

This declaration certifies that the below mentioned apparatus conforms to the essential requirements of the EMC directive 2004/108/EY and Low-Voltage directive (LVD) 2006/95/EC.

Description of the apparatus:	Measuring and control unit with sensor
Type:	GA-1 Grease Alarm control unit with GA-SG1 sensor GA-2 Grease Alarm control unit with two GA-SG1 sensors
Manufacturer:	Labkotec Oy Myllyhaantie 6 FI-33960 Pirkkala FINLAND

The construction of the appliance is in accordance with the following standards:

EMC:	
EN 61000-6-1 (2007)	Electromagnetic compatibility, Generic standards – Immunity for residential, commercial and light-industrial environments.
EN 61000-6-3 (2007) +A1 (2011)	Electromagnetic compatibility, Generic standards – Emission standard for residential, commercial and light-industrial environments.
EN 61000-3-2 (2006) +A1+A2 (2009)	Electromagnetic compatibility, Product family standard: Harmonic current emissions.
EN 61000-3-3 (2008)	Electromagnetic compatibility, Product family standard: Voltage changes, fluctuations and flicker sensation.
LVD:	
EN 61010-1 (2010)	Safety requirements for electrical equipment for measurement, control and laboratory use. Part 1: General requirements.

This product is CE-marked since 2013.

Signature

The authorized signatory to this declaration, on behalf of the manufacturer, and the Responsible Person based within the EU, is identified below.

Pirkkala 20.5.2013

[redacted]

Ari Tolonen
CEO
Labkotec Oy

SPEL Grease/Fat Separators

Introduction

Grease separators are used to remove fat and grease from waste water. This is often essential to eliminate incidents of drain blockages caused by the waste from catering establishments. The operation of septic tanks, pumps, and sewage treatment systems will also be improved by removing the fat and grease from the effluent.

Siting and Installing the Tank

The tank should not be installed near a road or driveway, where it could be subjected to high external loads, unless the installation is designed to withstand such loadings so they are not transferred to the tank shell.

Where the tank is to emptied using a tanker, it should be sited within 30m of a vehicle access provided that the invert level of the septic tank is no more than 3m below the level of the vehicle access. This distance may need to be reduced where the depth to the invert of the tank is more than 3m. There should also be a clear route for the hose such that the tank can be emptied and cleaned without the contents being taken through a dwelling or place of work.

Adequate ventilation of the tank and the inlet pipework must be provided to prevent the accumulation of fermentation gases.

For full installation instructions concerning tank specification handling and burial please consider our supplied installation guidelines, Sec4.

Operation

Please refer to a supplied drawing. Contaminated water flows into the tank through the inlet pipe. Heavy deposits will settle on the bottom of the chamber and light contaminants will mostly float on top of the water. Cleaner water flows through to the second chamber where water is allowed to pass out of the tank taken from the cleanest part of the chamber.

Maintenance

Grease, sludge and other fatty effluents remain in the tank until removed by a specialist cleansing or waste disposal contractor. The tank must be emptied periodically of retained grease, sludge and other fatty effluents. Other than this action SPEL Grease separators are essentially maintenance free, however, it is not possible to predict site specific maintenance requirements. SPEL tank shells usually carry a 25-year warranty.

© SPEL Products, Lancaster Road, Shrewsbury, Shropshire. SY1 3NQ. Tel: +44 (0)1743 445200

Alarm Options
SPEL can provide a range of alarms to suit your needs.

Access
SPEL Grease separators have good access to both chambers for period emptying of retained grease, sludge and similar fatty effluents. Access is made in each case through a circular access shaft of 600mm diameter at the crown of the chamber.

Emptying Period
Periods between emptying will have to be determined depending on site conditions but normally at least twice a year.

Emptying Procedure
Typically the contents of the chambers will be sucked out by a specialist cleansing or waste disposal contractor. Both light and heavy deposits should be removed at this time. A Large hose is usually lowered down into the chamber through the access shaft. As the contents are sucked out care should be taken to ensure that both chambers contents are reduced equally. If one chamber is allowed to contain too great a quantity of fluid in comparison with the other chamber damage to the dividing baffle wall may result. Following removal the tank should be re-charged with clean water. The removed contents should be disposed of by the specialist contractor.

The contents of this document are supplied for general guidance only. SPEL Products can accept no liability for harmful incidents that arise as a result of the contents of this document. It is not possible for SPEL Products to predict site specific operational or maintenance requirements.

Appendix C

Maintenance Schedule

Inspection Log - Year ……..sheet 1 of 2

Inspection Date	A - Surface Water Catchpit Manholes	B - Foul Water Manholes	C - Gulley	D - Channel Outlets	E – Surface Water Treatment	F – Surface Water Flow Control Chamber	G – Cellular Attenuation Tank	H - Grease Trap	Comments
January									
February									
March									
April									
May									
June									

How to complete this Log:

1.0 Write date in LH column.
2.0 Tick which items have been inspected for that date.
3.0 Add to notes and maintenance completed e.g. gullies / catchpit's emptied

Inspection Log - Year ……..sheet 2 of 2

Inspection Date	A - Surface Water Catchpit Manholes	B - Foul Water Manholes	C - Gulley	D - Channel Outlets	E – Surface Water Treatment	F – Surface Water Flow Control Chamber	G – Cellular Attenuation Tank	H - Grease Trap	Comments
July									
August									
September									
October									
November									
December									

How to complete this Log:

1.0 Write date in LH column.
2.0 Tick which items have been inspected for that date.
3.0 Add to notes and maintenance completed e.g. gullies / catchpit's emptied

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Survey > Plan > Engineer

Issue 4: 07 July 2025

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

McDonald's, Blairgowrie (ST2473)

Prepared for: McDonald's Restaurants Ltd

Ref: 003_4240368_KJ_CEMP

Document History

Issue	Date	Description	Prepared By	Checked By
1	16 Sept 24	First Issue	K Jackson	H George
2	07 Feb 25	Site layout Updated	K Jackson	H George
3	20 June 25	Building type and site layout updated	K Jackson	H George
4	07 July 25	Further update to site layout	K Jackson	H George

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8.0 Delivery Times, Planning and Monitoring 3
9.0 Site Access, Construction Traffic Management and Routing 3
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Figures

Figure 1: Construction Management Plan

1.0 Introduction

1.1 McDonald's Restaurants Ltd have appointed Glanville Consultants to prepare a Construction Environmental Management Plan (CEMP) for the proposed McDonald's Restaurant to be located off Perth Road, Blairgowrie. This CEMP is limited to the McDonalds Store and associated groundworks up to and including the Modular building drop.

2.0 Existing Conditions

1.2 The site is located to the west of the A93 Perth Road approximately 250m south of its junction with the B947 Essendy Road. The site is surrounded by unmanaged fields the north, a retail area to the south, a residential area to the east and drainage ponds associated with the retail park and an established wooded area beyond to the west.

3.0 Construction Conditions

3.1 The site will be redeveloped to provide a new building and parking for use as a McDonald's Restaurant.

3.2 The proposed McDonald's restaurant is a modular building, manufactured off-site and assembled on site. The design finished levels will be set to accommodate the surrounding levels and will be very similar to the existing land minimising the extent of filling and excavation requirements. Where possible, excavated suitable material will be re-used as fill, to reduce the volume of spoil and fill to be removed and imported to the site.

3.3 Given the nature of the construction works described above, the volume of HGV vehicles using the site during construction will be minimal. The majority of traffic movements will be contractors' vehicles, consisting of cars and vans.

3.4 The duration of construction is likely to be approximately 14 weeks from the commencement of groundworks to final completion. The last 6 weeks relate to the Modular building fit out. If required local residents may be informed by letter of the construction periods and delivery times as well as contact details for site staff, should they have any queries or concerns.

3.5 Working Hours shall be:

Monday to Friday	07:30 to 18:00
Saturday	07:30 to 18:00

4.0 Main Plant

4.1 A pilling rig may be required, subject to detailed design.

4.2 360^0 machines will be used for excavation and bulk loading which will be sized to access and operate with the confines of the site.

4.3 Crushing equipment may be used on site, to enable recycling of existing paved areas as suitable granular fill.

4.4 Air quality within the site will be continually monitored and action taken if required. Lorry mounted hiabs will be used to off load most items required for the works.

4.5 There will be a requirement for craneage during the course of the construction works. Craneage will be on a contract hire basis and kept to a minimum.

5.0 Health and Safety

5.1 McDonald's Restaurants Ltd and their appointed contractors will carry out all operations on this development in full compliance with all relevant health and safety regulations, which includes making the statutory notification to the Health and Safety Executive (HSE) using notification form F10. The Construction Phase Health and Safety Plan will be drawn up by the Principal Contractor. This will then be updated as the development progresses.

5.2 This CEMP includes details of traffic management, and these details will be implemented and amended to suit the progress of construction. The CEMP will include both pedestrian and vehicle routes to and from the site, as well as movement on the site itself. This is discussed in greater depth later in this document.

5.3 All contractors employed by McDonald's Restaurants Ltd will attend a pre-contract meeting, during which their health and safety documentation will be reviewed and amended as necessary. These meetings are fully documented.

5.4 All relevant health and safety signage will be displayed as necessary.

6.0 Fire and Emergency Procedures

6.1 Contact names and telephone numbers will be made available in case of 'out of hours' emergencies relating to the site. This information will be displayed on the hoarding.

6.2 The Principal Contractor shall implement procedures to protect the site from fire.

6.3 A Site Fire Safety Co-ordinator will be appointed to assess the degree of fire risk and formulate a Site Fire Safety Plan, which will be updated as necessary as the works progress and will also include the following:-

- Hot Work Permit regime.
- Installation of the site fire-fighting equipment e.g. establishing fire points and installing and maintaining fire extinguishers etc.
- Evacuation alarm.
- Material storage and waste control.
- Fire Brigade access.

7.0 Protection of the Public and Pedestrians

7.1 The boundary to the site will be reinforced with hoarding, secured Heras fencing or approved final fencing to prevent unauthorised access as necessary. Boundary fencing / hoarding will be erected prior to any construction works commencing on site. On the hoarding will be an appropriate number of notices prohibiting unauthorised entry, including a contact procedure and number for any queries, complaints and/or emergencies in line with the Considerate Constructors Scheme. Gates will control the access on and off the site, which will be securely locked at the end of each working day. A banksman will be in attendance whilst any construction vehicles enter or exit the site to ensure pedestrian and vehicle safety.

7.2 A daily check will be completed of site security fencing, gates and external signs in addition to the normal on-site safety inspections.

8.0 Delivery Times, Planning and Monitoring

8.1 Deliveries will be scheduled, and drivers will contact the site manager to ensure the deliveries can be accepted. Deliveries will only be scheduled within the hours of operation stated in section 3.5. All site traffic will be directed into the site. No loading, unloading, or waiting will be permitted from the public highway. This will be monitored by site security staff.

8.2 Deliveries will be programmed to be as efficient as possible, minimising vehicle movements and journey distances using the following principles:

- Procurement of materials from local suppliers where possible and appropriate.
- Delivery of waste or recyclable materials to local centres if possible.
- Maximising the size of loads by appropriately sizing on site storage areas and calculating material and waste loads accurately.
- Maximising the size of loads by coordinating material requirements and placing larger orders with fewer suppliers.
- If possible, using delivery vehicles to remove waste.

8.3 Deliveries will be monitored against the delivery plan to check the time, vehicle and route taken from the site. Drivers not complying with the requirements of this plan will be contacted and appropriate action taken.

9.0 Site Access, Construction Traffic Management and Routing

9.1 The site is accessed from Perth Road, via an existing access to a small car park that currently occupies the southwest corner of the site. Perth Road extends to the city of Perth, approx. 14 miles to the south, where connections to the M90, A9 and A90 are available. The A93 has a junction with the A923 allowing access westwards towards the A9, and the A926 eastwards towards Kirriemuir and the A90 Aberdeen to Dundee dual carriageway. Construction traffic travelling to and from the site will be required to travel these main roads and avoid using residential streets. Clear signage will direct construction traffic directly into the works area. A banksman will ensure deliveries are taken safely through the car park.

9.2 After securing the site, the first activity will be to set up the site routes, accommodation, and signage in accordance with the construction traffic management plan (Figure 1). Figure 1 also demonstrates the ability for HGVs to enter and exit the site in a forward gear with no requirement for any vehicles to reverse onto or off the highway at any time.

9.3 Figure 1 shows the access position and route for pedestrians, HGVs and staff parking. The modular building is craned into position, with the crane being a mobile one and the modules brought in on HGV vehicles.

9.4 Site staff will follow a procedure to regulate, direct and monitor pedestrian and vehicle movements in and out of the site. All drivers and pedestrians will be asked to sign in and out of the site and the induction status of staff will be checked accordingly. Those requiring a site induction will be taken to the appropriate area for this to be completed.

9.5 Site staff and banksmen will be given training appropriate to their roles. This training will be updated with changes in the construction stages which may require different vehicle access rules and pedestrian routing.

9.6 Vehicles will only access the site using the designated access points as shown on Figure 1 and no vehicles or machinery will be permitted to stand or wait on the public highway.

9.7 No machinery will be permitted to operate over the public highway and no materials will be off-loaded or stored on the public highway.

10.0 Staff Transport and Parking

10.1 All construction staff will be provided with information regarding local public transport options and encouraged to travel to site using sustainable transport modes. The main form of public transport in Blairgowrie are buses, with a northbound and southbound stop on Perth Road adjacent to the site. When travelling by car to site, all construction personnel will be inducted on the rules for parking on site.

11.0 Construction Site Layout

11.1 The positioning of vehicle and pedestrian routes, site offices, loading and unloading areas, material waste storage and re-cycling, staff parking will be subject to changes by the main contractor. Different stages of construction will require movement of some of the temporary facilities and traffic routes which will be illustrated on updated Construction Site Layout Plans. Any movement of any vehicle routes will take into account the turning manoeuvre of the largest vehicle expected to access the site. Figure 1 illustrates the proposed layout of temporary construction facilities and routes to enable work to proceed at the start of the construction stage. This Construction Site Layout plan demonstrates adequate space on site to manage construction activities without causing an unacceptable impact upon the surrounding highway network.

12.0 Storage

12.1 All materials will be stored on site in designated areas and in line with the manufacturers' instructions. Materials will be off loaded from delivery vehicles and then moved to the appropriate areas by mechanical means where necessary/appropriate. Any vehicle movement will be in line with the relevant Construction Management plan and the designated site routes.

13.0 Waste Disposal

13.1 Every effort will be made to keep waste materials to a minimum during the construction of the site. Any waste that is unavoidable will be disposed of as per the manufacturers' instructions and with regards to COSHH and waste regulations and guidelines.

13.2 A Site Waste Management Plan will be developed prior to the commencement of work on site with targets set for the management, monitoring and reduction of site waste. Separate skips are to be used on site where possible; to segregate waste before a licensed waste carrier removes it. On no account will waste materials be burnt on site.

13.3 The proposed site levels will be similar to existing, to reduce as far as possible the removal and import of road construction materials.

14.0 Environmental Issues

14.1 The Principal Contractor will operate an environmental policy in which we pursue the following objectives.

To:

- Conduct activities with proper regard to the protection of the environment.
- Comply with all relevant regulatory and legislative requirements and codes of practice.
- Communicate with local communities to reduce disturbance and disruption.
- Ensure that staff have a good understanding of the environmental impacts of the project and what is expected of them to minimise the impacts.
- Ensure that suppliers and sub-contractors are aware of the plan and ensure the same standards to their own work.
- Latest Relevant Covid 19 Government Guidelines to be followed.

14.2 During the early stages of the project the following activities will be carried out to deal with environmental management:

- Preparation of the Project Environmental Plan.
- Preparation and consultation with client and statutory authorities to obtain any approved licences and consents and putting any controls in place through the Project Environmental Plan.

15.0 Control of Noise

15.1 Best practicable means will be employed at all times and in all areas to minimise noise and vibration emissions from the works. The relevant recommendations for the control of noise and vibration on construction and open sites in the approved Code of Practice BS5228:2009 will be adopted.

15.2 In general the following measures will be taken:

a. All handheld and portable equipment where practicable will be electrically powered.
b. All plant and equipment will be maintained in good working order.
c. Plant, when in operation intermittently, will be switched off during periods of inactivity.
d. All vehicles will observe site speed limits.
e. Stationary equipment and plant will be placed so as to provide a screening to other items of plant and located to provide minimum noise emissions in the direction of noise sensitive areas.
f. Care will be taken when loading and unloading materials to limit impact noise.
g. Vehicles will not be permitted to queue on the road or pavement outside the site access.
h. Vehicle parked within the site, outside working hours will have their engines switched off.
i. Vehicle routes and traffic management plans will be arranged to avoid where possible any reversing operations.
j. Activities which can produce significant levels of noise will be arranged for times which are less likely to cause disturbance.

15.3 In addition to the above, any plant on site will be compliant with EU/UK noise limits applicable to that equipment or is no noisier than would be expected from the noise levels quoted in BS5228. All plant will be maintained properly and operate in accordance with manufacturers recommendations. All plant will be fitted with appropriate noise and vibration attenuation measures in place, based on guidance given in BS5228.

16.0 Control of Dust, Smell and other Effluvia

16.1 The measures set out below summaries the measures set out within the IAQM guidance.

- display the name and contact details of the person accountable for air quality and dust issues on the site boundary (i.e., the environment manager/engineer or site manager);
- display the head or regional office contact information on the site boundary.
- record all dust and air quality complaints, identify cause, take appropriate measures to reduce emissions in a timely manner and record the measures taken.
- make the complaints log available to the local authority when asked.
- record any exceptional incidents that cause dust and/or air emissions, either on- or off- site and the action taken to resolve the situation in the logbook.
- carry out regular site inspections to monitor compliance with the DMP, record inspection results and make inspection log available to RC when asked.
- increase frequency of site inspection by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged periods of dry or windy conditions.
- plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles.
- fully enclose site or specific operations where there is a high potential for dust production.
- avoid site runoff of water or mud.
- keep the site fencing, barriers and scaffolding clean using wet methods.
- remove material that have a potential to produce dust form site as soon as possible, unless being re-used on site. If they are being re-used on site cover as described below.

- Cover, seed or fence stockpiles to prevent wind whipping.
- ensure all vehicles switch off engines when stationary - no idling vehicles.
- avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction e.g., suitable local exhaust ventilation systems.
- ensure an adequate water supply on site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- use enclosed chutes and conveyors and covered skips.
- minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
- avoid bonfires and burning of waste materials.
- ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- use water-assisted dust sweepers on the access and local roads, to remove, as necessary, any material tracked out of the site.
- avoid dry sweeping of large areas.
- ensure vehicles entering and leaving the site are covered to prevent the escape of materials during transport.
- Inspect on-site haul roads for integrity and instigate necessary repairs to the surfaces as soon as reasonably practicable; Record all inspections of haul routes and any subsequent action in a site logbook.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site) where reasonably practicable.
- Ensure vehicles entering and leaving the site are covered to prevent the escape of materials during transport.

Additional Desirable Measures:

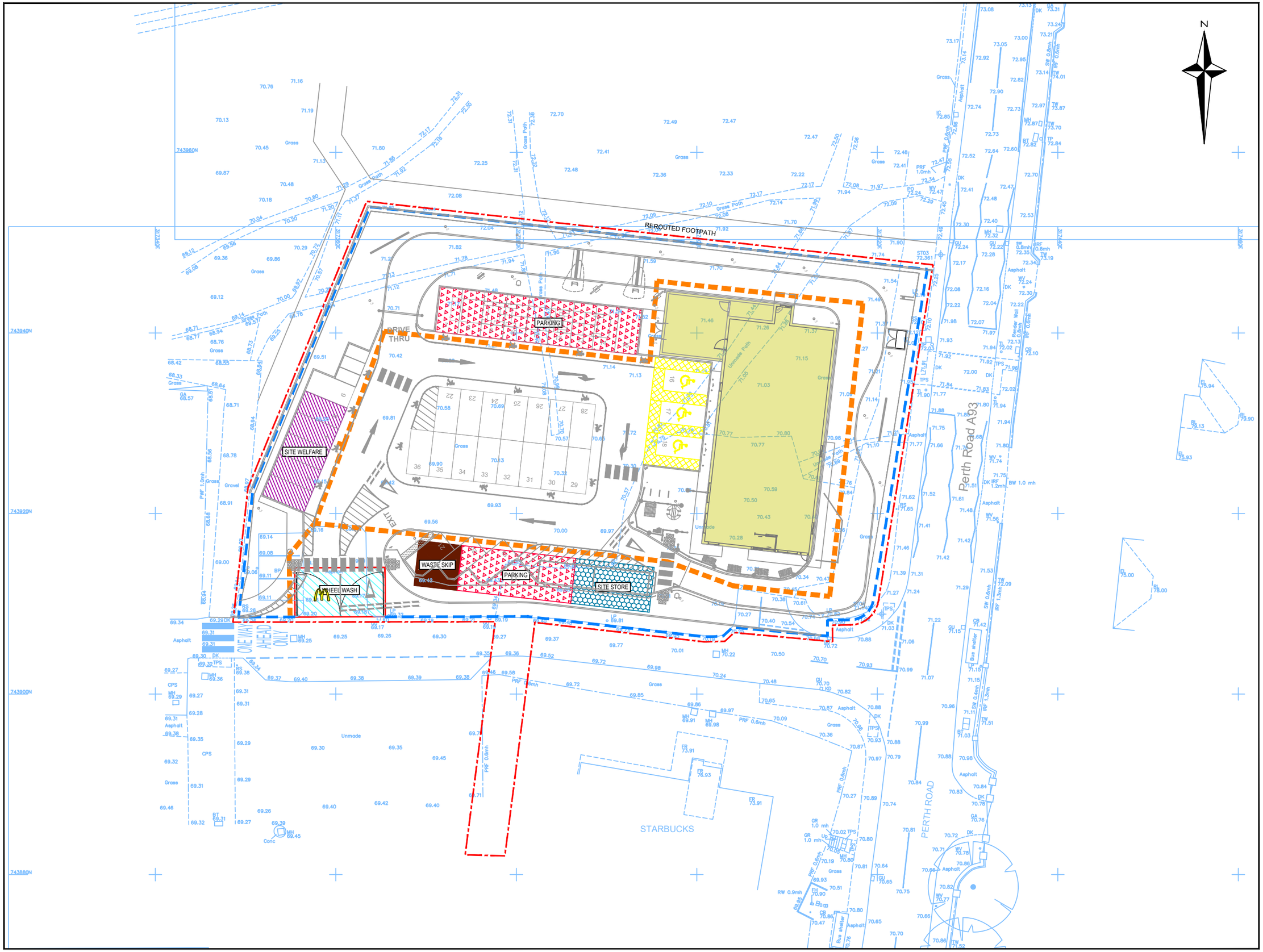
- undertake daily on-site and off-site inspection, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars, windows sills within 100m of site boundary, with cleaning provided if necessary.
- implement a travel plan that supports and encourages sustainable travel.
- re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
- use hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
- only remove the cover in small areas during work and not all at once.
- ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material or overfilling during delivery.
- avoid scabbling where possible.
- for smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.

17.0 Wheel Cleansing Facilities

17.1 There will be some excavations for services and drainage works and re-shaping of levels. During these phases of the development, wheel cleansing and road sweeping will be applied as necessary. As soon as practicable, excavations will be reinstated reducing any potential for tracking any dirt or mud onto customer parking areas or public roads.

17.2 During the remainder of the construction period, the cleanliness of the site roads and roads surrounding the development will be monitored and road sweepers brought in as and when required.

Figures



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
Scale 1:200

NOTES

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KEY

- EXISTING SURVEY
- PROPOSED SITE LAYOUT
- SITE BOUNDARY
- CONSTRUCTION HERAS FENCING
- PEDESTRIAN ROUTE
- SITE OFFICES (AND WELFARE)
- SITE PARKING AND PLANT STORAGE
- SITE MATERIALS STORAGE (INCLUDING BUNDED IMPERMEABLE AREA FOR CHEMICAL STORAGE)
- SITE WASTE (SKIPS)
- WHEEL WASH

FOR INFORMATION ONLY

FIGURE 1

Rev.	Description	Date	By	Chkd
I4	FURTHER UPDATE TO SITE LAYOUT	07:07:25	KJ	HBG
I3	BUILDING TYPE AND SITE LAYOUT UPDATED	19.06.25	KJ	HBG
I2	SITE LAYOUT UPDATED	07.02.25	KJ	HBG
I1	ISSUED FOR PLANNING	16.09.24	KJ	KJ

Glanville
Survey > Plan > Engineer
Civil Engineering · Highways Engineering · Structural Engineering · Building Surveying · Transport Planning · Geomatics
Hertfordshire | Oxfordshire | Cambridgeshire | Bristol

Client : McDonald's RESTAURANT

Project : McDONALD'S RESTAURANTS
PERTH ROAD, BLAIRGOWRIE
PH10 6FW [ST2473]

Title : CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Engineer : KJ | Date : AUGUST 2024
Director : HBG | Scale : 1:200@A1
Status : INFORMATION

Drawing No. 4240368-SK07 | Rev I4

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McDonald's Restaurant
Blairgowrie, Perth Road
LZC Report Rev A
30th June 2025

Approval and Revision History

Rev	Date	Description	Prepared by	Checked by	Approved by
A	30-06-2025	Building Type updated to NG50	M Mohammed	A Sands	A Sands
00	08-11-2024	First Issue	M Mohammed	A Sands	A Sands

Document Title:	Blairgowrie LZC Report Rev A
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1 Abbreviations and Terms

Abbreviation	Description
LZC	Low and Zero Carbon
DHW	Domestic Hot Water
EPC	Energy performance Certificate
BER	Building Emission Rate
TER	Target Emission Rate
HVAC	Heating, Ventilation and Air Conditioning
SFP	Specific Fan Power
AHU	Air Handling Unit
NCM	National Calculation Methodology
ASHP	Air Source Heat Pump
PV	Photovoltaic
CHP	Combined Heat and Power
GSHP	Ground Source Heat Pump

2 Introduction

This low carbon report has been carried out by Mautasim Mohammed who has studied Bachelor of Technology in Mechanical Engineering and holds MSc in Mechanical Engineering from University of Plymouth. The author has gained over 15 years of experience as a Mechanical Engineer working with some of the UK's leading environmental consultants including PHA Consult, Foster and Partners and Atkins. He has been involved in carrying out thermal modelling, energy analysis, feasibility studies, and design of low and zero carbon systems such as solar thermal and PV panels for wide variety of schemes for commercial, retail, residential and mixed-use developments. The author is also a registered low carbon energy assessor for level 5 buildings.

The main objective of this report is to satisfy the planning conditions for the proposed new McDonald's restaurant in Blairgowrie as stated in the Perth and Kinross Local Development Plan 2 Nov 2019.

The importance of LZC technologies is becoming ever greater as we aim to reduce the stress on natural resources along with minimising the impact of carbon emissions on the environment. The LZC technologies are most efficient and cost-effective when they are used to meet the energy demands already minimised through efficient design and use of energy conservation measures.

The proposed restaurant is a single story NG50 modular type building which consists of kitchen, dining, office, WC's, plant and BOH areas with a total area of approximately 287m².

The baseline energy consumption figures used for this study were derived from BRUKL results that had been used to assess compliance with Section 6 of the Scottish Building Regulations 2022. The potential of using renewable and low/zero carbon technologies to reduce building-related CO_2 emissions and meet the the Perth and Kinross planning requirements has been evaluated.

The following pages provide an analysis of the applicable LZC technologies and anticipated performance to achieve a reduction in energy demand and carbon emissions. We would advise that all the figures at this stage are preliminary and should be verified upon the final selection of renewable and low-energy options. This applies to actual installation costs, actual performance of the selected equipment, and on-site conditions.

3 Local Planning Requirements

The Climate Change (Scotland) Act 2009 creates a legal framework for the delivery of greenhouse gas emissions reductions in Scotland. Section 72 of that Act requires planning authorities to include policies in their LDPs to ensure that all new buildings avoid a specified and rising proportion of the projected greenhouse gas emissions from their use. This can be achieved through the installation and operation of low and zero-carbon generating technologies (LZCGT).

Perth and Kinross Local Development Plan Policy 32: Embedding Low and Zero Carbon Generating Technology in New Development - Proposals for all new buildings will be required to demonstrate that at least 10% of the current carbon emissions reduction set by Scottish Building Standards will be met through the installation and operation of low and zero-carbon generating technologies. A statement will be required to be submitted demonstrating compliance with this requirement. The percentage will increase at the next review of the local development plan.

This requirement will not apply to the following developments:
• Alterations and extensions to buildings.
• Change of use or conversion of buildings.
• Ancillary buildings that stand alone and cover an area less than 50 square metres.
• Buildings which will not be heated or cooled, other than by heating provided solely for frost protection.
• Buildings which have an intended life of less than two years.

4 Scottish Building Regulations

A new version of the Scottish Building Regulations Non-domestic Technical Handbook 2024 was released in April 2024, applicable to work that is subject to a building warrant submitted on or after 1 April 2024. The new standards are intended to achieve an improvement in new buildings, reducing carbon emissions by approximately 20% compared to the previous standards.

5 Calculation Methodology

Both Part L and EPC calculations are based on annual predicted CO2 emissions due to energy consumed by fixed building services. These regulated loads include heating and cooling plant, fans, pumps, and lighting. Unregulated loads such as portable appliances (small power), vertical transportation and external lighting are not accounted for.

To satisfy Scottish Building Regulations, all new buildings must achieve regulated carbon emissions equal to or lower than a specified target. The building's regulated carbon emission is known as the Building Emission Rate (BER) and is calculated based on the actual building 'as constructed' using standard occupancy patterns, operating conditions, and fuel CO2 emission rates, with corrections applied to give credit for power factor correction and energy metering capability. The Target Emissions Rate (TER) is based on the performance of a notional building of the same size and shape as the actual building, using the same occupancy patterns, operating conditions, and fuel CO2 emissions rates but with predefined building performance criteria.

The building energy compliance calculation has been performed based on the design of HVAC systems, and lighting systems using EDSL TAS. The results of this study will demonstrate if the building meets the four criteria's namely TER, building fabric thermal performance, limiting the effects of heat gains in summer, building performance consistency with the BER, and

providing energy efficient operation of the building. The report will highlight areas where changes are required in the design if it does not meet the compliance criteria.

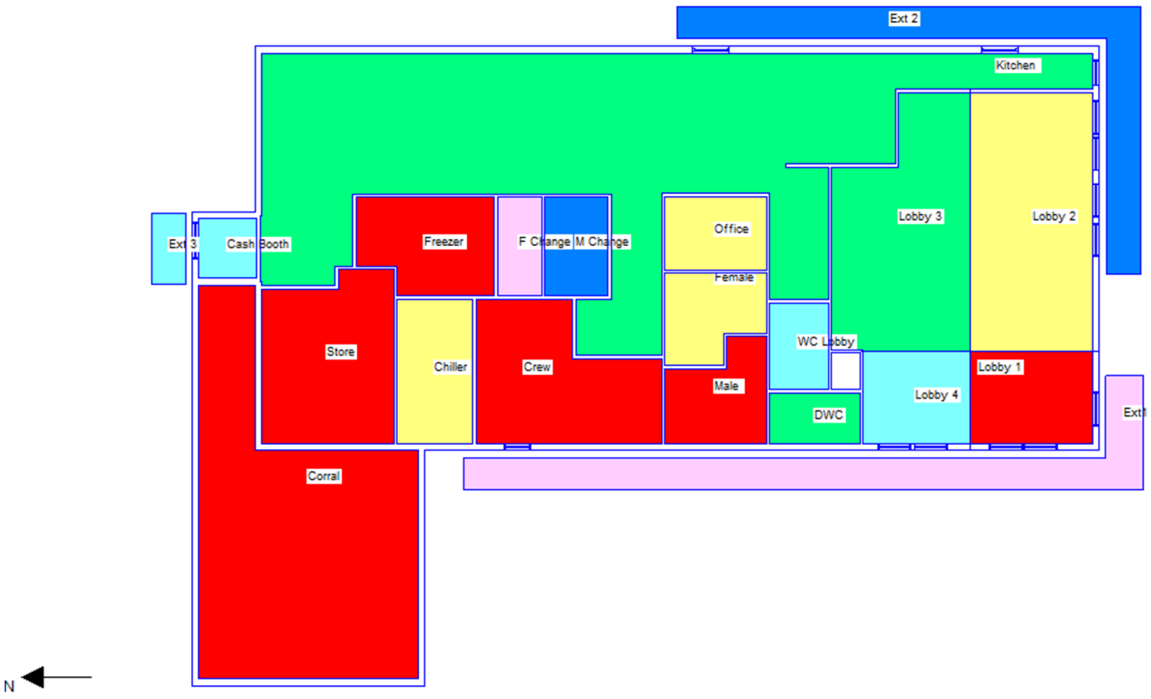
The EPC Asset Rating is calculated in a similar way, in this case by comparing the predicted emissions from the actual building with a Standard Emission Rate (SER). The SER is mined by applying a fixed improvement factor to the emissions from a reference building. The reference building is identical to the Part L notional building except that heat is always provided by gas and all spaces are mixed mode, cooled to 27°C irrespective of the systems in the actual building.

5.1 Thermal Model

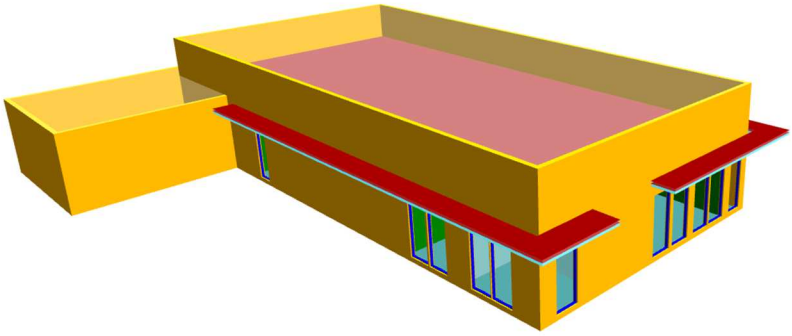
The calculations for this assessment were carried out using EDSL TAS 9.5.6, a dynamic thermal simulation package approved for the purposes of undertaking Part L and EPC Level 5 calculations. The 3D model (below) was constructed in the TAS 3D Modeller with reference to the 2D plans and sections available at the time of the analysis.

The model was zoned in accordance with the NCM guidance based on internal conditions, servicing strategy, solar orientation, and daylight access. Day-lit spaces were divided into two sub-zones: the first representing the day-lit space within 6m of the building façade, the second representing the non-day-lit space beyond 6m from the façade.

The below images show the 3d model and internal zoning for the ground floor, and roof including a 3D view extracted from the TAS model.



Ground Floor



3D Model

6 Energy Benchmarking

6.1 Option1 - Base Case

This option has the standard HVAC system configuration that has been implemented in McDonald's stores for this type of modular building. It consists of Mitsubishi Air Source heat pumps serving kitchen AHU (S1) and ground floor lobby AHU (S2)

An air source heat pump is a system that transfers heat from outside to inside of the building or vice versa. It works on the principle of vapor compression refrigeration and uses a refrigerant system involving a compressor and condenser to absorb heat from one place and discharge it to another.

Air Source Heat Pumps

The heat pump units provide both heating and cooling to meet the building load to maintain internal conditions. Both S1 and S2 AHUs are supply-only AHUs with no form of heat recovery and therefore does not include an exhaust fan as part of the AHU.

A separate kitchen extract fan is used to extract from the cooking canopies along with a general extract from the wash-up, beverage cell, and storeroom.

Make-up air to the WC areas is provided by the S2 unit with a separate toilet extract fan to achieve the designed extract rates. Cooling and heating to the crew room and manager's office are provided by Mitsubishi split a/c units with fresh air served from the S2 unit.

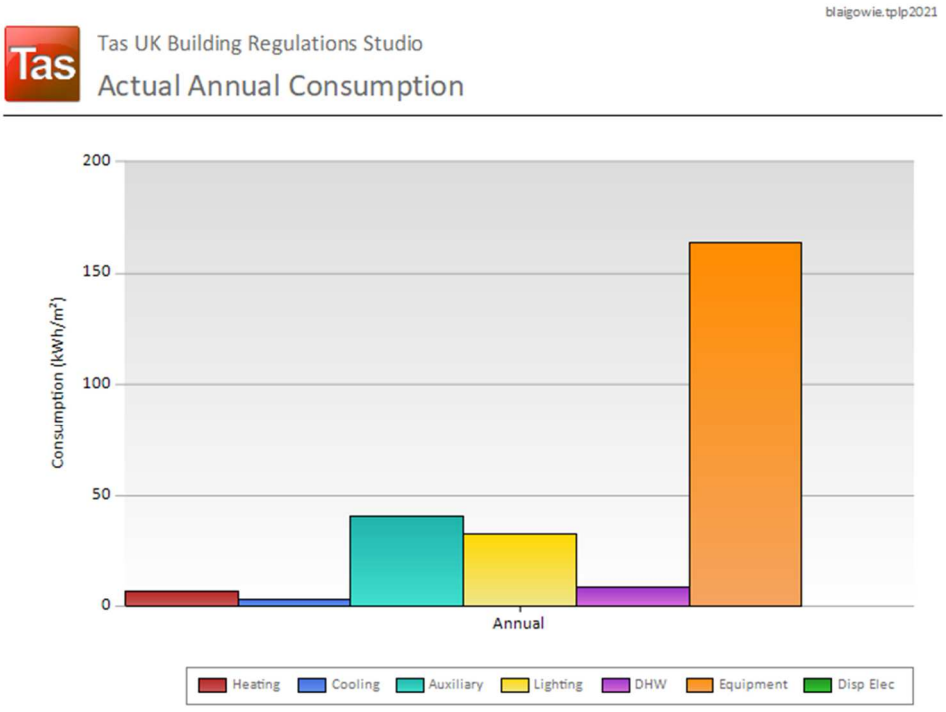
An air source heat pump is used to provide DHW. One of the main advantages of using this type of system is higher coefficient of performance compared to an electric DHW system.

The air source heat pump DHW system was modelled in TAS as a primary heat source to meet 100% of the hot water demand of the building. A notional efficiency of 4.0 was used for the assessment based on the AO Smith heat pump system (ref – HRYO Pi Series).

Hot Water Storage Cylinders

Hot Water Air Source Heat Pump

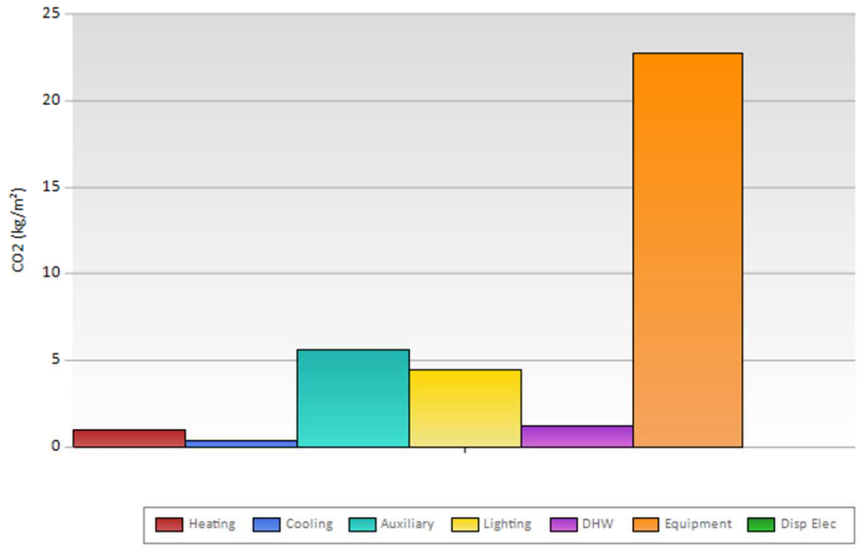
To assist with the assessment of different renewable technologies a computational building model used for building compliance calculations under Section 6 of the Scottish Building Regulations 2022 has been used to predict energy use and carbon dioxide emissions. The building operational characteristic was defined in accordance with National Calculation Method (NCM) profiling.



	Heating	Cooling	Auxiliary	Lighting	DHW	Equipment	Displaced Electricity
Consumption (kWh/m²)	6.71	3.13	40.59	32.38	8.84	163.57	0.00

Tas UK Building Regulations Studio

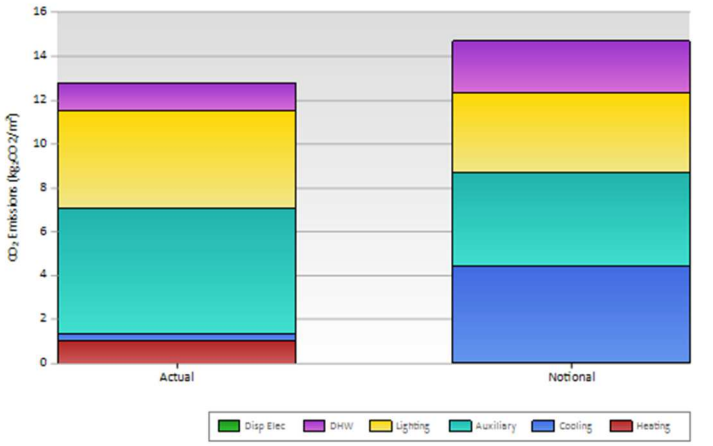
Actual Annual CO2 Emissions



	Heating	*Cooling*	*Auxiliary*	*Lighting*	*DHW*	*Equipment*	*Displaced Electricity*
CO2 (kg/m²)	1.04	0.36	5.63	4.49	1.23	22.69	0.00

Tas UK Building Regulations Studio

Annual CO2 Emissions Comparison



	Actual	*Notional*
Heating (kgCO2/m²)	1.04	0.06
Cooling (kgCO2/m²)	0.36	4.37
Auxiliary (kgCO2/m²)	5.63	4.26
Lighting (kgCO2/m²)	4.49	3.64
DHW (kgCO2/m²)	1.23	2.37
Displaced Electricity (kgCO2/m²)	0.00	0.00
*Equipment (kgCO2/m²) **	*22.69*	*22.12*
Total (kgCO2/m²)	12.75	14.70
Total Floor Area (m²)	287.05	287.05

** Energy used by equipment does not contribute to total value - it is presented here for comparison only*

The base case results shows that the carbon emissions for the proposed building are lower than the notional building and therefore complies with the Scottish Building Regulations 2022 Section 6.

7 LZC Technology Options

7.1 Summary of the Technical Feasibility Assessment of Renewable and LZC Options

A summary of low carbon and renewable technologies have been considered as part of this report is shown in the table below.

Technology	Description	Benefits	Issues/Limitation	Consider for site
Solar photovoltaic	Solar photovoltaic systems convert energy from sun into electricity through semiconductor cells.	Low maintenance costs Can be integrated into the building design. Modules connected to inverter can convert DC to AC to be used in buildings.	Orientation of the building or roofs and available orientation of south facing roof and façade. Integration into roof, façade, and shading devices. Solar access to the site and potential obstacles such as buildings and trees.	Yes
Solar thermal	Solar water heating systems use the energy from the sun to heat water most commonly for hot eater needs. There are two standard types of collectors used: flat plate and evacuated tube.	Low maintenance costs Can be easily integrated with the existing hot water system	Large surface area required to meet the hot water demands of the building. May require additional gas or electric booster during winter	No
Air Source Heat Pumps	An air source heat pump extracts ambient heat energy in outside air and use this for heating and cooling and to produce domestic hot water.	Heat pumps can provide cooling in summer, as well as heating. Heat pump requires less maintenance than a combustion-	Not suitable for use with conventional radiators. High Capital costs	Yes

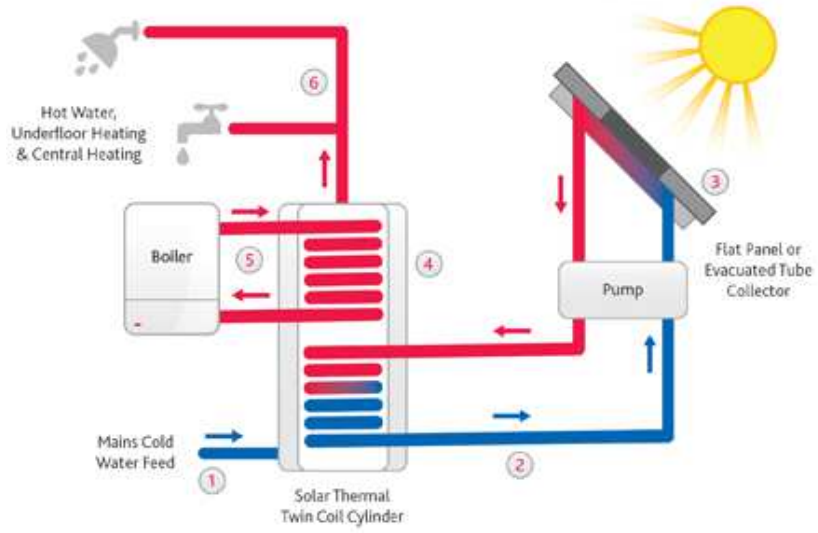
Technology	Description	Benefits	Issues/Limitation	Consider for site
		based heating system.		
Ground Source Heat Pump	Ground source heat pump uses the ground as the source of heat, with the building water circuit as the heat sink.	Seasonal performance of GSHP is better than air source heat pumps. Can provide both heating and cooling. Less maintenance	High Capital costs A detailed ground survey required to be conducted to determine the geology. Implementation of this system is easier at an early stage so that it can be incorporated with piling foundations.	No
Wind Turbine (Stand-alone)	Building-mounted or free-standing wind turbines can be used for onsite electricity generation and any excess power can be stored in batteries or exported to the grid.	Low maintenance costs	Planning issues Roof space requirements and safe distance from other buildings.	No
Biomass	Biomass is an alternative solid fuel to conventional fossil fuels and has an impact on carbon emissions that is close to neutral.	Potential to reduce CO_2 emissions.	Complex feeding mechanism. Significant area required for fuel delivery and storage.	No
Gas Fired CHP	CHP is a process involving the simultaneous generation of heat and electricity where heat generated from the process is harnessed via heat recovery equipment for heating or cooling.	Can be fuelled by natural gas, biofuels, or biomass. Excess electricity can be exported to the grid. Can simultaneously meet heating and electricity demands.	High maintenance is required. Suitable for constant electricity and heating applications. Plant space required.	No

7.2 Technical Feasibility of Low Carbon Technology Options

7.2.1 Solar thermal

Solar water heating systems use energy from the sun to heat water to meet hot water needs. The system consists of a heat collector heat collector mounted on the roof or south-facing façade in which fuel is heated by the sun. The fluid used to heat water is stored in a twin coil hot water cylinder with the second coil providing the top-up heating from a conventional boiler. The collectors should ideally be placed on the roof at an angle of 30° from the horizontal facing south-east/south-west orientations.

The two standard types of heat collectors are flat plate and evacuated tube collectors Flat plate collectors are simple in design, robust, and cheaper than evacuated tube collectors but require more roof space. Evacuated tube collectors have higher operating temperatures and efficiencies, lower weight, and are more compact compared to flat plate collectors.



Solar thermal hot water system

The above figure shows a solar hot water system connected as a secondary loop to provide pre-heat to a solar thermal twin coil cylinder.

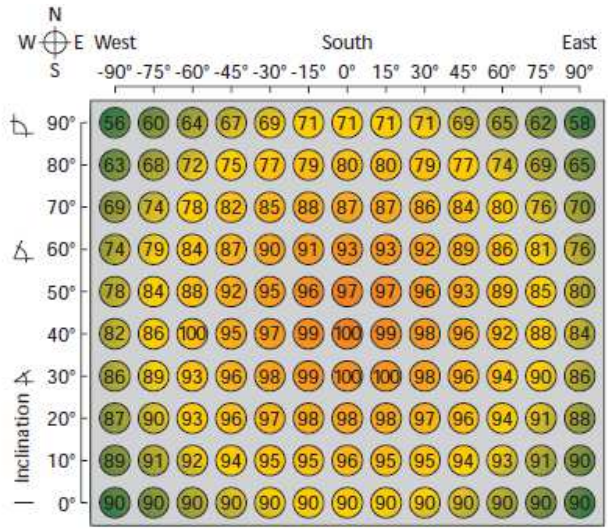
NCM assumes a large amount of water consumption for restaurants due to Kitchens and public WCs, however in reality the hot water demand in the McDonald's restaurants is found to be considerably less. Due to low hot water demand and higher payback for this type of system, it is therefore not considered viable for this project.

7.2.2 PV Panels

Solar photovoltaic (PV) systems convert energy from the sun into electricity through semiconductor cells. This system consists of semiconductor cells mounted into modules that are connected to an inverter to convert their direct current (DC) into alternating current (AC).

Power generation from PV cells relies on good access to solar radiation and ideally should face south inclined at an angle of 30º to the horizontal, although an orientation of 45º of south

is acceptable. Typically, in the UK 1kWp polycrystalline system will generate around 750 kWh of electricity a year.



Photovoltaic energy yield relative to inclination and orientation

Photovoltaic technology can be implemented into the building design at an early stage with low maintenance and initial costs. As this LZC report has been carried out at an early stage the installation can be incorporated on the roof of the building. This will be coordinated with the proposed HVAC plant and other services.

Typical PV panel installation

A nominal 25m² of PV panels with a nominal efficiency of 20% was modelled in TAS to assess the reduction in carbon emissions. The PV panels can be located on the roof facing

south at an angle of 35º. The energy consumption and carbon emissions results are shown below.

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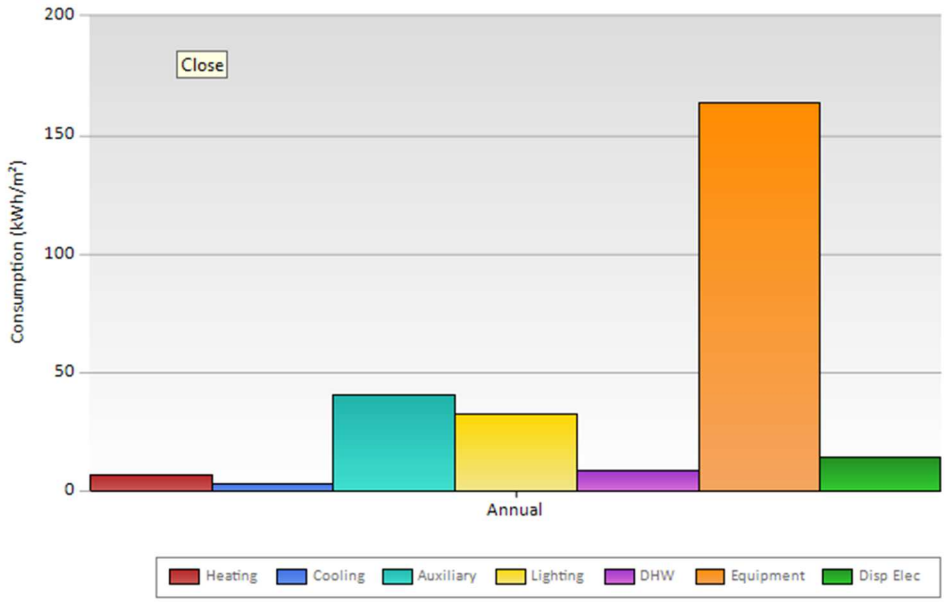
Actual Annual Consumption



	Heating	Cooling	Auxiliary	Lighting	DHW	Equipment	Displaced Electricity
Consumption (kWh/m²)	6.71	3.13	40.59	32.38	8.84	163.57	14.29

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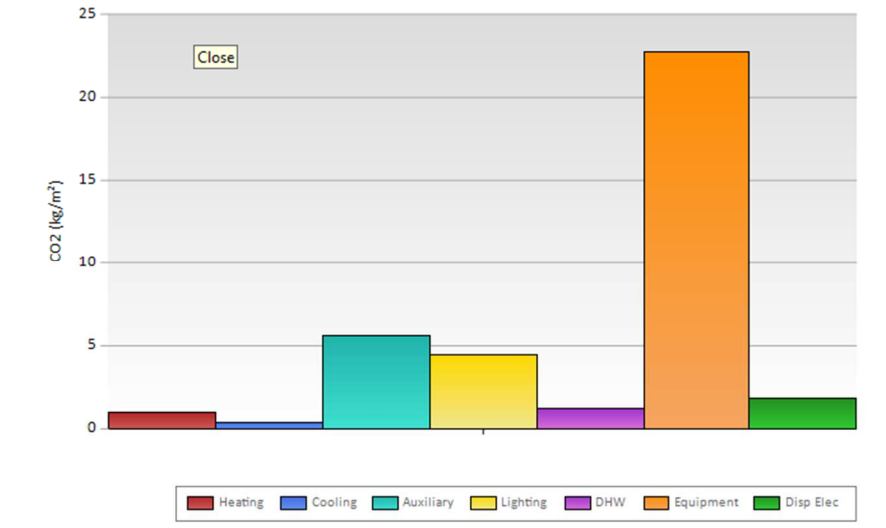
Actual Annual CO2 Emissions



	Heating	Cooling	Auxiliary	Lighting	DHW	Equipment	Displaced Electricity
CO2 (kg/m²)	1.04	0.36	5.63	4.49	1.23	22.69	1.84

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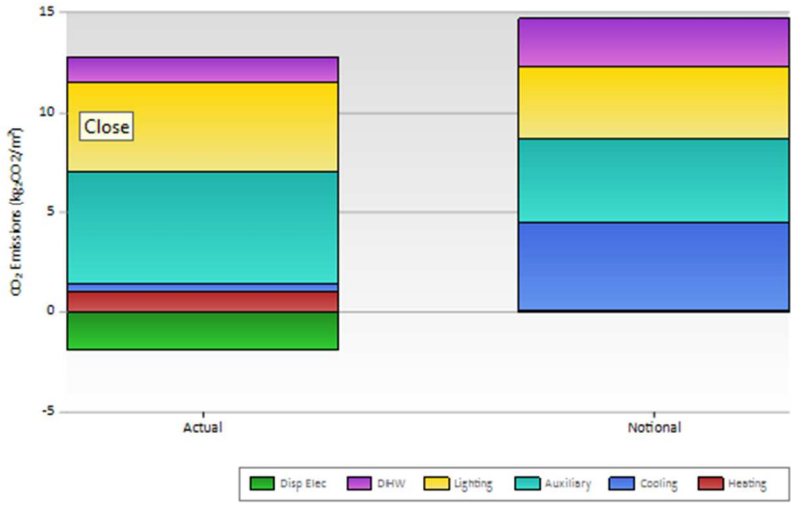
Annual CO2 Emissions Comparison



	Actual	Notional
Heating (kg_2CO2/m^2)	1.04	0.06
Cooling (kg_2CO2/m^2)	0.36	4.37
Auxiliary (kg_2CO2/m^2)	5.63	4.26
Lighting (kg_2CO2/m^2)	4.49	3.64
DHW (kg_2CO2/m^2)	1.23	2.37
Displaced Electricity (kg_2CO2/m^2)	-1.84	0.00
*Equipment (kg_2CO2/m^2) **	*22.69*	*22.12*
Total (kg_2CO2/m^2)	10.91	14.70
Total Floor Area (m^2)	287.05	287.05

** Energy used by equipment does not contribute to total value - it is presented here for comparison only*

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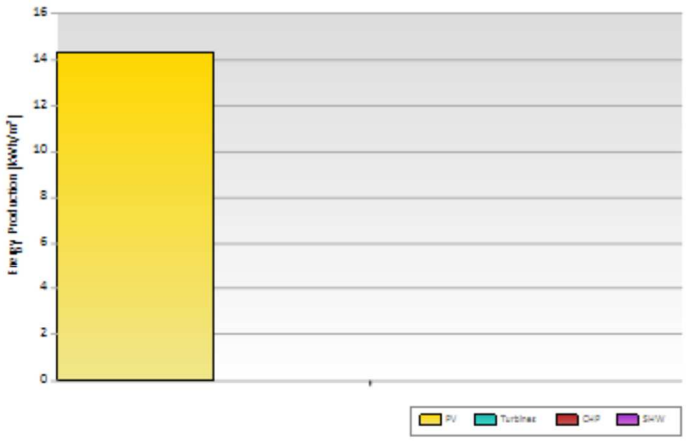
Renewables Breakdown



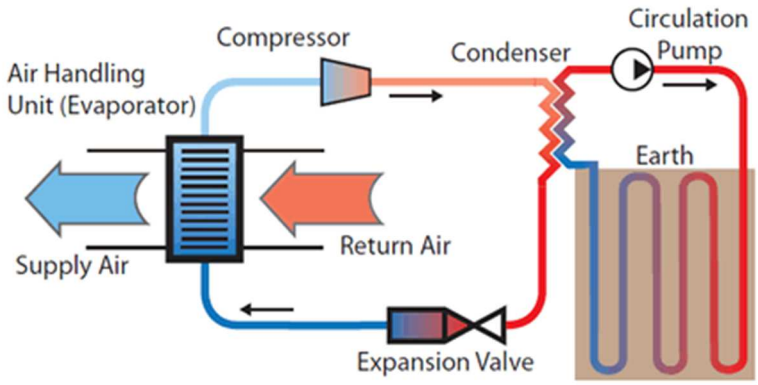
Photovoltaic Systems (kWh/m^2)	14.29
Wind Turbines (kWh/m^2)	0.00
CHP Generators (kWh/m^2)	0.00
Solar Thermal Systems (kWh/m^2)	0.00
Total (kWh/m^2)	14.29
Total Floor Area (m^2)	287.05

The results indicate that 25m² PV panels can generate 14.29 kWh/m2 of energy which can reduce carbon emissions by 25.78 % when combined with Option 1 – Base case.

Please refer to section 10.2 Option 2 – Base Case + PV Panels BRUKL & EPC

7.2.3 Ground Source Heat Pump

Ground source heat pump system (GSHP) uses ground as the source of heat, with a building water circuit as the sink. In a reversible system, in cooling mode, the building water circuit is the cooling circuit and the heat source, and the ground as the heat sink.



Ground Source Heat Pump

The main advantage of ground source heat pump is that beyond a certain depth of ground surface, the temperatures are constant between 10°C - 14°C in the UK. Heat pump performance is better when the source and sink temperatures is lower. The seasonal performance of the ground source heat pump is better than the air source heat pump as air temperature is often below 12°C during winter.

Ground source heat pump system can be open and closed loop. The open loop system directs the abstraction and use of groundwater, typically found in aquifers. Water is abstracted via one or more boreholes passed through a heat exchanger and is returned via a separate borehole, discharged to foul water drainage. With no aquifers in the proximity of the site and an abstraction license requirement, the open loop has been identified as unsuitable.

It should be noted that GHSPs generally deliver water at temperatures of 50°C which is ideal for underfloor heating systems that are not used in McDonald's restaurants due to slow thermal response and lack of temperature control. Therefore, GSHP is not considered to be a viable renewable technology for this development.

7.2.4 Wind Turbine

Wind power is one of the most successful and fastest-growing renewable energy technologies in the UK with a number of individual and group installations of varying size, capacity, and location. Typically, turbines are installed in non-urban areas to harness large offshore wind farms.

Electricity generated at any one time by a wind turbine is dependent on the speed of the wind at the site of the turbine. The speed is in turn dependent on several factors such as location within the UK, nearby obstructions, and the height of the turbine. According to the British Wind Energy Association notes that an average speed of 7m/s is required for viable systems and most small wind turbines start to generate electricity at wind speed of 3-4m/s. A professional assessment of the local wind speed needs to be undertaken for a full year at the exact location where the turbine is to be installed. In practice, this may be difficult, expensive and time-consuming and therefore the client runs the risk of installing an expensive technology that fails to meet the required energy production figures.

Small-scale micro-turbines have a diameter of 2m and require mounting a pole which increases the turbine's overall height. Wind turbines are usually visible and have implications on planning especially in conservative areas and therefore are likely to raise objections from neighbouring occupants and council.

Noise levels generated from wind turbines will be required to be assessed in relation to existing and predicted background noise levels for this site. The assessment will need to be carried out both during the day and night to determine noise levels. Despite the maturity of the wind industry, there is no official guidance on the separation to be maintained between the turbine and surrounding development. In view of these issues wind turbines are not considered a suitable option for this site.

7.2.5 Biomass

Biomass is a solid, liquid, or gaseous fuel that is derived from biomass and has been processed in some way into a more convenient form, principally to increase energy density. Biomass in the form of wood chips and pellets is often considered as a carbon-neutral fuel, as carbon dioxide emitted during the burning process is absorbed by the atmosphere by photosynthesis and no fossil fuel is involved.

Biomass

In the current site layout, there is no suitable location for a fuel store. Any fuel store has to be in proximity of the boiler. At present, this is not feasible due to existing plant room locations. Incorporation of biomass boiler would require redesign of external space around the site and relocation of plant room close to fuel store.

Wood pallet deliveries will require regular access and designated unloading space which can be problematic due to limited existing car park and drive-through space. Further objections from the residents may be experienced due to the location of biomass flue within the site which will be more prominent than a gas boiler flue.

Typically, the cost of installing a Biomass boiler is considerably more expensive than an equivalent gas-fired boiler as the cost of storage and spatial requirements need to be considered. The fuel costs are not much lower than gas fuel costs so the payback may not break even over the lifetime of the boiler.

The cost of biomass fuel is not expected to change considerably in the future as transportation and production costs are being aligned to gas and oil prices.

In the view of these issues, we do not consider the biomass boiler plant as a preferred low-carbon technology.

7.2.6 Combined Heat and Power (CHP)

CHP units burn gas or oil to generate both heat and power and are therefore a much more efficient way of producing energy.

CHP unit

To be economically viable in terms of reducing emissions it is recommended that CHP plant should run a minimum of 4000 hours per year. The proposed development does not have a constant base hot water demand and therefore is not considered viable for this development.

7.2.7 District Heating Network

We have reviewed the Scotland Heat Maps to establish the existing district heating network in the area. Currently, there is no active district heating network in the area and therefore is not considered for this project.

Scotland Heat Map

8 Summary of Carbon Reductions

8.1 Section 6 Compliance

The table below provides a summary of calculated carbon emissions for the proposed building to comply with Section 6 Scottish Building Regulations.

Options	BER (KgCO2/m2)	TER/notional building figure for 2022 Standards (KgCO2/m2)	% Improvement Beyond Section 6 Compliance-2022	Compliance with Section 6 Scottish Regulations -2022
Option 1 – Base Case	12.75	14.70	13.27	Yes
Option 2 – Option 1 +PV Panels	10.91	14.70	25.78%	Yes

Based on the compliance calculation, the carbon emissions for the proposed building exceed Section 6 compliance for the 2022 standard by a margin of 25.78%.

8.2 Calculating Building Emission Reduction

Calculating Building Emission provides a calculation procedure to demonstrate the carbon emission reduction target.

Step 1 - The appropriate software programme (SAP/SBEM) is used to calculate the 2020 Building Regulations Carbon Dioxide Emissions Standard. This will provide a Target Emissions Rate (TER), which is the predicted carbon dioxide emissions for a building of the specified size.

TER = 14.70 (KgCO2/m2)

Step 2 - The appropriate software programme (SAP/SBEM) is used to calculate the actual emissions rate for the proposed development, which includes the low and zero carbon generating equipment. This is the Dwelling or Building Emissions Rate (DER/BER), which is the predicted carbon dioxide emissions for the actual proposal.

BER = 10.91 (KgCO2/m2)

Step 3 - Calculate the percentage reduction from step 1 to step 2: (100 – (step 2 ÷ step 1 x 100))
= (100 – (10.91/14.70 x 100))

= 25.78%

Step 4 - The appropriate software programme (SAP/SBEM) is used to calculate the actual emissions rate for the development without the low and zero carbon generating technologies. This is a repeat of stage 2 and provides a recalculation of the DER/BER without the low and zero carbon generating technologies.

BER (without LZC technologies) – 12.75 (KgCO2/m2)

Step 5 - Calculate the percentage reduction due to the low and zero carbon equipment: ((step 4 – step 2) ÷ step 1) x 100)

= ((12.75 – 10.91)/ 14.70) x100)
= 12.51%

Based on the calculation the carbon emission reduction contribution achieved by installation and operation of low and zero-carbon generating technologies is 12.51% which exceeds the 10% target stated in Perth and Kinross Local Development Plan Policy 32.

9 Conclusion

Several LZC technologies have been assessed to reduce the carbon emissions of the proposed building to achieve compliance with Section 6 and the carbon reduction contribution target as stated in Perth and Kinross Local Development Plan Policy 32. The standard base system described in Base case Option 1, includes air source heat pumps as a preferred renewable and low carbon technology to meet the total heating, cooling, and DHW demand of the building.

Solar thermal panels have been discounted for this project due to insignificant hot water demands in the restaurant.

GSHP produces a mid-range temperature of 40-50°C ideally suited to low-temperature systems such as under-floor systems which are not used in McDonald's Restaurants due to low thermal response and lack of temperature control. Due to the reasons mentioned above including high capital costs and long payback period, this low-carbon technology has not been considered for this project.

Wind turbine technology has been discarded as it requires to be mounted on the roof at elevated heights with a 2m diameter which can raise objections from the neighbourhood and council. Moreover, a professional assessment of the wind speed needs to be conducted at the intended location of the wind turbine installation to determine wind speeds as it requires at least 3m/s wind speed to start generating electricity. Therefore, this technology is unsuitable for this site on a cost-to-benefit ratio.

The cost of installing a Biomass boiler is considerably more expensive than an equivalent gas-fired boiler as the cost of storage and spatial requirements needs to be considered. The fuel costs are not much lower than gas fuel costs so the payback may not break even over the lifetime of the boiler. The cost of biomass fuel is not expected to change considerably in the future as transportation and production costs are being aligned to gas and oil prices. Given these issues, we do not consider the biomass boiler plant as a preferred low-carbon technology.

A Gas-fired CHP unit installation would have high capital costs and additional maintenance costs when compared with other competing technologies. The simple payback period for this technology is 23 years based on the electricity generated by running the system. Excessive capital cost and fewer annual operating hours of the system due to low hot water demand make this technology unsuitable for this development.

A PV installation of 25m² would provide an overall carbon reduction of 25.78% beyond Section 6 2022 building regulations when added to the base option 1. This technology is proposed to be implemented as it can be installed on the roof, with limited maintenance and low ongoing costs.

Based on the assessment of all the low and zero-carbon technologies, Air source heat pumps are proposed to be used for the development as a preferred renewable and low-carbon technology to meet the total heating, cooling, and DHW demand of the building, combined

with 25m² PV Panels to reduce the overall carbon emissions by 25.78% compared to the notional building. A 12.50% carbon emission reduction contribution is achieved by installation and operation of low and zero-carbon generating technologies which exceed the 10% target stated in Perth and Kinross Local Development Plan Policy 32. Refer to Appendix 10 for BRUKL and EPC reports.

10 Appendix

10.1 Option 1 – Base Case BRUKL & EPC

TAS Specification Information

Scottish Building Regulations 2022 Section 6 Guidance
Carbon Dioxide Emissions, Energy Consumption, U-Values, Air Permeability, and HVAC

Project name **Modular and Portable**

McDonalds Restaurant Balirgowrie

Date: Fri Jun 27 00:21:15 2025

Administrative information

Building Details

Address: McDonalds Restaurant Ltd, Perth Road, Blairgowrie,

Agent details

Name: Mautasimuddin Mohammed
Telephone number: 07515440169
Address: 49 Dane Road, Ashford, TW15 1QJ

Certification tool

Calculation engine: TAS
Calculation engine version: "v9.5.6"
Interface to calculation engine: TAS
Interface to calculation engine version: v9.5.6
Compliance module version: v6.1.e.0

Foundation area [m²]: 265.88

1- The predicted CO_2 emissions and energy consumption

Target CO_2 emission rate (TER), $kgCO_2/m^2annum$	14.7	
Building CO_2 emission rate (BER), $kgCO_2/m^2annum$	12.75	
Target delivered energy rate (TDER), kWh/m^2annum	162.08	
Building delivered energy rate (BDER), kWh/m^2annum	138.8	
Do the building's emission and delivered energy rates exceed the targets?	BER =< TER	BDER =< TDER

2- The performance of the building fabric and the building services systems

Fabric element	$U_{a\text{-}Limit}$	$U_{a\text{-}Calc}$	$U_{i\text{-}Limit}$	$U_{i\text{-}Calc}$	First surface with maximum value
Walls	0.21	0.21	0.7	0.21	External Wall
Floors	0.18	0.13	0.7	0.13	Ground Floor
Roofs	0.16	0.16	0.35	0.16	Roof
Windows* and roof windows	1.6	1.41	3.3	1.62	Booth window
Rooflights**	2.2	-	3.8	-	No rooflights in project
Personnel doors	1.4	-	3.3	-	No personnel doors in project
Vehicle access & similar large doors	1.5	-	3.3	-	No vehicle access or similar large doors in projec
High usage entrance doors	3	-	N/A	-	No high usage entrance doors in project

$U_{a\text{-}Limit}$ = Limiting area-weighted average U-values [W/(m²K)]
$U_{a\text{-}Calc}$ = Calculated area-weighted average U-values [W/(m²K)]
$U_{i\text{-}Limit}$ = Limiting individual element U-values [W/(m²K)]
$U_{i\text{-}Calc}$ = Calculated individual element U-values [W/(m²K)]

* Display windows and similar glazing are excluded from the U-value check.
** Values for rooflights refer to the horizontal position.

Air Permeability	This building's value
m3/(h.m2) at 50 Pa	5

Page 1 of 6

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- S1 Kitchen

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.5	7.49	-	1.5	-
Standard value	2.5*	3	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

2- S2 Lobby

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.5	7.49	-	0.9	-
Standard value	2.5*	3	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

3- Crew (Crew)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.2	6.3	-	0.3	-
Standard value	2.5*	5	N/A	1.5^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

4- Office (Office)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.2	6.3	-	0.3	-
Standard value	2.5*	5	N/A	1.5^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

5- Mech Vent (6 Zones)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.5	-	-	1.3	-
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

1- New HWS Circuit

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	4	0
Standard value	2*	N/A

* Standard shown is for all types except absorption and gas engine heat pumps.

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter

NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
Kitchen	-	-	-	1.5	-	-	-	-	-	-	N/A
Lobby 1	-	0.9	-	-	-	-	-	-	-	-	N/A
Lobby 2	-	0.9	-	-	-	-	-	-	-	-	N/A
Lobby 3	-	0.9	-	-	-	-	-	-	-	-	N/A
Lobby 4	-	0.9	-	-	-	-	-	-	-	-	N/A
Store	-	-	-	1.5	-	-	-	-	-	-	N/A
Crew	-	-	-	-	-	-	-	0.3	-	-	N/A
Office	-	-	-	-	-	-	-	0.3	-	-	N/A
Male	-	-	-	1.3	-	-	-	-	-	-	N/A
Female	-	-	-	1.3	-	-	-	-	-	-	N/A
DWC	-	-	-	1.3	-	-	-	-	-	-	N/A
WC Lobby	-	-	-	1.3	-	-	-	-	-	-	N/A
M Change	-	-	-	1.3	-	-	-	-	-	-	N/A
F Change	-	-	-	1.3	-	-	-	-	-	-	N/A
Cash Booth	-	-	-	1.5	-	-	-	-	-	-	N/A

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
Kitchen	122	-	-
Lobby 1	126	95	-
Lobby 2	126	95	-
Lobby 3	126	95	-
Lobby 4	126	95	-
Freezer	140	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m^2]
Standard value	95	80	0.3
Chiller	140	-	-
Store	122	-	-
Crew	100	-	-
Office	122	-	-
Male	122	-	-
Female	122	-	-
DWC	122	-	-
WC Lobby	122	-	-
M Change	122	-	-
F Change	122	-	-
Cash Booth	122	-	-

3- The solar gains

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Kitchen	NO (-91%)	NO
Lobby 1	NO (-50%)	NO
Lobby 2	NO (-29%)	NO
Lobby 3	NO (-31%)	NO
Lobby 4	NO (-26%)	NO
Store	N/A	N/A
Crew	NO (-77%)	NO
Office	N/A	N/A
Cash Booth	NO (-90%)	NO

Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	YES
Is evidence of such assessment available as a separate submission?	YES
Are any such measures included in the proposed design?	YES

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m^2]	287	287
External area [m^2]	809	809
Weather	GLA	GLA
Infiltration [m^3/hm^2@ 50Pa]	5	4
Average conductance [W/K]	176	327.6
Average U-value [W/m^2K]	0.22	0.29
Alpha value* [%]	21.97	11.35

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area	Building Type
	Retail/Financial and Professional Services
100	**Restaurants and Cafes/Drinking Establishments/Takeaways**
	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	Hotels
	Residential Institutions: Hospitals and Care Homes
	Residential Institutions: Residential Schools
	Residential Institutions: Universities and Colleges
	Secure Residential Institutions
	Residential Spaces
	Non-residential Institutions: Community/Day Centre
	Non-residential Institutions: Libraries, Museums, and Galleries
	Non-residential Institutions: Education
	Non-residential Institutions: Primary Health Care Building
	Non-residential Institutions: Crown and County Courts
	General Assembly and Leisure, Night Clubs, and Theatres
	Others: Passenger Terminals
	Others: Emergency Services
	Others: Miscellaneous 24hr Activities
	Others: Car Parks 24 hrs
	Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m^2]

	Actual	Notional
Heating	6.71	0.36
Cooling	3.13	34.5
Auxiliary	40.59	31.47
Lighting	32.38	26.65
Hot water	8.84	17.55
Equipment*	163.57	163.57
TOTAL**	**91.66**	**110.53**

* Energy used by equipment does not count towards the total for consumption or calculating emissions.
** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m^2]

	Actual	Notional
Photovoltaic systems	0	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
Displaced electricity	*0*	*0*

Energy & CO_2 Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m^2]	196.92	670.9
Primary energy [kWh_{PE}/m^2]	138.8	162.08
Total emissions [kg/m^2]	12.75	14.7

HVAC Systems Performance										
System Type		Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEEF	Cool SSEER	Heat gen SEFF	Cool gen SEER
[ST] Single-duct VAV, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	34.6	161.8	2.1	6	53.3	4.5	7.49	4.5	7.49
	Notional	1.1	1035.1	0.1	56.4	42.4	3	5.1	----	----
[ST] Single-duct VAV, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	304.9	13.7	18.8	0.5	60	4.5	7.49	4.5	7.49
	Notional	5.9	545.6	0.6	29.7	33.4	3	5.1	----	----
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	27.2	89.9	1.8	4	1.6	4.2	6.3	4.2	6.3
	Notional	4.6	612.1	0.4	33.3	3.6	3	5.1	----	----
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	44.1	26.7	2.9	1.2	1.6	4.2	6.3	4.2	6.3
	Notional	2.2	528.7	0.2	28.8	3.6	3	5.1	----	----
[ST] Constant volume system (variable fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	17.8	0	1.1	0	22.1	4.5	0	4.5	0
	Notional	2.1	0	0.2	0	14.5	3	0	----	----

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type

Energy Performance Certificate

Non-Domestic buildings and buildings other than dwellings

Scotland

McDonalds Restaurant Ltd, Perth Road, Blairgowrie

Date of assessment:	27 Jun 2025	**Reference number:**	9421-2567-2630-3308-0503
Date of certificate:	27 Jun 2025	**Building type:**	Restaurant/Cafes/takeaway
Total conditioned area:	287 m²	**Assessment software:**	EPCgen, v6.1.e.0
Primary energy indicator:	139 kWh/m².yr	**Approved organisation:**	

Building Energy Performance Rating

Current	Potential
13 A	0 A+

Approximate Energy Use: 92 kWh per m² per year

Approximate Carbon Dioxide Emissions: 12.75 kgCO_2 per m² per year

The building energy performance rating is a measure of the effect of a building on the environment in terms of carbon dioxide (CO2) emissions. The better the rating, the less impact on the environment. The current rating is based upon an assessor's survery of the building. The potential rating shows the effect of undertaking all of the recommended measures listed below. The Recommendations Report which accompanies this certificate explains how this rating is calculated and gives further information on the performance of this building and how to improve it.

Benchmark

A building of this type built to current building regulations at the date of issue of this certificate would have a building energy performance rating of: 15 A

Recommendations for the cost-effective improvement of energy performance

THIS PAGE IS THE ENERGY PERFORMANCE CERTIFICATE WHICH MUST BE AFFIXED TO THE BUILDING AND NOT BE REMOVED UNLESS REPLACED WITH AN UPDATED CERTIFICATE.

10.2 Option 2 – Base Case + PV Panels BRUKL & EPC

TAS Specification Information

Scottish Building Regulations 2022 Section 6 Guidance
Carbon Dioxide Emissions, Energy Consumption, U-Values, Air Permeability, and HVAC

Project name **Modular and Portable**

McDonalds Restaurant Balirgowrie

Date: Fri Jun 27 00:30:33 2025

Administrative information

Building Details

Address: McDonalds Restaurant Ltd, Perth Road, Blairgowrie,

Agent details

Name: Mautasimuddin Mohammed
Telephone number: 07515440169
Address: 49 Dane Road, Ashford, TW15 1QJ

Certification tool

Calculation engine: TAS
Calculation engine version: "v9.5.6"
Interface to calculation engine: TAS
Interface to calculation engine version: v9.5.6
Compliance module version: v6.1.e.0

Foundation area [m²]: 265.88

1- The predicted CO_2 emissions and energy consumption

Target CO_2 emission rate (TER), $kgCO_2/m^2annum$	14.7	
Building CO_2 emission rate (BER), $kgCO_2/m^2annum$	10.91	
Target delivered energy rate (TDER), kWh/m^2annum	162.08	
Building delivered energy rate (BDER), kWh/m^2annum	117.77	
Do the building's emission and delivered energy rates exceed the targets?	BER =< TER	BDER =< TDER

2- The performance of the building fabric and the building services systems

Fabric element	$U_{a\text{-}Limit}$	$U_{a\text{-}Calc}$	$U_{i\text{-}Limit}$	$U_{i\text{-}Calc}$	First surface with maximum value
Walls	0.21	0.21	0.7	0.21	External Wall
Floors	0.18	0.13	0.7	0.13	Ground Floor
Roofs	0.16	0.16	0.35	0.16	Roof
Windows* and roof windows	1.6	1.41	3.3	1.62	Booth window
Rooflights**	2.2	-	3.8	-	No rooflights in project
Personnel doors	1.4	-	3.3	-	No personnel doors in project
Vehicle access & similar large doors	1.5	-	3.3	-	No vehicle access or similar large doors in project
High usage entrance doors	3	-	N/A	-	No high usage entrance doors in project

$U_{a\text{-}Limit}$ = Limiting area-weighted average U-values [W/(m²K)] $U_{i\text{-}Limit}$ = Limiting individual element U-values [W/(m²K)]
$U_{a\text{-}Calc}$ = Calculated area-weighted average U-values [W/(m²K)] $U_{i\text{-}Calc}$ = Calculated individual element U-values [W/(m²K)]

* Display windows and similar glazing are excluded from the U-value check.
** Values for rooflights refer to the horizontal position.

Air Permeability	This building's value
m3/(h.m2) at 50 Pa	5

Page 1 of 6

Building services

For details on the standard values listed below, system-specific guidance, and additional regulatory requirements, refer to the Approved Documents.

Whole building lighting automatic monitoring & targeting with alarms for out-of-range values	NO
Whole building electric power factor achieved by power factor correction	<0.9

1- S1 Kitchen

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.5	7.49	-	1.5	-
Standard value	2.5*	3	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

2- S2 Lobby

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.5	7.49	-	0.9	-
Standard value	2.5*	3	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

3- Crew (Crew)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.2	6.3	-	0.3	-
Standard value	2.5*	5	N/A	1.5^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

4- Office (Office)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.2	6.3	-	0.3	-
Standard value	2.5*	5	N/A	1.5^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

5- Mech Vent (6 Zones)

	Heating efficiency	Cooling efficiency	Radiant efficiency	SFP [W/(l/s)]	HR efficiency
This system	4.5	-	-	1.3	-
Standard value	2.5*	N/A	N/A	2^	N/A
Automatic monitoring & targeting with alarms for out-of-range values for this HVAC system					YES

* Standard shown is for all types >12 kW output, except absorption and gas engine heat pumps.

^ Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.

1- New HWS Circuit

	Water heating efficiency	Storage loss factor [kWh/litre per day]
This building	4	0
Standard value	2*	N/A
* Standard shown is for all types except absorption and gas engine heat pumps.		

Zone-level mechanical ventilation, exhaust, and terminal units

ID	System type in the Approved Documents
A	Local supply or extract ventilation units
B	Zonal supply system where the fan is remote from the zone
C	Zonal extract system where the fan is remote from the zone
D	Zonal balanced supply and extract ventilation system
E	Local balanced supply and extract ventilation units
F	Other local ventilation units
G	Fan assisted terminal variable air volume units
H	Fan coil units
I	Kitchen extract with the fan remote from the zone and a grease filter
NB: Limiting SFP may be increased by the amounts specified in the Approved Documents if the installation includes particular components.	

Zone name	SFP [W/(l/s)]									HR efficiency	
ID of system type	A	B	C	D	E	F	G	H	I		
Standard value	0.3	1.1	0.5	2.3	2	0.5	0.5	0.4	1	Zone	Standard
Kitchen	-	-	-	1.5	-	-	-	-	-	-	N/A
Lobby 1	-	0.9	-	-	-	-	-	-	-	-	N/A
Lobby 2	-	0.9	-	-	-	-	-	-	-	-	N/A
Lobby 3	-	0.9	-	-	-	-	-	-	-	-	N/A
Lobby 4	-	0.9	-	-	-	-	-	-	-	-	N/A
Store	-	-	-	1.5	-	-	-	-	-	-	N/A
Crew	-	-	-	-	-	-	-	0.3	-	-	N/A
Office	-	-	-	-	-	-	-	0.3	-	-	N/A
Male	-	-	-	1.3	-	-	-	-	-	-	N/A
Female	-	-	-	1.3	-	-	-	-	-	-	N/A
DWC	-	-	-	1.3	-	-	-	-	-	-	N/A
WC Lobby	-	-	-	1.3	-	-	-	-	-	-	N/A
M Change	-	-	-	1.3	-	-	-	-	-	-	N/A
F Change	-	-	-	1.3	-	-	-	-	-	-	N/A
Cash Booth	-	-	-	1.5	-	-	-	-	-	-	N/A

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
Kitchen	122	-	-
Lobby 1	126	95	-
Lobby 2	126	95	-
Lobby 3	126	95	-
Lobby 4	126	95	-
Freezer	140	-	-

General lighting and display lighting	General luminaire	Display light source	
Zone name	Efficacy [lm/W]	Efficacy [lm/W]	Power density [W/m²]
Standard value	95	80	0.3
Chiller	140	-	-
Store	122	-	-
Crew	100	-	-
Office	122	-	-
Male	122	-	-
Female	122	-	-
DWC	122	-	-
WC Lobby	122	-	-
M Change	122	-	-
F Change	122	-	-
Cash Booth	122	-	-

3- The solar gains

Zone	Solar gain limit exceeded? (%)	Internal blinds used?
Kitchen	NO (-91%)	NO
Lobby 1	NO (-50%)	NO
Lobby 2	NO (-29%)	NO
Lobby 3	NO (-31%)	NO
Lobby 4	NO (-26%)	NO
Store	N/A	N/A
Crew	NO (-77%)	NO
Office	N/A	N/A
Cash Booth	NO (-90%)	NO

Consideration of high efficiency alternative energy systems

Were alternative energy systems considered and analysed as part of the design process?	YES
Is evidence of such assessment available as a separate submission?	YES
Are any such measures included in the proposed design?	YES

Technical Data Sheet (Actual vs. Notional Building)

Building Global Parameters

	Actual	Notional
Floor area [m^2]	287	287
External area [m^2]	809	809
Weather	GLA	GLA
Infiltration [m^3/hm^2@ 50Pa]	5	4
Average conductance [W/K]	176	327.6
Average U-value [W/m^2K]	0.22	0.29
Alpha value* [%]	21.97	11.35

* Percentage of the building's average heat transfer coefficient which is due to thermal bridging

Building Use

% Area	Building Type
	Retail/Financial and Professional Services
100	**Restaurants and Cafes/Drinking Establishments/Takeaways**
	Offices and Workshop Businesses
	General Industrial and Special Industrial Groups
	Storage or Distribution
	Hotels
	Residential Institutions: Hospitals and Care Homes
	Residential Institutions: Residential Schools
	Residential Institutions: Universities and Colleges
	Secure Residential Institutions
	Residential Spaces
	Non-residential Institutions: Community/Day Centre
	Non-residential Institutions: Libraries, Museums, and Galleries
	Non-residential Institutions: Education
	Non-residential Institutions: Primary Health Care Building
	Non-residential Institutions: Crown and County Courts
	General Assembly and Leisure, Night Clubs, and Theatres
	Others: Passenger Terminals
	Others: Emergency Services
	Others: Miscellaneous 24hr Activities
	Others: Car Parks 24 hrs
	Others: Stand Alone Utility Block

Energy Consumption by End Use [kWh/m^2]

	Actual	Notional
Heating	6.71	0.36
Cooling	3.13	34.5
Auxiliary	40.59	31.47
Lighting	32.38	26.65
Hot water	8.84	17.55
Equipment*	163.57	163.57
TOTAL**	**91.66**	**110.53**

* Energy used by equipment does not count towards the total for consumption or calculating emissions.
** Total is net of any electrical energy displaced by CHP generators, if applicable.

Energy Production by Technology [kWh/m^2]

	Actual	Notional
Photovoltaic systems	14.29	0
Wind turbines	0	0
CHP generators	0	0
Solar thermal systems	0	0
Displaced electricity	*14.29*	*0*

Energy & CO_2 Emissions Summary

	Actual	Notional
Heating + cooling demand [MJ/m^2]	196.92	670.9
Primary energy [kWh_{PE}/m^2]	117.77	162.08
Total emissions [kg/m^2]	10.91	14.7

HVAC Systems Performance										
System Type		Heat dem MJ/m2	Cool dem MJ/m2	Heat con kWh/m2	Cool con kWh/m2	Aux con kWh/m2	Heat SSEEF	Cool SSEER	Heat gen SEFF	Cool gen SEER
[ST] Single-duct VAV, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	34.6	161.8	2.1	6	53.3	4.5	7.49	4.5	7.49
	Notional	1.1	1035.1	0.1	56.4	42.4	3	5.1	----	----
[ST] Single-duct VAV, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	304.9	13.7	18.8	0.5	60	4.5	7.49	4.5	7.49
	Notional	5.9	545.6	0.6	29.7	33.4	3	5.1	----	----
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	27.2	89.9	1.8	4	1.6	4.2	6.3	4.2	6.3
	Notional	4.6	612.1	0.4	33.3	3.6	3	5.1	----	----
[ST] Split or multi-split system, [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	44.1	26.7	2.9	1.2	1.6	4.2	6.3	4.2	6.3
	Notional	2.2	528.7	0.2	28.8	3.6	3	5.1	----	----
[ST] Constant volume system (variable fresh air rate), [HS] ASHP, [HFT] Electricity, [CFT] Electricity										
	Actual	17.8	0	1.1	0	22.1	4.5	0	4.5	0
	Notional	2.1	0	0.2	0	14.5	3	0	----	----

Key to terms

Heat dem [MJ/m2]	= Heating energy demand
Cool dem [MJ/m2]	= Cooling energy demand
Heat con [kWh/m2]	= Heating energy consumption
Cool con [kWh/m2]	= Cooling energy consumption
Aux con [kWh/m2]	= Auxiliary energy consumption
Heat SSEFF	= Heating system seasonal efficiency (for notional building, value depends on activity glazing class)
Cool SSEER	= Cooling system seasonal energy efficiency ratio
Heat gen SSEFF	= Heating generator seasonal efficiency
Cool gen SSEER	= Cooling generator seasonal energy efficiency ratio
ST	= System type
HS	= Heat source
HFT	= Heating fuel type
CFT	= Cooling fuel type

Energy Performance Certificate

Non-Domestic buildings and buildings other than dwellings

Scotland

McDonalds Restaurant Ltd, Perth Road, Blairgowrie

Date of assessment:	27 Jun 2025	**Reference number:**	9421-2567-2630-3308-0503
Date of certificate:	27 Jun 2025	**Building type:**	Restaurant/Cafes/takeaway
Total conditioned area:	287 m^2	**Assessment software:**	EPCgen, v6.1.e.0
Primary energy indicator:	118 kWh/m^2.yr	**Approved organisation:**	

Building Energy Performance Rating

	Current	Potential
	11 A	0 A+

Approximate Energy Use:	92 kWh per m^2 per year
Approximate Carbon Dioxide Emissions:	10.91 $kgCO_2$ per m^2 per year

The building energy performance rating is a measure of the effect of a building on the environment in terms of carbon dioxide (CO2) emissions. The better the rating, the less impact on the environment. The current rating is based upon an assessor's survery of the building. The potential rating shows the effect of undertaking all of the recommended measures listed below. The Recommendations Report which accompanies this certificate explains how this rating is calculated and gives further information on the performance of this building and how to improve it.

Benchmark

A building of this type built to current building regulations at the date of issue of this certificate would have a building energy performance rating of: 15 A

Recommendations for the cost-effective improvement of energy performance

THIS PAGE IS THE ENERGY PERFORMANCE CERTIFICATE WHICH MUST BE AFFIXED TO THE BUILDING AND NOT BE REMOVED UNLESS REPLACED WITH AN UPDATED CERTIFICATE.

LiAS Design Notes

This preliminary design is produced by the Lighting Application Specialist (LiAS) team of Signify UK based on information supplied by the Customer for the purpose of identifying suitable products and costing the proposal. This design cannot be used for Construction, as this design does not purport to eliminate health and safety risks as a CDM Regulation risk assessment has not been undertaken.

Depending on the level of information received, a number of assumptions may have been applied in order to create an indicative lighting proposal and costing model, according to lighting industry guidelines and incorporating industry best practice methods. These assumptions are documented below and will require confirmation by the Principle Designer (which is not Signify UK) during the detailed design phase.

Generic Assumptions (unless specifically informed differently)

- Preliminary Design proposals produced by the Signify LiAS Team are not to be used for installation purposes. It is the responsibility of the Principle Designer and/or Principle Contractor to ensure all Installation and Maintenance can be done in a safe manner, carried out by competent persons, based on their agreed Risk Assessments and Method Statements.
- The Luminaire Maintenance Factors have been based on 6-year cleaning intervals within an E3/E4 Environmental Zone and it is assumed that lamp/luminaire failures will be replaced on a 'spot replacement'.
- Energy consumptions have been based on the luminaire/s having Constant Light Output (CLO) enabled and the quoted wattage/s are the average over 100,000 hours (without dimming).
- The design calculations produced by Signify do not account for the effect obstructions, such as trees, will cause.
- Signify has not been provided with utility plans showing Buried, Above Ground or Overhead utilities. Therefore, all column/luminaire locations are indicative and are subject to review/verification by the Principle Designer.
- Unless stated otherwise, Signify has not visited site. Therefore, all column/luminaire locations are indicative and are subject to an onsite verification arranged/performed by the Principle Designer.
- Signify has not produced any Private Cable Network electrical calculations or reviewed the DNO network to confirm power supplies to the proposed lighting.
- Signify has not performed any asset condition testing and therefore assumes that any existing lighting columns/wall mounted brackets are structurally capable of supporting the weight & windage of the proposed luminaire/s. This must be verified by the Principle Designer before installation works commence.
- Unless stated otherwise, Signify is not supplying the new lighting columns (including brackets etc) and therefore it is the responsibility of the Principle Designers to confirm that all proposed equipment is suitable for the intended locations (e.g. raise & lower, ground condition, foundation type, saline environment, etc).
- Unless stated otherwise, luminaires will be supplied in their standard colour.

Luminaire Schedule

Luma Gen2 Medium BGP704 80 LED DX10 16KLM WW 3000K
lamp(s): LED-HB 5.2S 730
candela file 'Luma Gen2 Medium_BGP704_DX10_16000_80LED_5.2S_CLO_L90_730.ies'
1 lamp(s) per luminaire, 16000 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 94
Outreach (from mounting axis to photometric center)= 400 mm
mounting height= 6 m
number locations= 3, number luminaires= 3

BL1

Luma Gen2 Medium BGP704 80 LED DX10 BL1 16KLM WW 3000K
lamp(s): LED-HB 5.2S 730
candela file 'Luma Gen2 Medium_BGP704_DX10 BL1_16000_80LED_5.2S_CLO_L90_730.ies'
1 lamp(s) per luminaire, 16000 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 94
Outreach (from mounting axis to photometric center)= 400 mm
mounting height= 6 m
number locations= 2, number luminaires= 2

Luma Gen2 Mini BGP703 40 LED DM10 8KLM WW 3000K
lamp(s): LED-HB 5.2S 730
candela file 'Luma Gen2 Mini_BGP703_DM10_8000_40LED_5.2S_CLO_L90_730.ies'
1 lamp(s) per luminaire, 8000 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 47
Outreach (from mounting axis to photometric center)= 400 mm
mounting height= 6 m
number locations= 1, number luminaires= 1

BL2

Luma Gen2 Mini BGP703 40 LED DM10 BL2 8KLM WW 3000K
lamp(s): LED-HB 5.2S 730
candela file 'Luma Gen2 Mini_BGP703_DM10 BL2_8000_40LED_5.2S_CLO_L90_730.ies'
1 lamp(s) per luminaire, 8000 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 47
Outreach (from mounting axis to photometric center)= 400 mm
mounting height= 6 m
number locations= 1, number luminaires= 1

OptiSpace BCB500 T25 1 xLED35/830 A
lamp(s): LED35/830
candela file 'BCB500 T25 1 xLED35_830 A.ldt'
1 lamp(s) per luminaire, 3500 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 30
Outreach (from mounting axis to photometric center)= 0 mm
mounting height= 1.05 m
number locations= 11, number luminaires= 11

Car Park
568 points at z=0, sp 1.5m by 1.5m
HORIZONTAL LUX

Average	25.00
Maximum	51.32
Minimum	6.79
Min/Avg(Uo)	0.272
Min/Max	0.132
Coef Var	0.384
UnifGrad	1.92

Drive Thru
186 points at z=0, sp 1.5m by 1.5m
HORIZONTAL LUX

Average	25.26
Maximum	55.35
Minimum	6.84
Min/Avg(Uo)	0.271
Min/Max	0.124
Coef Var	0.300
UnifGrad	1.93

Lighting Proposal Terms and Conditions of Use

These terms apply to the use of this preliminary proposal produced by Signify UK. This "**Proposal**" is understood to mean this document, a CAD drawing, lighting calculations, written documents, verbal conversations or any medium used to demonstrate or communicate the proposed lighting scheme using products from Signify's brands. A "**Customer**" is the person or organisation for whom the Proposal is intended. The "**CDM Regulations**" means The Construction, Design and Management Regulations 2015, the Safety, Health & Welfare at Work Act 2005, The Construction (Design & Management) Regulations (Northern Ireland) 2015.

This Proposal is for guidance only and cannot be relied upon for purposes of installation or Health and Safety.

The supply and installation of this lighting scheme are subject to a contract being agreed between Customer and Signify.

PROPOSAL
(NOT FOR CONSTRUCTION)

Rev	DSR no.	Comment	Date	LiAS	KAM
0	6049871	INITIAL PROPOSAL	11.02.25	CP	LC

Project Number: 501734912
Scale & Sheet Size: NTS @ A3
Sheet No: DWG 00

Project Name: MCDONALDS BLAIRGOWRIE
Drawing Name: LiAS DESIGN NOTES & LUMINAIRE SCHEDULE

Key:

Luma Gen2 Medium BGP704 80 LED DX10 16KLM WW 3000K
lamp(s): LED-HB 5.2S 730
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1 lamp(s) per luminaire, 16000 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 94
Outreach (from mounting axis to photometric center)= 400 mm
mounting height= 6 m
number locations= 3, number luminaires= 3

BL1

Luma Gen2 Medium BGP704 80 LED DX10 BL1 16KLM WW 3000K
lamp(s): LED-HB 5.2S 730
candela file 'Luma Gen2 Medium_BGP704_DX10 BL1_16000_80LED_5.2S_CLO_L90_730.ies'
1 lamp(s) per luminaire, 16000 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 94
Outreach (from mounting axis to photometric center)= 400 mm
mounting height= 6 m
number locations= 2, number luminaires= 2

Luma Gen2 Mini BGP703 40 LED DM10 8KLM WW 3000K
lamp(s): LED-HB 5.2S 730
candela file 'Luma Gen2 Mini_BGP703_DM10_8000_40LED_5.2S_CLO_L90_730.ies'
1 lamp(s) per luminaire, 8000 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 47
Outreach (from mounting axis to photometric center)= 400 mm
mounting height= 6 m
number locations= 1, number luminaires= 1

BL2

Luma Gen2 Mini BGP703 40 LED DM10 BL2 8KLM WW 3000K
lamp(s): LED-HB 5.2S 730
candela file 'Luma Gen2 Mini_BGP703_DM10 BL2_8000_40LED_5.2S_CLO_L90_730.ies'
1 lamp(s) per luminaire, 8000 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 47
Outreach (from mounting axis to photometric center)= 400 mm
mounting height= 6 m
number locations= 1, number luminaires= 1

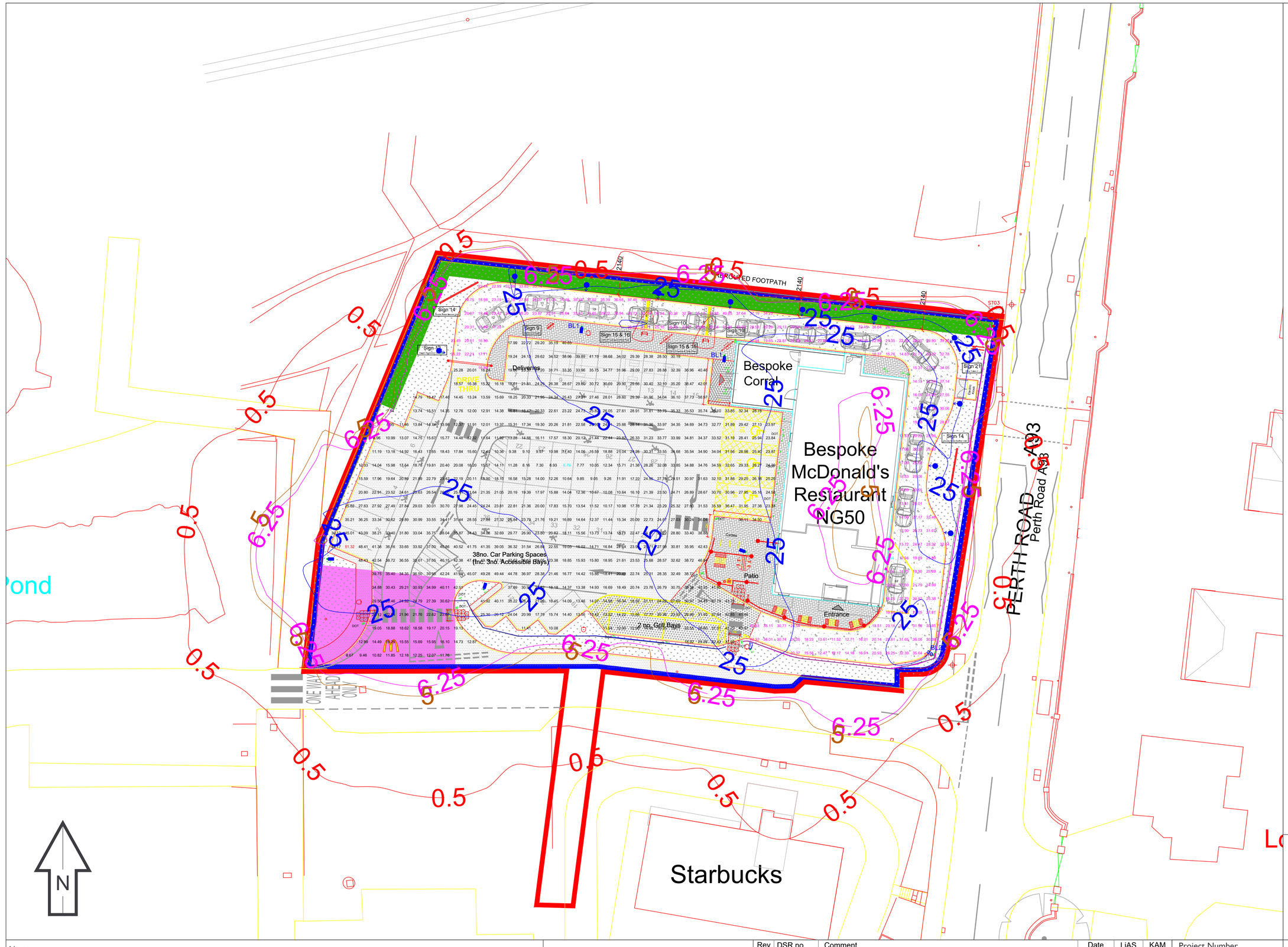
OptiSpace BCB500 T25 1 xLED35/830 A
lamp(s): LED35/830
candela file 'BCB500 T25 1 xLED35_830 A.ldt'
1 lamp(s) per luminaire, 3500 initial lumens per lamp
Maintenance Factor = 0.760, watts per luminaire = 30
Outreach (from mounting axis to photometric center)= 0 mm
mounting height= 1.05 m
number locations= 11, number luminaires= 11

Car Park
568 points at z=0, sp 1.5m by 1.5m
HORIZONTAL LUX

Average	25.00
Maximum	51.32
Minimum	6.79
Min/Avg(Uo)	0.272
Min/Max	0.132
Coef Var	0.384
UnifGrad	1.92

Drive-Thru
186 points at z=0, sp 1.5m by 1.5m
HORIZONTAL LUX

Average	25.26
Maximum	55.35
Minimum	6.84
Min/Avg(Uo)	0.271
Min/Max	0.124
Coef Var	0.300
UnifGrad	1.93



Notes:

1) Unless agreed otherwise, the lighting proposal produced by the Lighting Application Specialist (LiAS) team of Signify UK&I is not intended for construction purposes, as it does not take into account the elimination of health and safety risks at this stage. For further details please refer to sheet number **DWG 00**

2) Do not scale for this drawing

PROPOSAL
(NOT FOR CONSTRUCTION)

Rev	DSR no.	Comment	Date	LiAS	KAM
0	6049871	INITIAL PROPOSAL	11.02.25	CP	LC

Project Number
501734912

Scale & Sheet Size
1:200 @ A1

Sheet No
DWG 01

Project Name
MCDONALDS BLAIRGOWRIE

Drawing Name
PROPOSED LIGHTING LAYOUT

Signify
PHILIPS interact MODULAR ILTI LUCE

McDonald's Blairgowrie
Lighting Impact Assessment Report
Car Park & Drive-Thru External Lighting

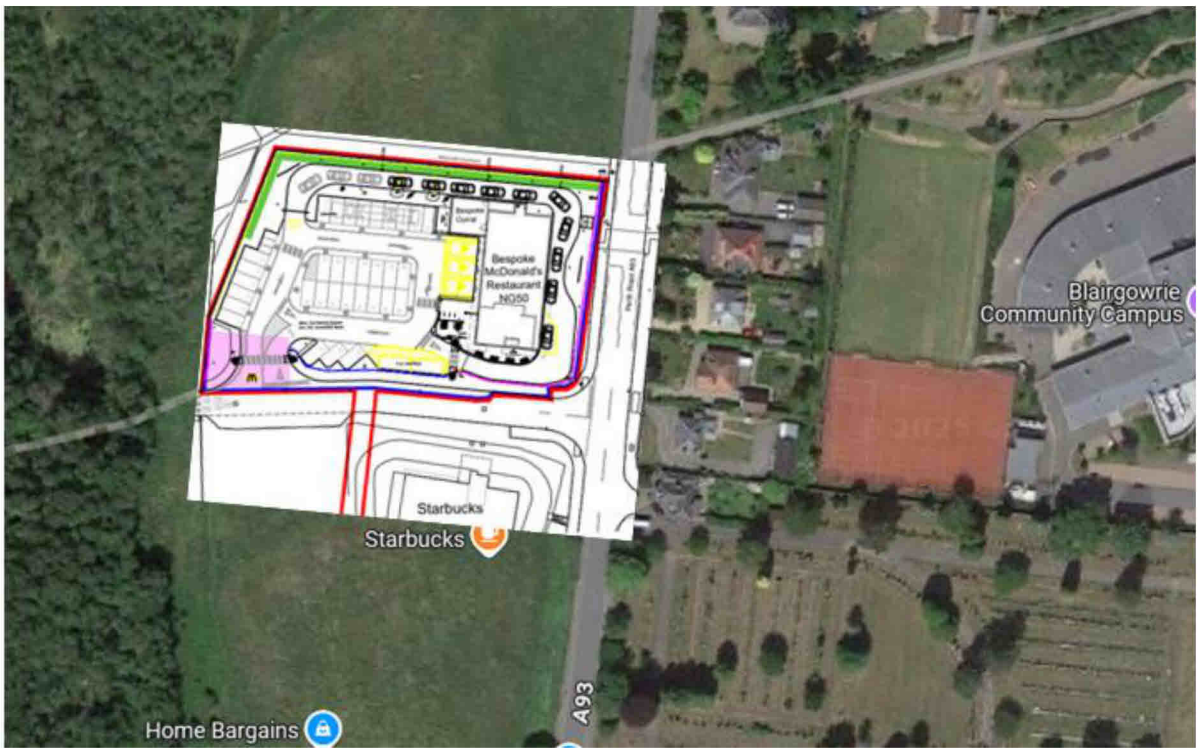
Associated Reference Documents:
Institute of Lighting Professionals Guidance Note 01/21
Institute of Lighting Professionals Guidance Note 08/23
Signify Drawing 6049871/501734912
Signify Lighting Application Specialist Design Notes & Luminaire Schedule

27th June 2025

LAUK Lighting Limited, [redacted]
Company Registration No: 03143050. VAT Number: GB 165 8405 90.

Site Location

The site comprises of 0.2885 Hectares of undeveloped land abutting the A93 Perth Road. South of the site is a new Starbucks Drive Thru restaurant and a small retail park occupied by Home Bargains and Lidl. Starbucks and the retail park are illuminated using LED luminaires on 6m high columns. Opposite the site are a number of single and two storey residential properties and the entrance to Blairgowrie Cemetery. Perth Road is illuminated using LED luminaires on 8m high columns at standard highways intervals. To the west of the site is woodland area of mature trees accessed by a public footpath.



Scope of Report and Lighting Design Principles

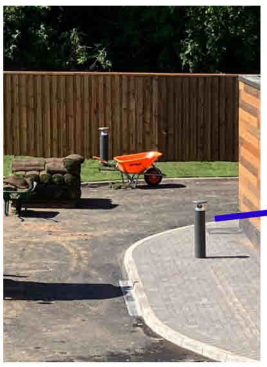
The lighting impact assessment report is summarised in conjunction with:

- Signify Drawing 6049871/501734912
- Signify Lighting Application Specialist Design Notes & Luminaire Schedule
- Extracts from Google Earth and Street View

The assessment examines boundary light overspill, verifies the effective use of LED optics and the Isolux contours that have been achieved and then considers what impact there might be upon the residential properties opposite the site, the proposed residential development to the north of the site and the area of mixed mature trees to the west of the site. In addition, it considers night sky glow using industry lighting best practice and the ecology recommendations detailed in the Encon Associates Ecological Appraisal dated 30th October 2024.

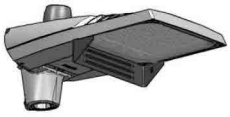
Neighbouring Properties

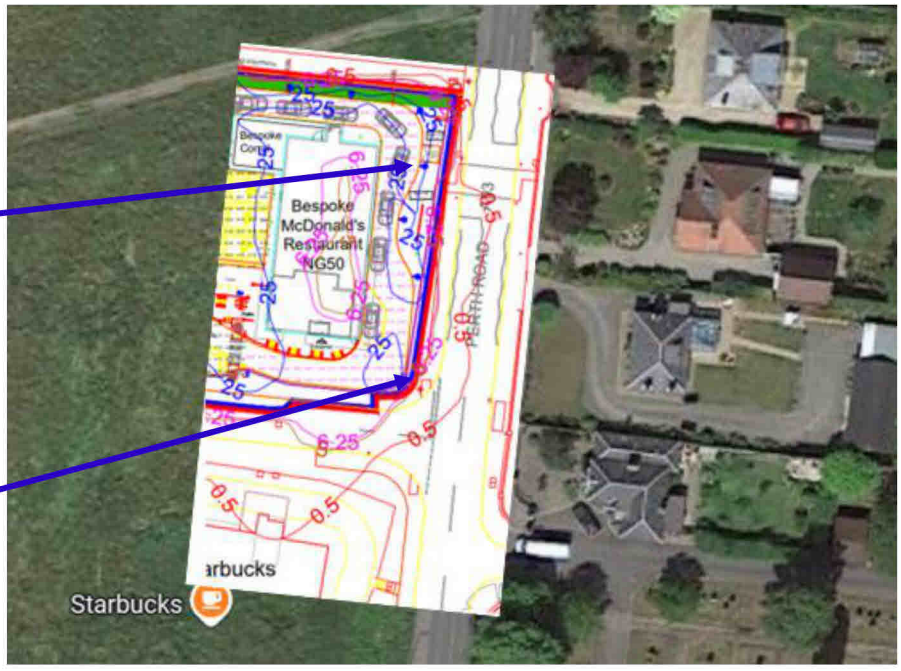
In consideration of the residential properties in Perth Road opposite the site, the lighting design has adopted the principles set out in the Institute of Lighting Professionals Guidance Note 01/20 and GN 01/21 to minimise or eliminate any obtrusive light and to protect the night sky. The LED luminaire to the eastern boundary with Perth Road incorporates backlight louvres which eliminate any horizontal illuminance and provide contained light overspill at ground level. The drive-thru lane is illuminated using low level LED bollards. The residential properties on the opposite of Main Street will not be affected by any obtrusive light. The Isolux plot shows the 0.5 lux contour (moonlight) contained within the width of Perth Road.



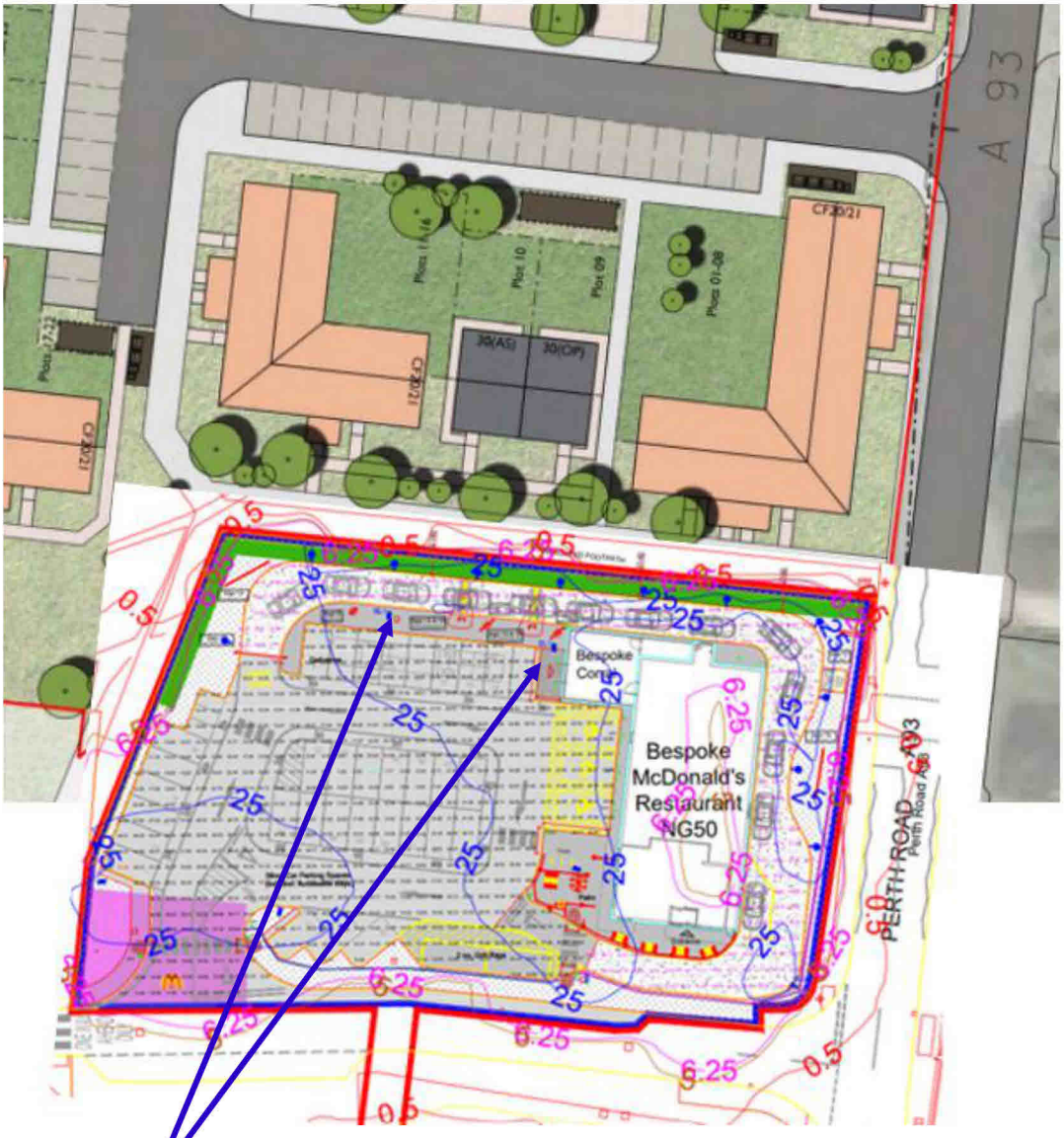
Low level LED bollards

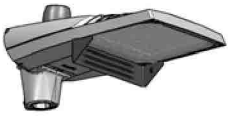
Luminaire with back light louvres





In consideration of the proposed residential property development to the north of the site, the lighting design has adopted the principles set out in the Institute of Lighting Professionals Guidance Note 01/20 and GN 01/21 to minimise or eliminate any obtrusive light. Low level downward directional LED bollards have been used along the length of the drive-thru lane. The bollards will sit below the top of the boundary line 1.1m high close boarded fence. The light spill is contained within the site and there will not be any vertical illuminance on the southern façade of the proposed residential properties as the nearest receptors.



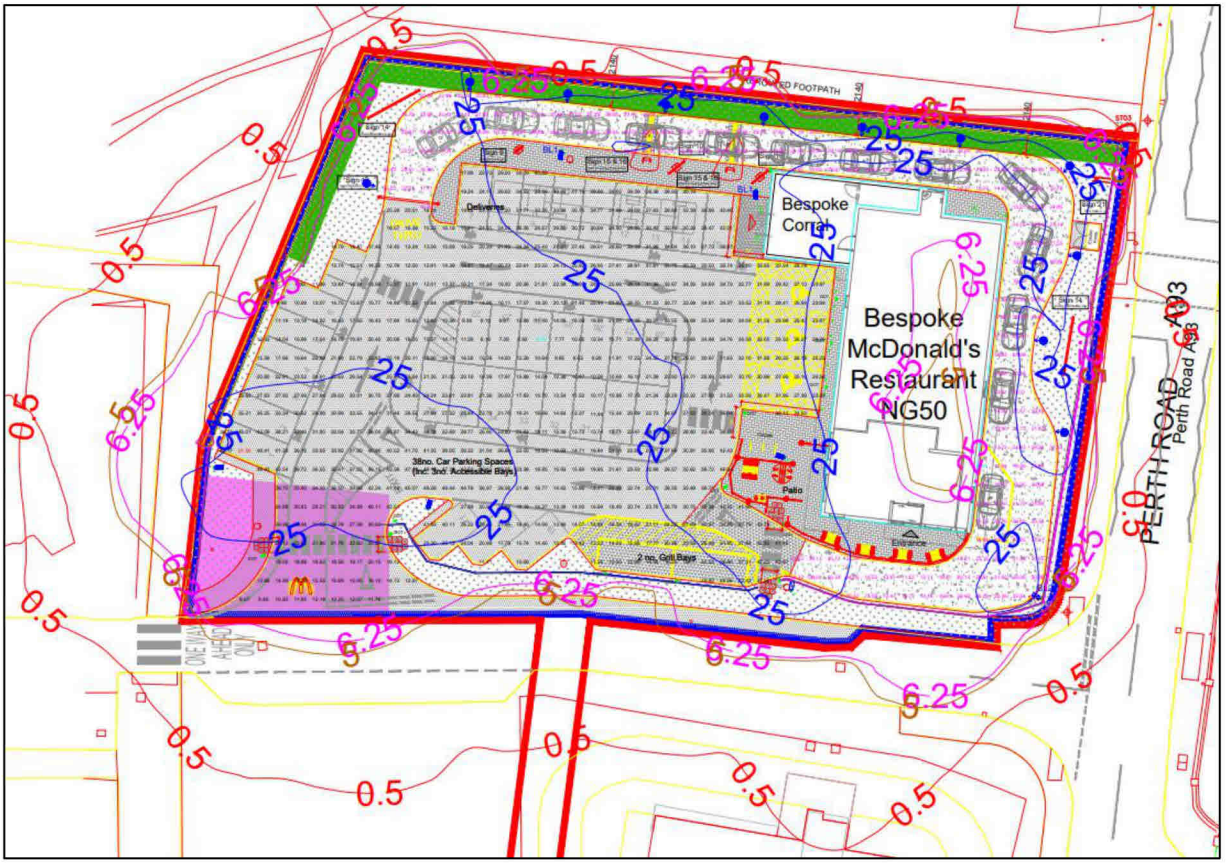


As an additional design measure, the two LED luminaires illuminating the car parking bays to the south of the drive-thru lane incorporate back light louvres which will prevent any line of sight from the residential properties.

Ecology Mitigation

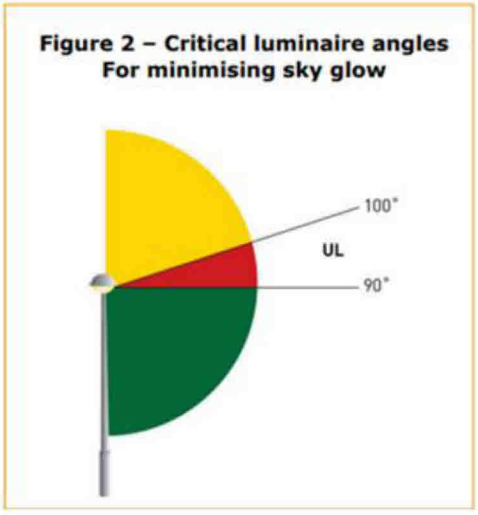
In consideration of the ecology principles set out in the Institute of Lighting Professionals Guidance Note 08/23 Bats And Artificial Lighting At Night:

- The LED luminaires and LED bollards have a CCT of 3000K Warm White
- The columns have been limited to 6m high.
- The luminaires have been set to zero tilt. The ULR will be under 5% and there will not be any night sky glare.
- The Signify luminaires and bollards have an LED light source which does not have a UV component.
- The Signify luminaires and bollards have a peak wavelength greater than 550nm.
- The boundary luminaires all use DM and DX optics to direct light away from the perimeter habitats and to limit boundary light overspill. The drive-thru lane bollards are forward directional (indicated by an arrow on the Isolux plot) which contains rear light spill.
- The drive-thru lane illumination has been designed to an average of 25 lux (normally 50 lux) in order to reduce light reflection in wet conditions and to limit the ground light spill onto the planted border along the northern boundary and drive-thru lane.
- The 0.5 lux (moonlight) Isolux contour has been plotted to show light overspill control.

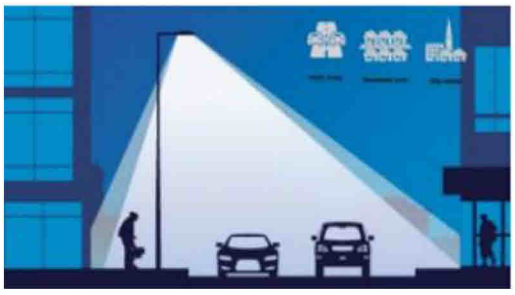


Night Sky Preservation

The lighting design uses Signify luminaires with downward directional LED optics which, in conjunction with the luminaire heads set at zero degree tilt, prevent any upward light and consequential night sky glow. The ULR (Upward Light Ratio) is under 5%.



The Signify LiAS schedule details the full product specification for the 11 luminaires specified in the lighting design. The luminaires incorporate directional optics that ensure that the angle of light emitted is under the required 85°. These are the polar curves for the 2 optics being used.



DM10

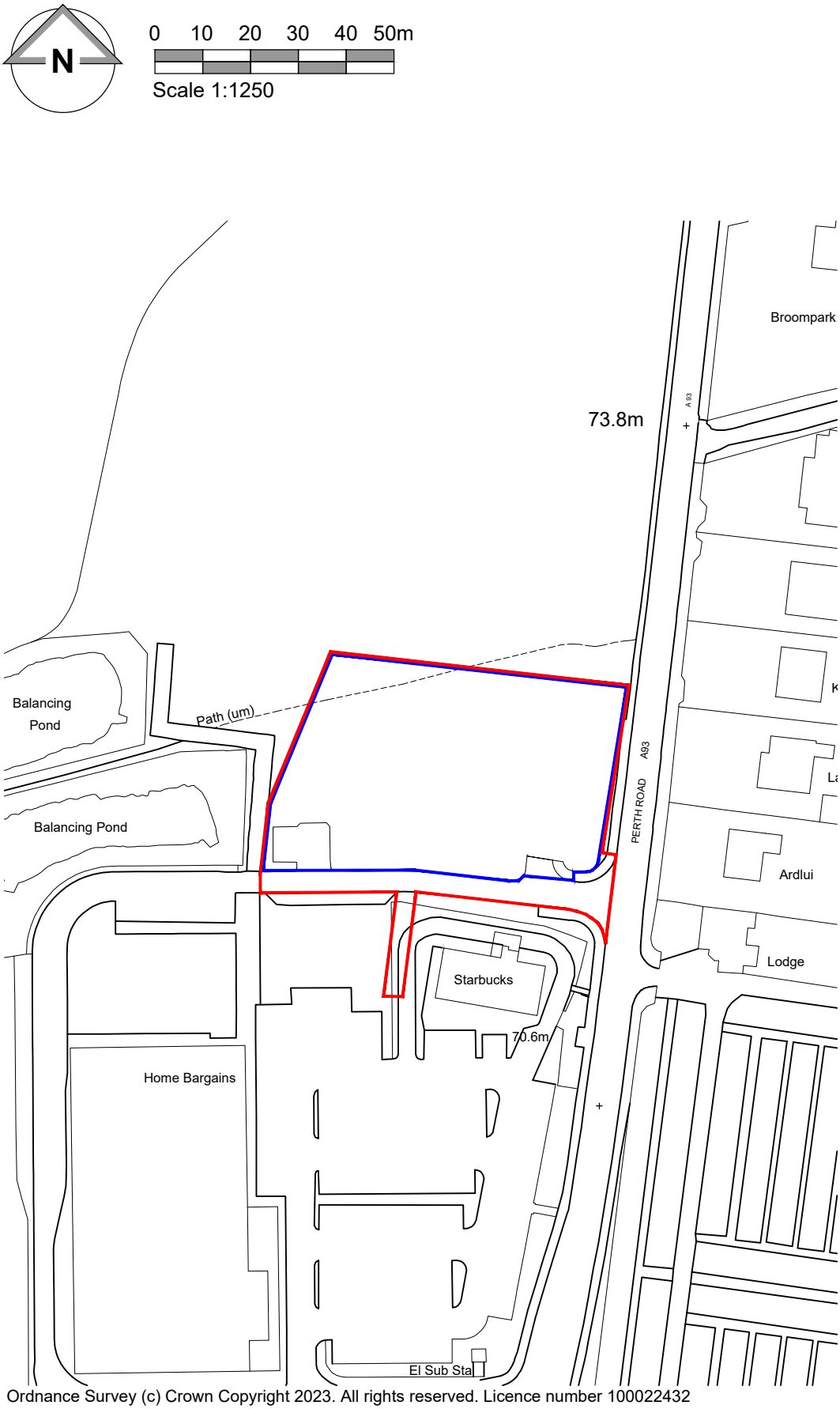
DX10

The DM and DW Optics that are being used are recommended for both night sky and biodiversity preservation.

Night preservation	DN10 / DM11 / DW10 / DX10	DM50 / DW50 / DX60 / DS50 / DSM11
Biodiversity preservation	DN10 / DM11	DW10 / DX51

Conclusions

1. The lighting design ensures that there is no obtrusive light impact on the existing neighbouring residential properties There will be no line of sight from any of the ground or first floor property windows to the underside light source optics of the boundary or car park luminaires. The ground light spill stops within the width of Perth Road.
2. The lighting design ensures that there will be no obtrusive light impact on the southern facades of the proposed residential properties to the north of the site. Because low level bollards are being used along the drive-thru lane and they will be below the fence height, it will not be possible for any line of sight from the ground or first floor windows to the light source. The LED optics will be facing away from the properties.
3. The lighting design eliminates any potential night sky glow by using downward projection luminaires set at zero tilt. The ULR is under 5%.
4. The lighting design uses a CCT of 3000K Warm White which follows the recommendations of the Institute of Lighting Professionals in areas of any potential airborne wildlife activity.
5. The lighting design eliminates any directional light spill into the nearby woodland.
6. The Signify luminaires and bollards have an LED light source which does not have a UV component and both product types have a peak wavelength that is greater than 550nm.
7. The luminaire column heights are limited to 6m.
8. The lighting design provides excellent lux levels and light uniformity within the McDonald's site to support staff and customer welfare, CCTV clarity and safe use of the four pedestrian crossings within the car park area and across the drive-thru lane.
9. The Signify LED luminaires surpass the current BRUKL and BREEAM efficacy requirements.



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Site Location Plan

Scale 1:1250

Location Plan

NOTES

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Project Notes

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Drawing based on:

- OS Map
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Application Boundary:

Land Ownership Boundary:

REV	Date	Drawn by: -	Checked by: -
A	28/07/2025	WJB	BSC
	Redline boundary updated to include access road.		
-	20/06/2025	WJB	BSC/TSS
	Initial Issue		

Purpose of Issue: **For Information**

drawing stage: **Planning**

client: **McDonald's Restaurants Ltd**

project: **Blairgowrie Perth Road**

store: **2473**

drawing title: **Location Plan**

date	20/06/2025	drawn	WJB
scale@A4	1:1250	checked	BSC/TSS

Planning

Rev A

Job No 13638_AEW_2473_1001

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N

0 2 4 6 8 10m

Scale 1:200

3No. Existing car parking bays to be removed

Existing kerbs to be removed

Existing site to be fully cleared in preparation for new development

Existing give way road marking to be removed

Perth Road A93

ONE WAY AHEAD ONLY

Site Plan
Scale 1:200

Existing Site Plan

NOTES

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Project Notes

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Drawing based on:

- Glanvilles Topographical Survey drawing 4240368/4101 Dated:01/07/24
- OS map
- Ordnance Survey (c) Crown Copyright 2023. All rights reserved. Licence number 100022432
- Westpark, Blaigowrie Draft Site 7 Disposition drawing DISPOSITION - PLAN 1(30560098.2) (1) Dated: 12/08/24
- Existing below ground utilities/services unknown, Intrusive surveys required

Application Boundary:

Land Ownership Boundary:

Extent of Existing elements to be removed/demolished

Schedule of Areas	
Site Area (Hectares)	0.3456

REV	Date	Drawn by: -	Checked by: -
A	28/07/2025	WJB	BSC
Redline boundary updated to include access road.			
-	20/06/2025	WJB	BSC/TSS
Initial Issue			

Purpose of Issue

For Information

drawing stage **Planning**

client

McDonald's Restaurants Ltd

project **Blairgowrie Perth Road**

store **2473**

drawing title

Existing Site Plan

date **20/06/2025** drawn **WJB**

scale@A1 **1:200** checked **BSC/TSS**

Planning

Rev **A**

Job No **13638_AEW_2473_1003**

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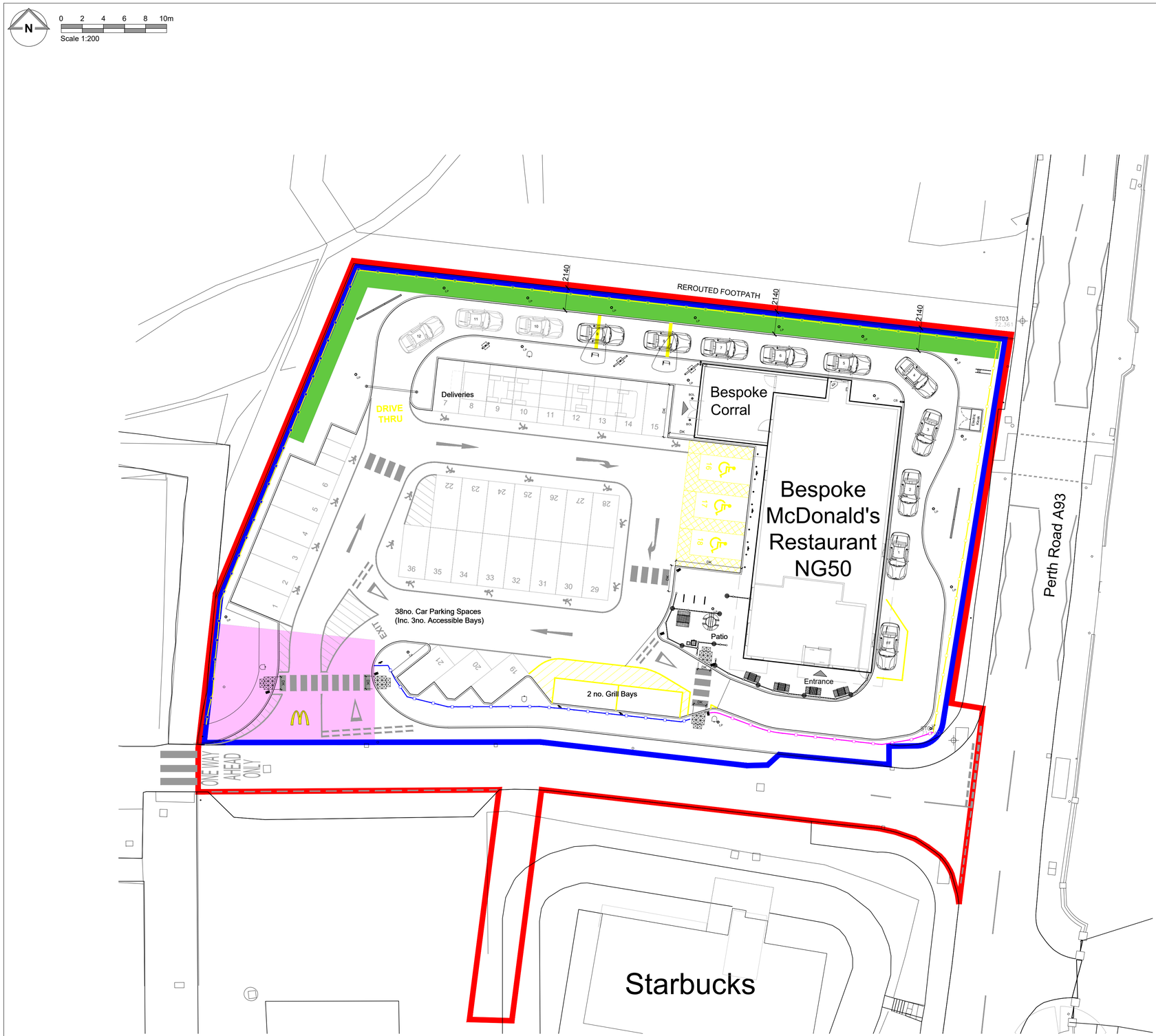

Site Plan
Scale 1:200

Proposed Site Plan

General Site Proposal Notes:

'DOT' denotes Department of Transport Signs installed in accordance will all Approved Documents and British Standards.

'DK' denotes location of drop kerbs to be installed.
Drop kerbs to be installed:
- Along delivery routes
- Around Accessible Parking Bays in accordance with AD M
- At Pedestrian crossing point

Yellow Thermoplastic Material to:
- All Drive Thru related road markings
- Accessible parking bays in accordance with AD M
- Parked order bays

White Thermoplastic Material to:
- Car park related road markings to be in white thermoplastic material
- Standard parking bays to be finished in white thermoplastic material
- All junction road markings
- All pedestrian crossings

Parking Schedule	
Bay Type	Proposed
Accessible Bays	3
Grill Bays	2
General Bays	33
EVC Bays	0
Total Car Bays	38
Cycle Spaces	6
Motorcycle Spaces	3

Schedule of Areas	
	Proposed
Site Area (Hectares)	0.3456
Building GEA (m²) (exc. Corral)	314.4
Building GEA (m²) (inc. Corral)	373.5
Building GIA (m²)	291.7

NOTES

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Project Notes

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Drawing based:

- Glanvilles Topographical Survey drawing 4240368/4101 Dated:01/07/24
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- Westpark, Blaigowrie Draft Site 7 Disposition drawing DISPOSITION - PLAN 1(30560098.2) (1) Dated: 12/08/24
- LAUK Lighting Layout drawing no. 6279826_CALC_McDonalds Blairgowrie (R1), Dated: 18/06/25
- Existing below ground utilities/services unknown, Intrusive surveys required

McDonald's Demise Boundary Indicated:

McDonald's Application Boundary Indicated:

Extent of No Build Zone:

Extent of Landscaping Buffer Zone:

Site Features Key	
150mm Diameter stainless steel protective bollard	BOL
Cranked bollards Painted Black	CB
Tactile Blister Paving	
Target Bin	
"LP" Denotes Lamppost	LP
Proposed 600mm high Timber Knee Rail Fence	
Proposed 1800mm high Close Boarded Timber Fence (Subject to Acoustic Specialist Design)	
Proposed 1100mm high Close Boarded Timber Fence	

REV	Date	Drawn by: -	Checked by: -
F	17/11/2025	WJB	BSC
Acoustic fence height and extent updated to suit acoustic report.			
E	28/07/2025	WJB	BSC
Redline boundary updated to include access road.			
D	10/06/2025	WJB	BSC
Acoustic fence line added. LAUK Lighting layout added.			
C	06/06/2025	WJB	BSC
Building footprint updated, cash booth relocated. Site, drive thru, patio and corral layout updated to suit new building footprint			
B	09/05/2025	WJB	BSC
Building footprint moved south, corral enlarged and patio, drive thru and site reworked to accommodate change.			
A	20/03/2025	WJB	BSC
Building moved slightly north and squared off to the south. Patio, Drive Thru and Parking reworked to accommodate change.			
-	13/03/2025	AG	BSC
Initial Issue			

Purpose of Issue
For Information

drawing stage **Planning**

client
McDonald's Restaurants Ltd

project
Blairgowrie Perth Road

store
2473

drawing title
Proposed Site Plan

date **13/03/2025** drawn **AG**
scale@A1 **1:200** checked **BSC**

Planning

Rev **F**

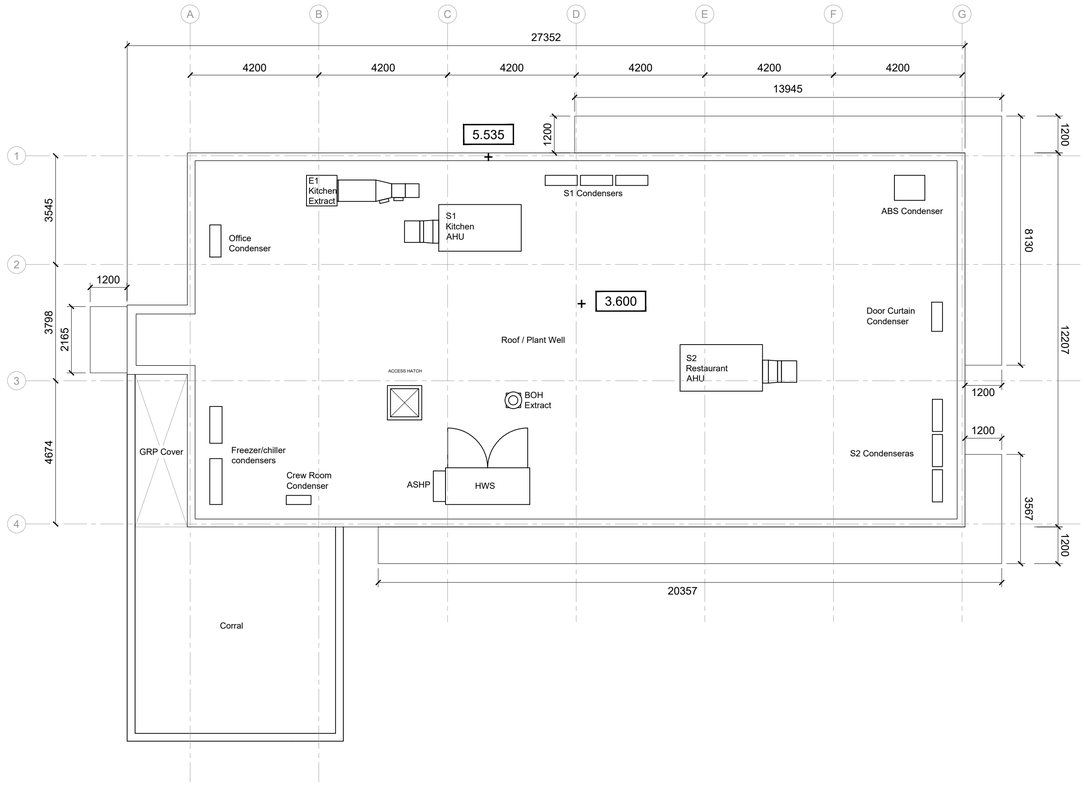
Job No **13638_AEW_2473_1004**

aew architects
0161 214 4370
www.aewarchitects.com

N

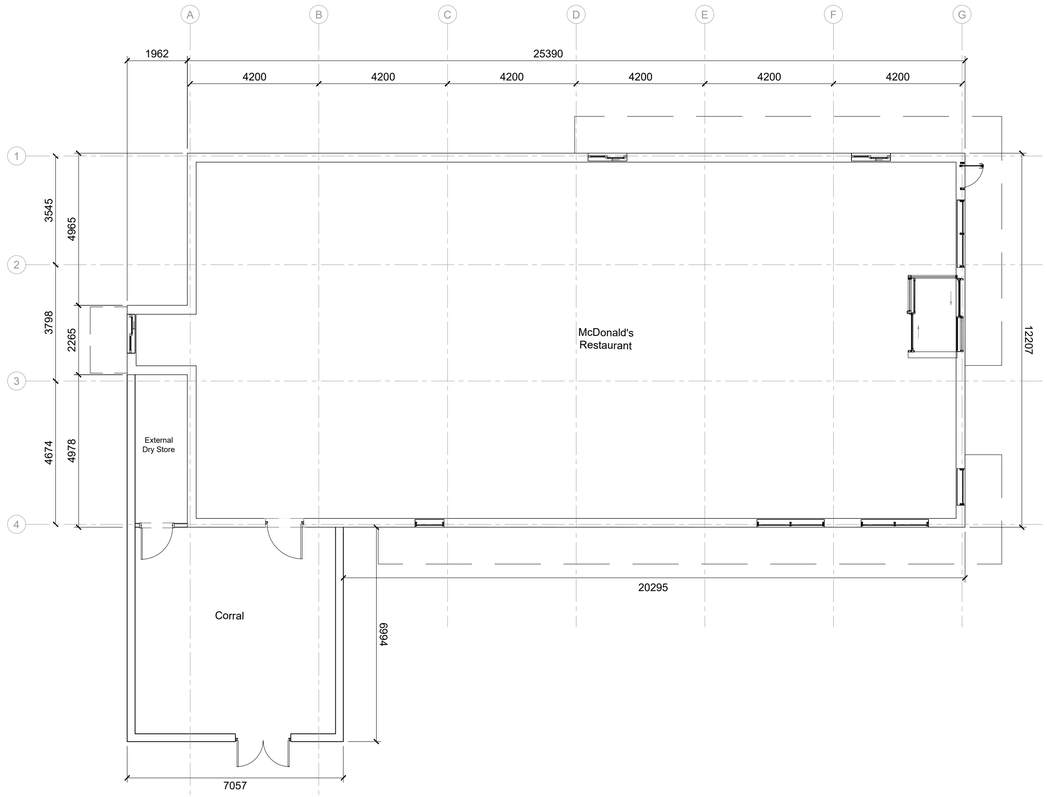
0 1 2 3 4 5m

Scale 1:100



Proposed Roof Plan

Scale 1:100



Proposed Floor Plan

Scale 1:100

Proposed Floor & Roof Plan

NOTES

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Project Notes

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- Drawing based on Scurr Architects Drawing Reference: XXXX-SA-XXXX-P006 NG50 Floor & Roof Plans Mar 25

Planning

REV	Date	Drawn by: -	Checked by: -
-	16/06/2025	WJB	BSC

Initial Issue

Purpose of Issue

For Information

drawing stage **Planning**

client

McDonald's Restaurants Ltd

project	store
Blairgowrie, Perth Road	**2473**

drawing title

Proposed Floor and Roof Plan

date	**16/06/2025**	drawn	**WJB**
scale@A1	**1:100**	checked	**BSC**

Rev -

Job No **13638_AEW_2473_1006**

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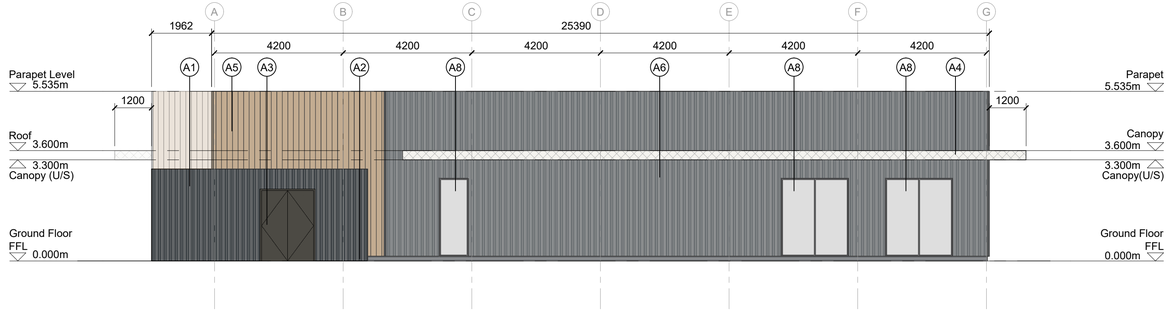
0 1 2 3 4 5m

Scale 1:100



Proposed West Elevation

Scale 1:100

Proposed South Elevation

Scale 1:100

NOTES

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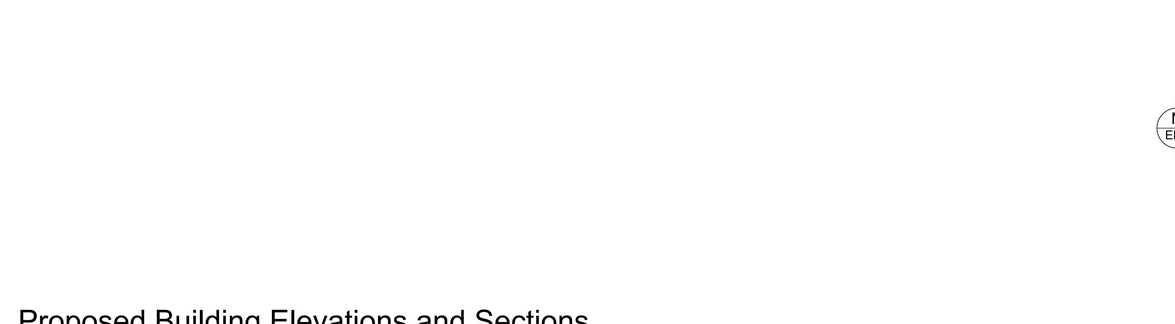
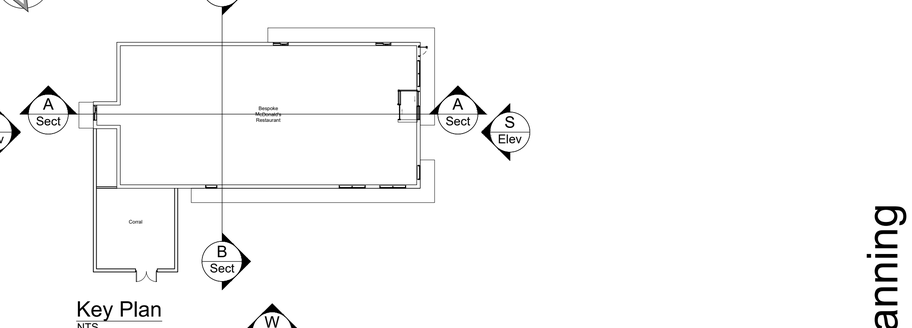
Project Notes

- All drawings to be read in conjunction with all other drawings as noted on issue sheet.
- Drawing based on Scurr Architects Drawing Reference:
- XXXX-SA-XXXX-P005 NG50 Elevations and Sections Mar 25
- XXXX-SA-XXXX-P006 NG50 Floor & Roof Plans Mar 25



Proposed East Elevation

Scale 1:100



Proposed North Elevation

Scale 1:100

NG50 - Building Finishes		
Reference	Key	Description
A1		Corral Dark grey - Cladding panels
A2		Restaurant Stall Riser Dark grey - Engineering brick
A3		Security Doors PPC RAL 7022 Umbra Grey
A4		Canopies and Columns PPC RAL 9003 Signal White
A5		Restaurant Timber effect - Cladding panels
A6		Restaurant Dark grey - Cladding panels
A7	Not in use	Not in use
A8		Window and Doors PPC RAL 9005 Jet Black frames
A9		Plant Parapet Black cladding panels
A10		Service Points - Illuminated panel RAL 1023 Traffic Yellow

Proposed Section A-A

Scale 1:100

Proposed Section B-B

Scale 1:100

Key Plan

NTS

Proposed Building Elevations and Sections

REV	Date	Drawn by: -	Checked by: -
B	28/07/2025	WJB	BSC
	Elevation orientation tags updated.		
A	16/06/2025	WJB	BSC
	Building layout and elevations updated to suite new scheme.		
-	09/05/2025	WJB	BSC
	Initial Issue		

Purpose of Issue

For Information

drawing stage **Planning**

client

McDonald's Restaurants Ltd

project

Blairgowrie, Perth Road

store

2473

drawing title

Proposed Building Elevations and Sections

date **08/05/2025** drawn **WJB**

scale@A1 **1:100** checked **BSC**

Planning

Rev **B**

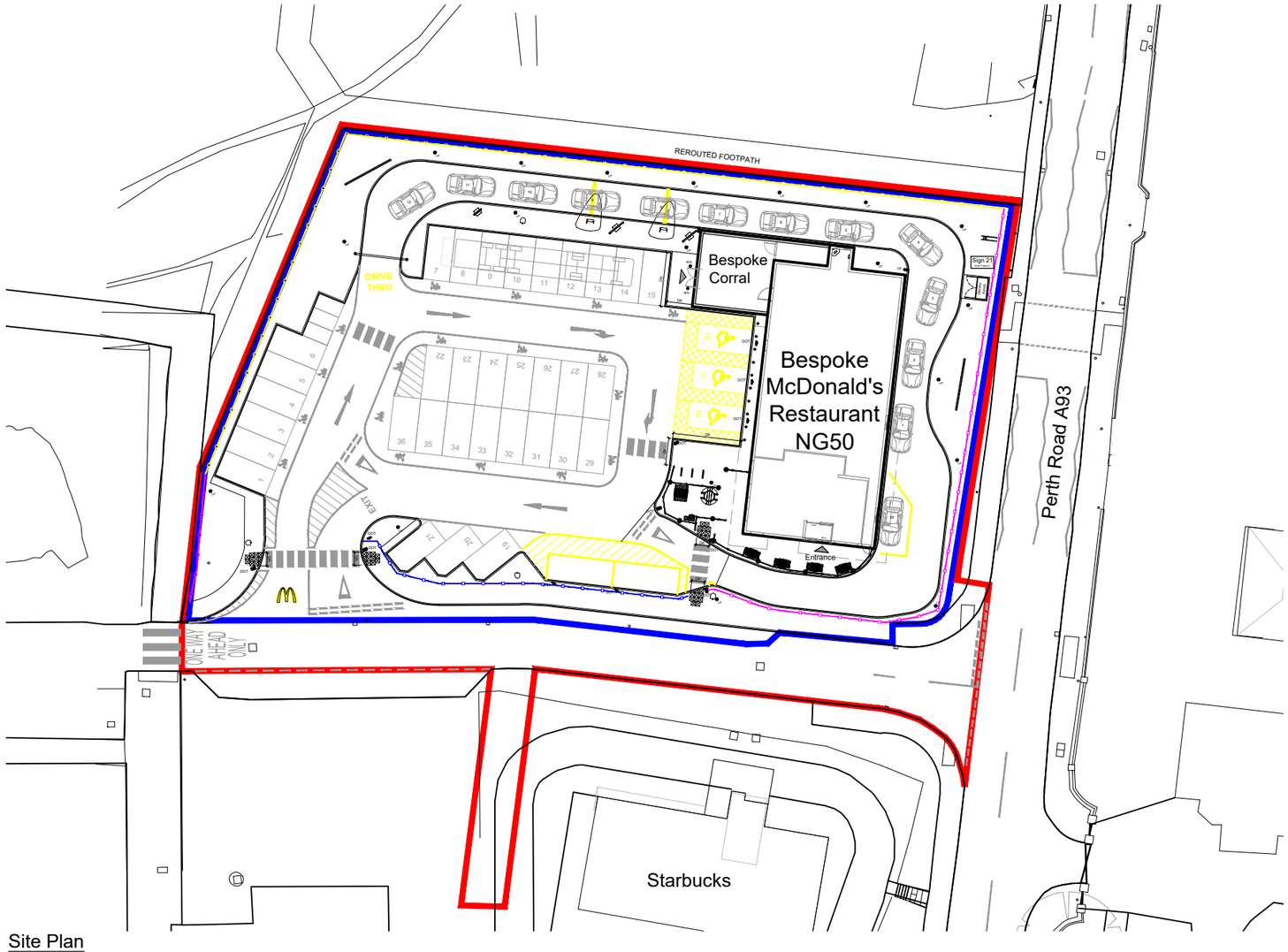
Job No **13638_AEW_2473_1005**

aew architects
0161 214 4370
www.aewarchitects.com

N

0 5 10 15 20 25m

Scale 1:500



Site Plan
Scale 1:500

NOTES

- All dimensions and levels are to be checked on site.
- Any discrepancies are to be reported to the architect before any work commences.
- Whilst information on this sheet is issued to scale, scaling directly from this drawing may result in inaccuracies. For precise measurements, refer to the stated dimensions or contact the Architect.
- This drawing shall not be reproduced without express written permission from AEW.
- Title overlay drawings and ownership boundaries are produced using all reasonable endeavours. AEW cannot be responsible for the accuracy or scale discrepancy of base plans supplied to them.
- All works are to be undertaken in accordance with Building Regulations and the latest British Standards.
- All proprietary materials and products are to be used strictly in accordance with the manufacturers recommendations.

Project Notes

- All drawings to be read in conjunction with all other drawings as noted on issue sheet.

Drawing based on:

- Glanvilles Topographical Survey drawing 4240368/4101 Dated:01/07/24
- OS map
- Ordnance Survey (c) Crown Copyright 2023. All rights reserved. Licence number 100022432
- Westpark, Blaigowrie Draft Site 7 Disposition drawing DISPOSITION - PLAN 1(30560098.2) (1) Dated: 12/08/24
- LAUK Lighting Layout drawing no. 6279828_CALC_McDonalds Blairgowrie (R1), Dated: 18/06/25

Application Boundary:

Land Ownership Boundary:

REV	Date	Drawn by: -	Checked by: -
A	28/07/2025	WJB	BSC
Redline boundary updated to include access road.			
-	20/06/2025	WJB	BSC/TSS
Initial Issue			

Purpose of Issue
For Information

drawing stage **Planning**

client
McDonald's Restaurants Ltd

project
Blairgowrie Perth Road

store
2473

drawing title
Block Plan

date **20/06/2025** drawn **WJB**
scale@A3 **1:500** checked **BSC/TSS**

Planning

Rev **A**

Job No **13638_AEW_2473_1002**

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Block Plan

Tuesday, 12 August 2025

Local Planner
Planning and Development
Perth and Kinross Council
Perth
PH1 5GD

Development Operations
The Bridge
Buchanan Gate Business Park
Cumbernauld Road
Stepps
Glasgow
G33 6FB

Development Operations
Freephone Number - 0800 3890379
E-Mail - DevelopmentOperations@scottishwater.co.uk
www.scottishwater.co.uk

Follow Us

Dear Customer,

Land 70 Metres West Of Langdale, Perth Road, Blairgowrie, PH10 6EN
Planning Ref: 25/01116/FLL
Our Ref: DSCAS-0138269-38V
Proposal: Erection of restaurant unit with drive thru facilities and formation of vehicular access, parking areas, landscaping and associated works

Please quote our reference in all future correspondence

Scottish Water has no objection to this planning application. The applicant should be aware that this does not confirm that the proposed development can currently be serviced.

Please read the following carefully as there may be further action required. Scottish Water would advise the following:

Water Capacity Assessment

- This proposed development is within the Lintrathen Water Treatment Works catchment. To allow us to fully appraise the proposals we suggest that the applicant completes a Pre-Development Enquiry (PDE) Form and submits it directly to Scottish Water via our Customer Portal

Waste Water Capacity Assessment

- This proposed development is within the Blairgowrie Waste Water Treatment Works catchment. Continued engagement through the Pre-Development Enquiry (PDE) process is recommended, regarding capacity for this development.

Please Note

The applicant should be aware that we are unable to reserve capacity at our water and/or waste water treatment works. When planning permission has been granted and a formal connection application has been submitted, we will review the availability of capacity at that time and advise the applicant accordingly.

Surface Water

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.

There may be limited exceptional circumstances where we would allow such a connection for brownfield sites only, however this will require significant justification from the customer taking account of various factors including legal, physical, and technical challenges.

In order to avoid costs and delays where a surface water discharge to our combined sewer system is anticipated, the developer should refer to our guides which can be found at https://www.scottishwater.co.uk/Help-and-Resources/Document-Hub/Business-and-Developers/Connecting-to-Our-Network which detail our policy and processes to support the application process, evidence to support the intended drainage plan should be submitted at the technical application stage where we will assess this evidence in a robust manner and provide a decision that reflects the best option from environmental and customer perspectives.

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will typically require surface water to be eliminated from any new discharges of trade effluent.

Asset Impact Assessment

Scottish Water records indicate that there is live infrastructure in the proximity of your development area that may impact on existing Scottish Water assets.

The applicant must identify any potential conflicts with Scottish Water assets and contact our Asset Impact Team via our Customer Portal for an appraisal of the proposals.

The applicant should be aware that any conflict with assets identified will be subject to restrictions on proximity of construction. Please note the disclaimer at the end of this response.

Written permission must be obtained before any works are started within the area of our apparatus.

Next Steps:

- **Non Domestic/Commercial Property:**

  Since the introduction of the Water Services (Scotland) Act 2005 in April 2008 the water industry in Scotland has opened to market competition for non-domestic customers. All non-domestic household customers now require a Licensed Provider to act on their behalf for new water and waste water connections. Further details can be obtained at www.scotlandontap.gov.uk

- **Trade Effluent Discharge from Non-Domestic Property:**

  Certain discharges from non-domestic premises may constitute a trade effluent in terms of the Sewerage (Scotland) Act 1968. Trade effluent arises from activities including; manufacturing, production and engineering; vehicle, plant and equipment washing, waste and leachate management. It covers both large and small premises, including activities such as car washing and launderettes. Activities not covered include hotels, caravan sites or restaurants.

  If you are in any doubt as to whether the discharge from your premises is likely to be trade effluent, please contact us on 0800 778 0778 or email TEQ@scottishwater.co.uk using the subject “Is this Trade Effluent?". Discharges that are deemed to be trade effluent need to apply separately for permission to discharge to the sewerage system. The forms and application guidance notes can be found here.

  Trade effluent must never be discharged into surface water drainage systems as these are solely for draining rainfall run off.

  For food services establishments, Scottish Water recommends a suitably sized grease trap is fitted within the food preparation areas, so the development complies with Standard 3.7 a) of the Building Standards Technical Handbook and for best management and housekeeping practices to be followed which prevent food waste, fat oil and grease from being disposed into sinks and drains.

  The Waste (Scotland) Regulations which require all non-rural food businesses, producing more than 5kg of food waste per week, to segregate that waste for separate collection. The regulations also ban the use of food waste disposal units that dispose of food waste to the public sewer. Further information can be found at www.resourceefficientscotland.com

I trust the above is acceptable however if you require any further information regarding this matter, please contact me on **0800 389 0379** or via the e-mail address below or at planningconsultations@scottishwater.co.uk.

Yours sincerely,

Angela Allison
Development Services Analyst
PlanningConsultations@scottishwater.co.uk

Scottish Water Disclaimer:

"It is important to note that the information on any such plan provided on Scottish Water's infrastructure, is for indicative purposes only and its accuracy cannot be relied upon. When the exact location and the nature of the infrastructure on the plan is a material requirement then you should undertake an appropriate site investigation to confirm its actual position in the ground and to determine if it is suitable for its intended purpose. By using the plan you agree that Scottish Water will not be liable for any loss, damage or costs caused by relying upon it or from carrying out any such site investigation."

Supplementary Guidance

- Scottish Water asset plans can be obtained from our appointed asset plan providers:
    - Site Investigation Services (UK) Ltd
    - Tel: 0333 123 1223
    - Email: sw@sisplan.co.uk
    - www.sisplan.co.uk

- Scottish Water's current minimum level of service for water pressure is 1.0 bar or 10m head at the customer's boundary internal outlet. Any property which cannot be adequately serviced from the available pressure may require private pumping arrangements to be installed, subject to compliance with Water Byelaws. If the developer wishes to enquire about Scottish Water's procedure for checking the water pressure in the area, then they should write to the Development Operations department at the above address.

- If the connection to the public sewer and/or water main requires to be laid through land out-with public ownership, the developer must provide evidence of formal approval from the affected landowner(s) by way of a deed of servitude.

- Scottish Water may only vest new water or waste water infrastructure which is to be laid through land out with public ownership where a Deed of Servitude has been obtained in our favour by the developer.

- The developer should also be aware that Scottish Water requires land title to the area of land where a pumping station and/or a Sustainable Drainage System (SUDS) proposed to vest in Scottish Water is constructed.

- Please find information on how to submit application to Scottish Water at our Customer Portal.

Comments to the Development Quality Manager on a Planning Application

Planning Application ref.	25/01116/FLL	**Comments provided by**	David Stephens
Service/Section	HE/Flooding	**Contact Details**	[redacted]
Description of Proposal	Erection of restaurant unit with drive thru facilities and formation of vehicular access, parking areas, landscaping and associated works.		
Address of site	Land 70 Metres West Of Langdale Perth Road Blairgowrie PH10 6EN		
Comments on the proposal	No Objection. The developer has, through drainage improvements, allowed for the required 200yr + 39% climate change event and provided pre and post development exceedance drawings. Due to ongoing surface water issues at the discharge location for the wider sites SuDS infrastructure, we ask that the developer considers betterment where possible by limiting discharge to the 2yr event run off flow rate for all return periods up to 200yr + CC. This would allow the developer to have a positive impact on the downstream environments. The core path located adjacent to the existing SuDS discharge point has been found to be susceptible to surface water issues and therefore all developments proposed as part of the wider site will be asked to provide betterment in this way.		
Recommended planning condition(s)			
Recommended informative(s) for applicant	The applicant is advised to refer to Perth & Kinross Council's Supplementary guidance on Flood Risk and Flood Risk Assessments 2021 as it contains advice relevant to your development.		
Date comments returned	06/10/2025		

Comments to the Development Quality Manager on a Planning Application

Planning Application ref.	25/01116/FLL	**Comments provided by**	Katie Briggs
Service/Section	Strategy and Policy	**Contact Details**	Phone Email [redacted]
Description of Proposal	Erection of a drive-through restaurant, associated works		
Address of site	Land 70 Metres West Of Langdale Perth Road Blairgowrie PH10 6EN		
Comments on the proposal	**Development Plan policies** NPF4 Policy 27 City, Town, Local and commercial centres states *'b) Development proposals will be consistent with the town centre first approach. Proposals for uses which will generate significant footfall, including commercial, leisure, offices, community, sport and cultural facilities, public buildings such as libraries, education and healthcare facilities, and public spaces:* *i. will be supported in existing city, town and local centres, and* *ii. will not be supported outwith those centres unless a town centre first assessment demonstrates that:* *• all centre and edge of centre options have been sequentially assessed and discounted as unsuitable or unavailable;* *• the scale of development cannot reasonably be altered or reduced in scale to allow it to be accommodated in a centre; and* *• the impacts on existing centres have been thoroughly assessed and there will be no significant adverse effect on the vitality and viability of the centres.'* This also policy goes on to say: *'c) Development proposals for non-retail uses will not be supported if further provision of these services will undermine the character and amenity of the area or the health and wellbeing of communities, particularly in disadvantaged areas. These uses include:* *i. Hot food takeaways, including permanently sited vans;* *ii. Betting offices; and* *iii. High interest money lending premises.* *d) Drive-through developments will only be supported where they are specifically supported in the LDP.'* Chief Planners letter on transitional arrangements dated 8 February 2023 states, *'The intention of this policy was to ensure that this type of development is considered as an integral part of the wider development plan, and is not (as has been erroneously reported) a moratorium or ban on such developments.* *In applying policy 27(d) and whether such developments are supported, planning authorities may regard wider uses that are compatible with the drive through function to be included, as there is no single class of development that this relates to and may sometimes be considered as sui generis. Suitable locations may include for example those allocated for Class 1 shops or Class 3 Food and drink, depending on the nature of the proposal involved in each case. In looking at the potential impact of the development as a whole, as always, decisions will depend on the facts and*		

circumstances of each individual case and regard should be given to wider policies within NPF4, including those relating to reducing emissions that contribute to climate change and to wider policies that aim to improve town centres and support local living.'

Local Development Plan guidance May 2023 *provides further advice as follows: 'To support a healthier food environment hot food takeaways, including permanently sited vans, can be directed towards centres. This can support local living and 20 minute neighbourhoods by helping to create diversity of access to food.' It also identifies, 'LDP3 should focus on the need to redevelop the town centre as a first port of call for new development proposals.'*

Blairgowrie and Rattray Local Place Plan 2025 -2035
The Local Place plan supports, 'Town Centre First Approach In line with current national policies, development in the future requires focus on encouraging, promoting and facilitating revitalisation of the town centre. The Town Centre First approach helps towns adapt positively to long-term economic, environmental and societal changes.'

Proposal description/site history
There is the 17/00939/IPM in principle permission for the MU5 wider allocation, for 604 m2 of class 3 space, alongside 2,174 m2 retail (food), 2,570 m2 retail (non food) and 120m2 (hotels and hostels). The detailed 1A masterplan associated to 19/00163/AMM which followed, then approved the details of the 2 retail units (Lidl and Home Bargains), and a neighbourhood centre comprising 3 retail units (Class 1). Phase 1A, did not include - one of the retail units north of Home Bargins, this site, the restaurant at the southern end, nor the food outlet which the later 21/01595/FLL 214 m2 Starbucks application approved for class 1/class 3 plus ancillary drive through. This proposed site for MacDonalds drive through relates to land 17/00939/IPM earmarked for a hotel.

Policy comments
LDP2 MU5 allocates for housing, employment use, and education. As mentioned, the sui generis use proposed in this location is also not established by the 17/00939/IPM in principle permission, which identified this site for a hotel, and the wider LDP MU5 for an element of class 3 or food and drink provision (but not sui generis). Nor is sui generis established by the 19/00163/AMM permission which left this area as a reserved matter. This site was earmarked for a hotel in the 17/00939/IPM indicative site plan, and permitting this application would take it close to the overall amount indicated for food and drink within the in principle permission for food and drink whilst there is another available site within MU5 earmarked for a restaurant.

When considering the Chief Planners letter, there is no moratorium on drive throughs, and LDP allocated retail locations can be considered appropriate depending on the nature of the proposal, and the potential impacts. Reflecting the permissions granted, and its development thus far, this retail location is not a current LDP allocation, but it is likely to be identified in LDP3 as both a local and a commercial centre reflecting the scale of retail provision (Home Bargains and Lidl). When considering that this retail centre will also functions as a local neighbourhood centre, a drive through format would encourage customers who live within walking distance to drive rather than walk/cycle. This local centre role suggests class 3 provision within MU5 as per the 17/00939/IPM permission, with an element of

	parking, would be more appropriate, this would encourage walking and cycling, whilst it would cater adequately for drivers. NPF4 policy 27 requires a town centre assessment to consider if a sequential approach has been taken. A hot food takeaway generates higher customer numbers and should be located within the town centre/edge of town centre if possible. In the submitted town centre assessment, the applicant notes that there is a not a sequentially preferable site which could accommodate their proposal. It is noted that the applicant has ruled out the former supermarket site, on Commercial Street, for being too large at 0.89ha, and for it being within a Conservation Area. Whilst it is considered that its position on the edge of the Conservation area, and current amenity in this area means it would not be precluded on that basis, after contacting the agent, it has been confirmed that McDonald's was not an option for this Landlord as the deal would not stack up versus retaining the existing building. In terms of following the sequential approach, the applicant's town centre assessment is considered to meet NPF4 policy 27b. It is also noted that within the Local Place Plan, the community aspiration for this former Coop building is for, 'A local indoor market/crafters space, indoor entertainment space, bowling or sports centre'. It is also noted that NPF4 Policy 27 and the Local Development Plan guidance May 2023 seeks to protect the health and wellbeing of communities from hot food takeaways, and direct these to the town centre. The easy walkable, proximity of this site to Blairgowrie Secondary school is a consideration. Whilst it is noted that McDonald's provides a range of food options, including healthy options, this location is not within the town centre, where there would be a wider choice of healthier options to choose from. **Conclusion** This is a finely balanced application to determine, and it is noted there are significant number of public comments both objecting to and supporting this planning application. When coming to a recommendation and a decision, it is considered that the key policy issue is 27d, as this is a class 3 and sui generis drive through format being proposed outwith an LDP allocated retail location. This site also lies within a retail location which has permission for and will partially function as a local centre, where we should encourage active travel, further strengthening the reasoning for supporting food and drink rather than sui generis drive through development. There could also be an additional reason for this application potentially being considered contrary to Policy 27, in that this fast-food outlet is being proposed within easy walkable proximity to the high school, and it is not being proposed within the town centre situated alongside other healthy eating choices. It could potentially contribute to this application being considered to '*undermine the character and amenity of the area or the health and wellbeing of communities'* under NPF4 Policy 27C. However, it is noted that at this stage NPF4, has not taken a similar approach to England, and provided a clearer steer, as their NPF (December 2024) states that, 'Local planning authorities should refuse applications for hot food takeaways and fast food outlets: a) within walking distance of schools and other places where children and young people congregate, unless the location is within a designated town centre.'
Recommended planning	

condition(s)	
Recommended informative(s) for applicant	

LICHFIELDS

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Planning and Development
Perth and Kinross Council
Pullar House
Kinnoull Street
Perth
PH1 5GD

Date: 25 November 2025
Our ref: 67496/01/NWO/RAf/40265277v2

Application for Planning Permission: Land at Perth Road, Blairgowrie (ref. 25/01116/FLL)

On behalf of our client, McDonald's Restaurants Ltd ('McDonald's'), we wish to respond to the comments received from the policy team at Perth and Kinross Council regarding the proposed drive-thru restaurant at Perth Road, Blairgowrie which is currently under consideration by Perth and Kinross Council (planning application ref. 25/01116/FLL).

We have reviewed the response from the policy team and seek to respond to the key issues raised. Our response is structured around the key themes set out within the policy team's response, under the following headings:

- The principle of drive-thru development in this location;
- Sustainable transport; and
- Health and wellbeing.

The principle of drive-thru development in this location

The site is located directly adjacent to an existing retail park, where several Class 1A and Class 3/Sui Generis uses have been developed, so should be seen in the context of this neighbouring development. Indeed, it is important to recognise that an existing drive-thru coffee shop is located directly adjacent to application site and the proposed development provides the opportunity to create a food and drink 'hub' within the retail park.

In addition to this, the proposed site is within 10-minutes walking distance of Blairgowrie Town Centre and is therefore well connected to the range of uses and amenities located there. The proposed development is both an employment and a leisure facility, so the application site's location, close to several residential areas and the town centre (which will allow people to walk and cycle to the site, rather than drive) is of great importance. Given the above, it is considered that the proposals comply with NPF4 Policy 15 (Local living and 20-minute neighbourhoods) which encourages development proposals to support local living and reduce the need to travel.

Nathaniel Lichfield & Partners Limited (trading as "Lichfields") is registered in England, no. 2778116
Registered office at The Minster Building, 21 Mincing Lane, London EC3R 7AG

LICHFIELDS

NPF4 Policy 27

In accordance with Part b) of Policy 27 of NPF4, it has been demonstrated through a Town Centre First Assessment (which formed part of the submitted Planning Statement, July 2025) that there are no suitable or available sites in Blairgowrie Town Centre. This has been accepted by the policy team at Perth and Kinross Council, which is welcomed. On this basis, the proposed development (and proposed site) should be assessed on its individual merits, and against the wider policies of the development plan.

In response to the comment from the policy team regarding the potential development site to the south of the existing retail park – while it is noted that the site is undeveloped and benefits from Planning Permission in Principle for a family restaurant with a floorspace of just under 500 sq.m, the site is not sequentially preferrable to the application site as it is not within a designated centre, and lies further away from Blairgowrie Town Centre. Additionally, the proposed McDonald's drive-thru restaurant is just 314 sq.m GEA and it is considered unlikely that the development of this subject proposal will impact deliverability of the other site.

In terms of Part c) of Policy 27 of NPF4, the proposed development is also not likely to impact on the character and amenity of the area, given it is located adjacent to an established retail park and will therefore be seen in the context of this development. To address concerns in relation to health and wellbeing, further information is set out below in this letter.

With regard to Part d) of Policy 27 – the application site is allocated for mixed-use development in the extant LDP. While it is acknowledged that the site's allocation does not specifically address whether drive-thru development is an acceptable form of development, it is noted that a drive-thru coffee shop was granted permission in 2021, and the principle of such development has therefore been supported by the Council at this location in recent years.

Furthermore, it is important to assess the acceptability of the proposed development in the context of the Transitional Arrangements, published in February 2023, regarding the application of Policy 27d). The guidance states "*in applying Policy 27 (d) and whether such developments are supported, planning authorities may regard wider uses that are compatible with the drive through function to be included, as there is no single class of development that this relates to and may sometimes be considered as sui generis. Suitable locations may include for example those allocated for Class 1 shops or Class 3 Food and drink, depending on the nature of the proposal involved in each case*".

In the context of the proposed development, the application site is located directly adjacent to an existing retail park where planning permission has been granted for several Class 1A/Class 3/ and sui generis (drive-thru) uses. The site is also located in a highly accessible area, which has good pedestrian and cycle links to the wider area of Blairgowrie, including the town centre. It is therefore considered that the proposals align with the Transitional Arrangements that were published by the Scottish Government.

While it is understood that the Council's concern is the inclusion for a drive-thru facility as part of the proposed scheme, this should not be the determining factor in the circumstances of this case. Furthermore, as set out below the drive-thru lane has a limited bearing on overall levels of traffic generation and indeed most of the traffic of the proposed restaurant would be traffic that is already on the local road network who would visit McDonald's as part of a wider trip.

Socio-economic impact

When considering the proposed development, it is also important to emphasise the significant economic benefits that the proposals will bring. This includes:

- Supporting 140 direct FTE construction jobs, as well as supporting a further 120 indirect and induced FTE jobs during the construction phase;
- Generating an additional £4.1 million of GVA during construction;
- Creating 80-100 direct headcount jobs (55-75 direct FTE jobs) on-site once the development is completed and operational – and a further 30 indirect and induced jobs; and
- Delivering an uplift in business rates revenue in the range of £39,000 to £42,5000.

In overall summary, there are significant economic benefits which would be created from the proposed development. The proposals would therefore bring a range of benefits to the residents of Blairgowrie, and this should be a material consideration for the planning application.

Health and wellbeing

Proximity to Blairgowrie Secondary School

The policy team have noted that the site is in close proximity to Blairgowrie Secondary School and that the proposals should be located in Blairgowrie Town Centre where there are more options for healthy eating.

As set out above, the submitted planning application has demonstrated that there are no suitable or available sites within Blairgowrie Town Centre.

It is acknowledged that the policy team is committed to addressing health and wellbeing. However, any approach which seeks to restrict new development that comprise an element of hot food takeaway uses – including by reference to local schools – is unjustified. This is not least given the absence of any basis for this in either national or local planning policy.

While it is noted that there is a policy within England's National Planning Policy regarding the distance to schools, this is not a policy within Scottish national or local policy and is not therefore a material policy consideration in the context of this planning application. The site is located directly adjacent to a retail park which already contains other comparable uses - and lies approximately 800m walking distance from Blairgowrie High School so there is no reasonable reason to assume pupils will walk to the site.

Healthy eating

The policy team have highlighted the point of healthy eating and raised concerns in terms of its impact.

The McDonald's menu includes lower calorie meals of under 400kcal and 600kcal, which includes salads. McDonald's also use quality produce that is sourced locally wherever possible. 100% of its beef is British and Irish and every one of its 20,000 farmers is approved by a nationally recognised farm assurance scheme, such as Red Tractor or Bord Bia.

Furthermore, it is important to highlight that McDonald's supports the promotion of healthier lifestyles and tackling obesity and is committed to giving their customers a range of options and supporting them to better understand the choices they make. Nutritional information is presented in a variety of ways to customers, from nutrition labelling on select food packaging to use of its mobile apps, kiosks and online nutrition calculators, as well as displaying calories on menu boards. This allows customers to select an order that fits with their own dietary plans and nutritional requirements.

McDonald's also promote active lifestyles as an ambassador and partner for participation in football across the UK. Since 2002, McDonald's has partnered with the four UK Football Associations, providing financial support to improve the standards and growth of grassroots football across England, Scotland, Wales and Northern Ireland. Local employees and restaurants have also been involved. McDonald's Club Twinning was launched in 2008 and there are now over 900 restaurants twinned with local clubs, providing coaching and business support.

Given the above, it should be clear that the proposed McDonald's approach is very different from that of other drive-thru operators who do not provide such a wide-ranging menu or provide customers with information on nutrition and calories to help customers make an informed choice. It is important that this is taken into account when considered the proposed use.

Furthermore, there is no link between the proposed development and levels of childhood obesity, particularly given McDonald's ongoing responsible approach to offering balanced options and promoting active lifestyles.

Sustainable transport

McDonald's anticipate that a large majority of sales captured from the proposed development will come from the local area. At present, the nearest McDonald's restaurant is over 19km away. The proposed site will therefore offer a more convenient option to residents in a currently unserved market, thereby offering greater facilities locally which in turn should reduce the number of trips made by local residents to other existing stores across the surrounding area.

Also, as outlined above, the site is located directly adjacent to an existing retail park and is therefore accessible by walking, cycling and public transport – including by employees living in Blairgowrie who will be able to access the site by non-vehicular modes of travel. The proposed development will be accessible on foot from surrounding residential areas and lies within 70m of two bus stops on Perth Road, which provides access to public transport networks. The site is therefore highly accessible by various sustainable modes of travel.

In planning terms, the addition of a new restaurant in Blairgowrie would clearly be beneficial in that it would provide an opportunity to reduce the distance local people are travelling to access a McDonald's restaurant and thereby reduce overall travel demand / traffic levels.

Shared trips

During discussions with Officers, concerns were raised regarding the drive-thru lane encouraging car-based travel. The proposed McDonald's restaurant will include indoor and outdoor seating for customers. While takeaway sales will be important to ensure the overall viability of the development, the proposals are intended to be a restaurant in the first instance, and it will provide indoor seating for

around 50 customers. McDonald's do operate different formats across the UK, including drive-thru only schemes (i.e. with no restaurant seating area). The format being proposed for Blairgowrie is different to that, reflective of the fact that McDonald's are keen to promote the site as a restaurant.

McDonald's are unable to provide an exact breakdown of customers who will use the drive-thru lane, compared to the restaurant, as previously discussed with the planning officer. Each McDonald's restaurant differs in relation to the specific circumstances of their location, proximity to existing services, the nearby resident population and proximity to the road network, so it is difficult to estimate how each site will trade in advance of its opening. However, it is important to note that the site is located within an existing retail area, and therefore, it is expected that the majority of vehicular trips to the restaurant will be linked trips with customers also visiting the retail park.

This is shown in the submitted Transport Assessment which demonstrates that on the predicted Friday afternoon peak, 87% of the trips to the McDonald's restaurant will be from vehicles already on the local road network and on the predicted Saturday afternoon peak, 84% will be from vehicles already on the local road network. This means that the drive-thru restaurant is not generally a destination in its own right and will typically attract customers who are already travelling in the local area, including those who are visiting the other facilities within the retail park. It is therefore considered that the proposals are sustainably located because the proposed site lies adjacent to an existing commercial area and the large majority of visitors to the development will make their visit as part of a wider visit to other uses – so it will not generate significant additional traffic.

In addition to this, the site is well served by sustainable transport modes. Two bus stops are available on Perth Road, directly to the east of the site, approximately 70m from the proposed development and ca be accessed via the existing pedestrian infrastructure. These bus stops are served by bus services 58 and 63 and provide connections to Blairgowrie and Perth seven days a week, and Carsie and Rattray six days a week. The site is also accessible by cyclists and pedestrians, with good quality and well-lit pedestrian infrastructure along Perth Road. A toucan crossing is provided across Perth Road adjacent to the site which provides a convenient crossing point to the residential area to the east. This facilitates people visiting the site via sustainable transport methods.

In the context of all of the above, the specific scheme proposed through the subject planning application should be considered to be a sustainable form of development.

Summary

In summary, it is essential that all relevant material considerations are taken into account when determining the current planning application for a new drive-thru restaurant at Blairgowrie. The decision should be based on the individual facts and circumstances of the case, consideration should be given to the wider policies of the development plan, including both the Perth and Kinross LDP and NPF4, and ultimately a balanced decision should be made which takes into account all relevant policy and other material considerations.

It is considered that the application proposals accord with the relevant policies within the adopted plan when read as a whole. The site lies in a commercial area, which includes established retail and drive-thru uses and would complement the existing function of the retail park, resulting in linked trips. The proposals would also support the wider vitality and viability of the retail park by providing another use

for customers to visit. It would also give rise to significant economic benefits which weigh in favour of the grant of planning permission.

It is therefore considered that the principle of the proposed development is acceptable given the absence of any significant technical or amenity conflicts, alongside its location adjacent to existing commercial uses, as well as the range of socio-economic benefits the development would deliver.

Yours sincerely

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI

Comments to the Development Quality Manager on a Planning Application

Planning Application ref.	25/01116/FLL	**Comments provided by**	Lachlan MacLean Project Officer – Transport Planning
Service/Section	Transport Planning	**Contact Details**	TransportPlanning@pkc.gov.uk
Description of Proposal	Erection of restaurant unit with drive thru facilities and formation of vehicular access, parking areas, landscaping and associated works		
Address of site	Land 70 Metres West Of Langdale, Perth Road, Blairgowrie PH10 6EN		
Comments on the proposal	The applicant is proposing to erect a 292m^2 McDonald's Restaurant on a development site just north of Westpark Retail Park, adjacent to Perth Road (A93). The operating hours will be 06:00 - 24:00 7 days a week. **Access to development** The vehicle access to the public road network for the site will be via the existing retail park vehicle access north of the Starbucks. The proposals set out to remove the existing kerb and footway on the north side of the access as the width of the access is 4 metres and widen the unadopted road to 6 metres. Street lighting infrastructure is present on the north side of the access, this will need to be relocated to facilitate the access widening. **A condition is recommended.** An existing junction bellmouth has been constructed to the site but this will be removed as part of the proposals with a new access constructed in the southwest corner of the site. This will allow for approximately 50m of vehicle stacking capacity from the yield line on Perth Road. No other businesses can exit the retail park from this access; retail park users must exit via the main retail park access at the ghost island junction to the south. **Parking** Parking will be provided on site for 38 vehicles, including 3 disabled bays. Three motorcycle bays and 6 cycle spaces will be provided. The applicant has also identified that there may be linked trips to the adjacent retail park, where customers may walk from the retail park to the McDonald's development site. **A condition is recommended.** **Deliveries** Deliveries and refuse collection will make use of the parking bays near the restaurant and will be scheduled for non-business hours (00:00am-06:00am). Swept paths for delivery and refuse lorries show they can manoeuvre within the site. The delivery times will be subject to comments from Environmental Health teams as the store is located near to residential dwellinghouses on Perth Road and proposed dwellings. The wider site has a restriction of 07:00 – 21:00 Monday to Saturday and 09:00 – 17:00 on Sundays. **Consult Environmental Health on delivery times.**		

Trip Generation
Surveys of the two retail park accesses were carried out in June 2024. Surveys at three similar McDonald's sites were undertaken on unknown dates and the average survey flows were used to derive the proposed trip generation. These values exceed the values derived using TRICS, so the higher values were used in the junction assessment. The proposed trip generation is shown in Table 1.

Table 1: Proposed Trip Distribution

Peak Hour	Proposed Traffic	
	In	Out
Weekday 18:00 – 19:00	94	99
Saturday 13:00 – 14:00	102	112

The 2024 surveys were factored to 2029 future year, with committed development flows added. The development trips were applied using a sensible trip distribution. JUNCTIONS 9 was used to calculate the capacities at the site exit to Perth Road and southbound on Perth Road at the site exit. These show a maximum Ratio of Flow to Capacity (RFC) value of 0.29 in the Saturday peak (an RFC greater than 1.0 indicates that traffic demand exceeds theoretical capacity, with an RFC of 0.85 or lower indicates that the specific arm of the junction is operating within its practical capacity).

The drive-thru lane has a stacking capacity for 13 vehicles, which exceeds the maximum recorded across three surveys of similar McDonald's sites.

Public Transport
The applicant has identified that a number of buses pass the site and they have identified that it is less likely to travel by bus to site. There may be a demand from Under 22's that have access to free bus travel to visit the site, travelling sustainably. There are bus shelters at and opposite the development site.

Construction Environmental Management Plan (CEMP):
The document sets out an anticipated 14 week construction program with construction hours being Mon-Sat 07:30-18:00. All vehicle access will be via the retail park access north of Starbucks. HGV deliveries are likely only in the first phase with the final 6 weeks being shop fit out.

Travel Plan:
An Interim Travel Plan for staff has been prepared highlighting the walking and cycling routes to site as well as the public transport provision passing along Perth Road. Expected parking demand from the TA includes anticipated staff parking at 33%. **A condition is recommended.**

	Core Path: It is unclear how the applicant proposes to re-route the core path out with the red line boundary of the site, as they have not included this area within the redline of the application. **Further details are required.** Transport Planning are not in a position to support this application and further details are required.
Recommended planning condition(s)	
Recommended informative(s) for applicant	
Date comments returned	09 October 2025

Rachel Affleck

From: Rachel Affleck
Sent: 15 October 2025 17:29
To: Adam Cairns
Cc: Jade Scott-Meikle
Subject: RE: Planning application ref. 25/01116/FLL - Land west of Perth Road, Blairgowrie [LICH-DMS.FID455928]
Attachments: BLAI29_RoW17_29_Order_2024_Confirmed.docx

Hi Adam,

Many thanks for the below email, it is much appreciated. We will review the comments from the policy team and come back to you shortly with a response.

In terms of the comments from the transport team regarding the proposed rerouting of the core path, a stopping up and diversion order for the existing core path (ref. BLAI29) was submitted in February 2024 and the following link on P&K's website shows that this order has been confirmed and has come into effect: https://www.pkc.gov.uk/article/22044/Core-Path-and-Right-of-Way-Stopping-Up-and-Diversion-Orders

The order notice is also attached to this email for information, as it shows the proposed diversion, which aligns with the proposed site plan for planning application ref. 25/01116/FLL. As per the attached notice, it states that it is the responsibility of the landowner of the wider site (West Park Partnership LLP) to implement the diversion. It is therefore our understanding that the diversion of the core path will be carried out by the landowner.

We trust that this information is suitable for the transport planning team and that they are now able to finalise their consultation response. However, please let us know if any more information is required.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk
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From: Adam Cairns [redacted]
Sent: 13 October 2025 16:33
To: Rachel Affleck [redacted]
Cc: Jade Scott-Meikle [redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Land west of Perth Road, Blairgowrie [LICH-DMS.FID455928]

CAUTION: This email originated from an external source.
Hi Rachel,

Apologies for the delay in getting back to you.

Please see below a summary of consultee feedback:

Structures & Flooding: *No objection.*
***Developer Contributions**: No comments received.*
***Commercial Waste**: No comments received.*
***Scottish Water**: No objection.*
***Transport Planning:** Further details required regarding core path. It is unclear how the applicant proposes to re-route the core path out with the red line boundary of the site, as they have not included this area within the redline of the application.*
***Environmental Health (Noise Odour):** No comments received. However, I note that discussions are ongoing between my Environmental Health colleague and the acoustic consultant over the submitted Noise Impact Assessment (NIA).*

I have made these consultee responses available to view on the public portal for your review.

As I outlined in my previous email, I was awaiting a finalised response from the Development Plan team regarding the acceptability of the proposals from a policy perspective before providing feedback. Please see their response below:

Proposal description/site history

There is the 17/00939/IPM in principle permission for the MU5 wider allocation, for 604 m2 of class 3 space, alongside 2,174 m2 retail (food), 2,570 m2 retail (non food) and 120m2 (hotels and hostels). The detailed 1A masterplan associated to 19/00163/AMM which followed, then approved the details of the 2 retail units (Lidl and Home Bargains), and a neighbourhood centre comprising 3 retail units (Class 1). Phase 1A, did not include - one of the retail units north of Home Bargains, this site, the restaurant at the southern end, nor the food outlet which the later 21/01595/FLL 214 m2 Starbucks application approved for class 1/class 3 plus ancillary drive through. This proposed site for MacDonalds drive through relates to land 17/00939/IPM earmarked for a hotel.

Policy comments

LDP2 MU5 allocates for housing, employment use, and education. As mentioned, the sui generis use proposed in this location is also not established by the 17/00939/IPM in principle permission, which identified this site for a hotel, and the wider LDP MU5 for an element of class 3 or food and drink provision (but not sui generis). Nor is sui generis established by the 19/00163/AMM permission which left this area as a reserved matter. This site was earmarked for a hotel in the 17/00939/IPM indicative site plan, and permitting this application would take it close to the overall amount indicated for food and drink within the in principle permission for food and drink whilst there is another available site within MU5 earmarked for a restaurant.

When considering the Chief Planners letter, there is no moratorium on drive throughs, and LDP allocated retail locations can be considered appropriate depending on the nature of the proposal, and the potential impacts. Reflecting the permissions granted, and its development thus far, this retail location is not a current LDP allocation, but it is likely to be identified in LDP3 as both a local and a commercial centre reflecting the scale of retail provision (Home Bargains and Lidl). When considering that this retail centre will also functions as a local neighbourhood centre, a drive through format would encourage customers who live within walking distance to drive rather than walk/cycle. This local centre role suggests class 3 provision within MU5 as per the 17/00939/IPM permission, with an element of

parking, would be more appropriate, this would encourage walking and cycling, whilst it would cater adequately for drivers.

NPF4 policy 27 requires a town centre assessment to consider if a sequential approach has been taken. A hot food takeaway generates higher customer numbers and should be located within the town centre/edge of town centre if possible. In the submitted town centre assessment, the applicant notes that there is a not a sequentially preferable site which could accommodate their proposal. It is noted that the applicant has ruled out the former supermarket site, on Commercial Street, for being too large at 0.89ha, and for it being within a Conservation Area. Whilst it is considered that its position on the edge of the Conservation area, and current amenity in this area means it would not be precluded on that basis, after contacting the agent, it has been confirmed that McDonald's was not an option for this Landlord as the deal would not stack up versus retaining the existing building. In terms of following the sequential approach, the applicant's town centre assessment is considered to meet NPF4 policy 27b. It is also noted that within the Local Place Plan, the community aspiration for this former Coop building is for, 'A local indoor market/crafters space, indoor entertainment space, bowling or sports centre'.

It is also noted that NPF4 Policy 27 and the Local Development Plan guidance May 2023 seeks to protect the health and wellbeing of communities from hot food takeaways, and direct these to the town centre. The easy walkable, proximity of this site to Blairgowrie Secondary school is a consideration. Whilst it is noted that McDonald's provides a range of food options, including healthy options, this location is not within the town centre, where there would be a wider choice of healthier options to choose from.

<u>Conclusion</u>

This is a finely balanced application to determine, and it is noted there are significant number of public comments both objecting to and supporting this planning application. When coming to a recommendation and a decision, it is considered that the key policy issue is 27d, as this is a class 3 and sui generis drive through format being proposed outwith an LDP allocated retail location. This site also lies within a retail location which has permission for and will partially function as a local centre, where we should encourage active travel, further strengthening the reasoning for supporting food and drink rather than sui generis drive through development.

There could also be an additional reason for this application potentially being considered contrary to Policy 27, in that this fast-food outlet is being proposed within easy walkable proximity to the high school, and it is not being proposed within the town centre situated alongside other healthy eating choices. It could potentially contribute to this application being considered to 'undermine the character and amenity of the area or the health and wellbeing of communities' under NPF4 Policy 27C. However, it is noted that at this stage NPF4, has not taken a similar approach to England, and provided a clearer steer, as their NPF (December 2024) states that, 'Local planning authorities should refuse applications for hot food takeaways and fast food outlets: a) within walking distance of schools and other places where children and young people congregate, unless the location is within a designated town centre.'

In its current form, the proposal would likely be refused as this is a class 3 and sui generis drive through format being proposed outwith an LDP allocated retail location and therefore contrary to NPF4 Policy 27 (d).

Do you think your client might be open to removing the drive-through element? At this stage, that seems to be the only way I can currently see the balance shifting towards a potentially supportable scheme.

If you need any further clarification, please don't hesitate to give me a call- happy to discuss.

I look forward to hearing from you.

Kind regards,
Adam

Adam Cairns
Planning Officer
Local Developments
Development Management
Economy, Development and Planning
Perth & Kinross Council
Pullar House
35 Kinnoull Street
Perth
PH1 5GD

[redacted]
Perth and Kinross Council
www.pkc.gov.uk

From: Rachel Affleck <[redacted]>
Sent: 08 October 2025 09:41
To: Adam Cairns [redacted]
Cc: Jade Scott-Meikle [redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Land west of Perth Road, Blairgowrie [LICH-DMS.FID455928]

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Hi Adam,

Many thanks for the update, it is much appreciated. Please let us know if you'd like to discuss in the meantime.

Kind regards,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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From: Adam Cairns <[redacted]
Sent: 07 October 2025 19:01
To: Rachel Affleck <[redacted]
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Land west of Perth Road, Blairgowrie [LICH-DMS.FID455928]

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Dear Rachel,

Thank you for your email- I hope you are well too.

Apologies for the delay. I am hoping to provide feedback by the end of this week, particularly in relation to the acceptability of the proposals. I've been in discussions with the Development Plan team regarding the application and I'm just waiting on their final comments before providing feedback.

Kind regards,
Adam

Adam Cairns
Planning Officer
Local Developments
Development Management
Economy, Development and Planning
Perth & Kinross Council
Pullar House
35 Kinnoull Street
Perth
PH1 5GD

[redacted]
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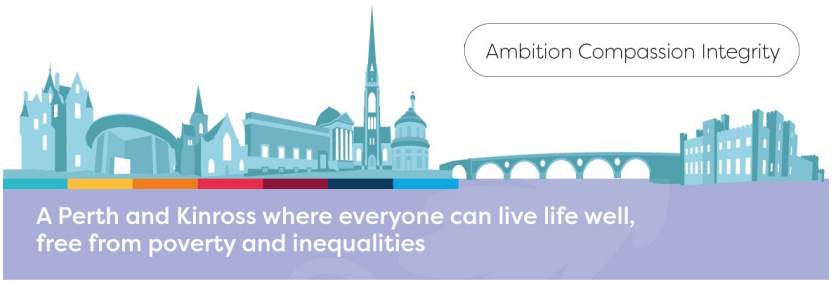

From: Rachel Affleck [redacted]
Sent: 07 October 2025 09:49
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle [redacted]
Subject: Planning application ref. 25/01116/FLL - Land west of Perth Road, Blairgowrie [LICH-DMS.FID455928]

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Good morning Adam,

Hope you are well.

We are emailing in relation to planning application ref. 25/01116/FLL. We note that no further consultation responses have been uploaded to the planning portal, so we would appreciate if you could please advise us on when the final responses ae due to be received.

If there is anything you would like to discuss about the application, please let us know and we would be happy to arrange a meeting.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

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Rachel Affleck

From: Adam Cairns [redacted]
Sent: 17 February 2026 12:45
To: Jade Scott-Meikle
Cc: Rachel Affleck
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Jade,

Hope you're well too.

Apologies for the delay in getting back to you, as I've said previously, this application has generated a lot of discussion within the senior management team.

Unfortunately, we will be recommending the application for refusal as per our previous stance. The primary reason being that the proposal is contrary to NPF4 Policy 27(d) as it involves a class 3 and sui generis drive-thru format located outwith a LDP2-allocated retail site. Furthermore, the inclusion of drive-thru facilities would undermine a location intended to function as a local centre and would result in the dilution of previously approved uses within the wider MU5 allocation.

Further to our earlier discussions, it has also been highlighted by our legal team, that the proposal is contrary to LDP2 Policy 15 (Public Access) due to the presence of the existing core path and right of way (BLAI/29) running through the site. Although a confirmed path order exists, it has not yet taken effect, with its implementation contingent on the diverted path being fully constructed to the required standard (3m wide, paved, lit, and intended for adoption) outwith the redline and ownership boundary of this application. There is currently no indication that the adjacent affordable housing development is progressing on-site, and therefore no guarantee that the diversion will be delivered. Approving the application in its current form would therefore result in the stopping up of a core path and right of way without providing an alternative route, contrary to LDP2 Policy 15. In summary, legally the order remains ineffective until the diversion is constructed.

I will endeavour to issue the decision notice by the end of this week/start of next week.

Please note that you would have right of appeal, and further information will be included in the decision notice.

Kind regards,
Adam

Adam Cairns
Planning Officer
Local Developments
Development Management
Economy, Development and Planning
Perth & Kinross Council

2 High Street,
Perth,
PH1 5PH

[redacted]
Perth and Kinross Council
www.pkc.gov.uk

From: Jade Scott-Meikle [redacted]>
Sent: 16 February 2026 12:56
To: Rachel Affleck <[redacted]>; Adam Cairns <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Hope you're well.

A quick email to check in re: the below planning application and ask if there is any update?

Many thanks,

Jade

Jade Scott-Meikle
Planning Director
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN

[redacted]

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From: Rachel Affleck <[redacted]>
Sent: 14 January 2026 15:06
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

Hi Adam,

Many thanks for your email. We can confirm we agree with the new processing agreement and we've attached a signed copy for your records.

Many thanks,

Rachel

Rachel Affleck
Senior Planner

MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

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From: Adam Cairns <[redacted]
Sent: 14 January 2026 12:49
To: Rachel Affleck <[redacted]>
Cc: Jade Scott-Meikle <[redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

CAUTION: This email originated from an external source.
Hi Rachel,

Yes of course, please find attached a processing agreement which outlines the revised route for determination. As before, I would be grateful if you could confirm your agreement and return the signed agreement for our records.

Kind regards,
Adam

Adam Cairns
Planning Officer
Local Developments
Development Management
Economy, Development and Planning
Perth & Kinross Council
2 High Street,
Perth,
PH1 5PH

[redacted]
Perth and Kinross Council
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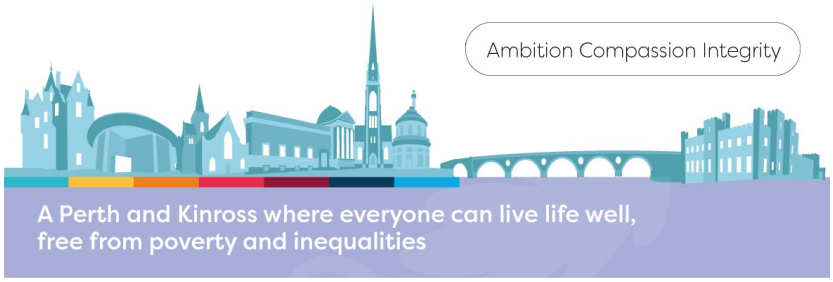

From: Rachel Affleck <[redacted]
Sent: 13 January 2026 17:15
To: Adam Cairns [redacted]

Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Hope you're well.

Appreciate you are still discussing the proposals with management, however, given that our current extension of time runs out tomorrow, please could we agree a further extension to allow us time to receive your feedback and discuss with our client regarding next steps on the project?

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

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From: Rachel Affleck
Sent: 06 January 2026 14:10
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle [redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

Hi Adam,

Happy New Year, hope you had a lovely Christmas!

Many thanks for the update, that is much appreciated. If you would like any further detail from us, please let us know.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

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From: Adam Cairns <[redacted]>
Sent: 06 January 2026 10:24
To: Rachel Affleck <[redacted]>
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

CAUTION: This email originated from an external source.
Hi Rachel,

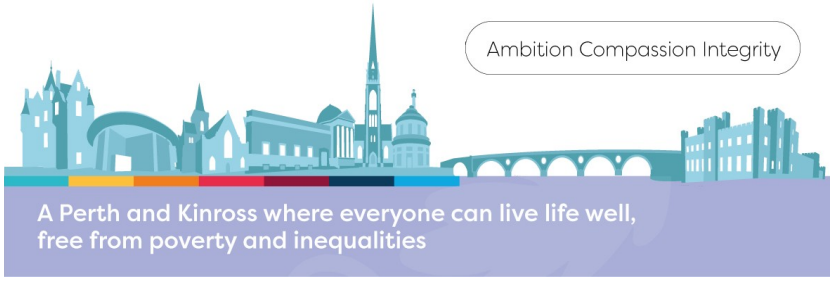
Happy New Year!

Unfortunately , there is no update currently as management are still reviewing the application. I will be in touch as soon as our recommendation has been confirmed.

Kind regards,
Adam

Adam Cairns
Planning Officer
Local Developments
Development Management
Economy, Development and Planning
Perth & Kinross Council
2 High Street,
Perth,
PH1 5PH

[redacted]
Perth and Kinross Council
www.pkc.gov.uk



Click below to complete the survey from
1 of October 2025 to 9 January 2026.

From: Rachel Affleck <[redacted]>
Sent: 18 December 2025 17:20
To: Adam Cairns [redacted]
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Many thanks for the update. As per our discussions, we would appreciate an update on the outcomes of that meeting before the application is determined.

Thanks in advance, and hope you have a lovely Christmas as well!

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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From: Adam Cairns <[redacted]
Sent: 18 December 2025 16:35
To: Rachel Affleck <[redacted]
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Rachel,

I've now discussed your letter with my team leader and the policy team but the outcomes from that meeting are now being reviewed by wider management, so it's likely I won't be able to provide feedback until next week at the earliest.

Thank you for your patience and have a good festive break.

Kind regards,
Adam

Adam Cairns

Planning Officer

Local Developments

Development Management
Economy, Development and Planning
Perth & Kinross Council
2 High Street,
Perth,
PH1 5PH

[redacted]

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A Perth and Kinross where everyone can live life well, free from poverty and inequalities

Click below to complete the survey from
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From: Rachel Affleck <[redacted]>
Sent: 16 December 2025 16:16
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle [redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Hope you're well.

Just wanted to send a quick email to let you know that me and Jade are both finishing up for Christmas this Friday (19 December) and will be back on Monday 5 January. If you are able to give us any insight into your discussions tomorrow or Thursday before we go off, it would be greatly appreciated.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

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From: Rachel Affleck
Sent: 10 December 2025 11:28
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle [redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

Hi Adam,

Great, many thanks for the update, much appreciated.

Kind regards,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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From: Adam Cairns <[redacted]
Sent: 09 December 2025 11:44
To: Rachel Affleck <[redacted]
Cc: Jade Scott-Meikle <[redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

CAUTION: This email originated from an external source.
Hi Rachel,

Thanks for sending the letter across.

Just to provide an update- I'll be meeting with the policy team and my team leader at the start of next week to discuss this. I will endeavour to provide feedback promptly afterwards.

Kind regards,
Adam

Adam Cairns
Planning Officer
Local Developments
Development Management
Economy, Development and Planning
Perth & Kinross Council
2 High Street,
Perth,
PH1 5PH

[redacted]

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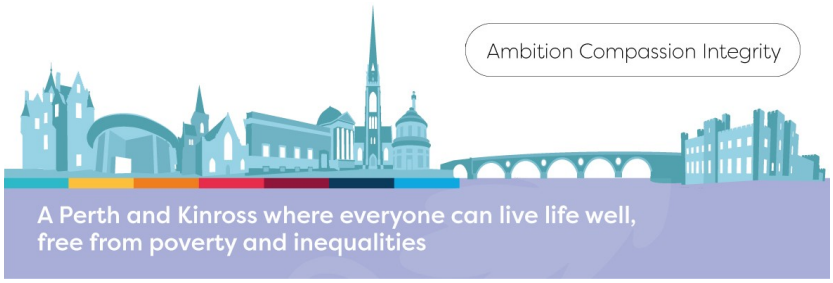

Click below to complete the survey from
1 of October 2025 to 9 January 2026.

From: Rachel Affleck <[redacted]>
Sent: 25 November 2025 16:08
To: Adam Cairns <[redacted]
Cc: Jade Scott-Meikle [redacted]
Subject: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Hope you're well.

Apologies for the delay in my email, I was off sick and just back to the office today.

As previously discussed, we've prepared a letter to respond to the comments received from the policy team regarding planning application ref. 25/01116/FLL and have attached it to this email for you to review during your consideration of the planning application.

Please let us know if you have any comments, we'd be happy to have another chat once you have had a chance to review and discuss internally.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

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Rachel Affleck

From: Rachel Affleck
Sent: 24 February 2026 17:05
To: Adam Cairns; Jade Scott-Meikle
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

Hi Adam,

I'm just back from leave and picking up on the email below.

We are disappointed with the anticipated recommendation to refuse the application. As previously noted, the site is directly adjacent to an existing retail park, where several Class 1A and Class 3/Sui Generis uses are operational (including a coffee drive-thru). It is our view that it is important to take this into consideration and, in particular, recognise that the locality is therefore seen to be an acceptable location for such development.

It is understood that the Council's concern is the inclusion of a drive-thru facility as part of the proposed scheme, as it is considered to impact the future 'Local Centre' allocation of the site. However, the planning application should be considered in the context of the extant development plan which allocates the site for mixed-use development. While it is acknowledged that the site's allocation does not specifically address whether drive-thrus are an acceptable form of development, it is noted that a drive-thru coffee shop was granted permission in 2021 and the principle of such development at this mixed-use site has therefore been supported by the Council in recent years.

The principle of a Class 3/Sui Generis use in this location also aligns with the Transitional Arrangements published by the Scottish Government which states that drive-thru developments would be suitably located with uses that are compatible with the drive-thru use, such as Class 1 / Class 3 uses, i.e. like those that exist at the retail park already.

In relation to the second point, the concern relates to the timing of implementation of the diversion of the Core Path on land outwith the application site and beyond the control of the applicant. It is considered that it would be unreasonable to refuse planning permission on the basis of uncertainty relating to development over which the applicant has no control. It is also considered that the confirmed diversion order should be a material consideration of significant weight, as the principle of the alternative route has already been accepted. Restricting planning permission on the site until the proposed diversion is implemented could result in the site never coming forward for development (not just the one proposed), and thereby risks losing the economic benefits that development brings. We would have welcomed the opportunity to work with the Council to find a temporary or other solution that could have been accommodated within the north-western section of the proposed development site to enable continued pedestrian/cycle access.

We appreciate that it is likely that the determination will be issued shortly, but we consider that the above points are relevant to the case and wish for them to be acknowledged in the report of handling.

Thanks and kind regards,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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From: Adam Cairns <[redacted]
Sent: 17 February 2026 12:45
To: Jade Scott-Meikle <[redacted]>
Cc: Rachel Affleck <[redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

CAUTION: This email originated from an external source.
Hi Jade,

Hope you're well too.

Apologies for the delay in getting back to you, as I've said previously, this application has generated a lot of discussion within the senior management team.

Unfortunately, we will be recommending the application for refusal as per our previous stance. The primary reason being that the proposal is contrary to NPF4 Policy 27(d) as it involves a class 3 and sui generis drive-thru format located outwith a LDP2-allocated retail site. Furthermore, the inclusion of drive-thru facilities would undermine a location intended to function as a local centre and would result in the dilution of previously approved uses within the wider MU5 allocation.

Further to our earlier discussions, it has also been highlighted by our legal team, that the proposal is contrary to LDP2 Policy 15 (Public Access) due to the presence of the existing core path and right of way (BLAI/29) running through the site. Although a confirmed path order exists, it has not yet taken effect, with its implementation contingent on the diverted path being fully constructed to the required standard (3m wide, paved, lit, and intended for adoption) outwith the redline and ownership boundary of this application. There is currently no indication that the adjacent affordable housing development is progressing on-site, and therefore no guarantee that the diversion will be delivered. Approving the application in its current form would therefore result in the stopping up of a core path and right of way without providing an alternative route, contrary to LDP2 Policy 15. In summary, legally the order remains ineffective until the diversion is constructed.

I will endeavour to issue the decision notice by the end of this week/start of next week.

Please note that you would have right of appeal, and further information will be included in the decision notice.

Kind regards,
Adam

Adam Cairns
Planning Officer
Local Developments
Development Management
Economy, Development and Planning
Perth & Kinross Council
2 High Street,
Perth,
PH1 5PH

[redacted]
Perth and Kinross Council
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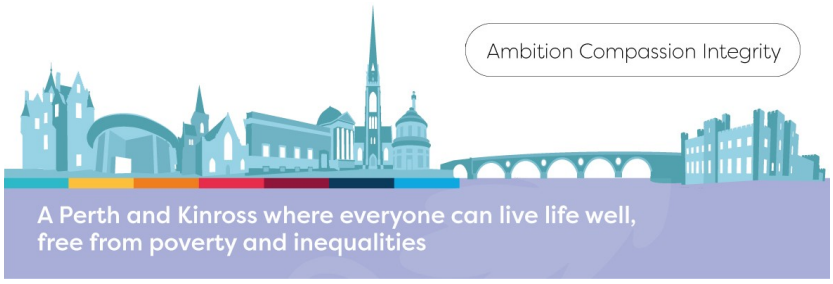

From: Jade Scott-Meikle <[redacted]
Sent: 16 February 2026 12:56
To: Rachel Affleck <[redacted]; Adam Cairns <[redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Hope you're well.

A quick email to check in re: the below planning application and ask if there is any update?

Many thanks,

Jade

Jade Scott-Meikle
Planning Director
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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From: Rachel Affleck <[redacted]
Sent: 14 January 2026 15:06
To: Adam Cairns <[redacted]
Cc: Jade Scott-Meikle <[redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

Hi Adam,

Many thanks for your email. We can confirm we agree with the new processing agreement and we've attached a signed copy for your records.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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From: Adam Cairns <[redacted]>
Sent: 14 January 2026 12:49
To: Rachel Affleck <[redacted]>
Cc: Jade Scott-Meikle [redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

CAUTION: This email originated from an external source.
Hi Rachel,

Yes of course, please find attached a processing agreement which outlines the revised route for determination. As before, I would be grateful if you could confirm your agreement and return the signed agreement for our records.

Kind regards,
Adam

Adam Cairns
Planning Officer
Local Developments
Development Management
Economy, Development and Planning
Perth & Kinross Council
2 High Street,
Perth,
PH1 5PH

[redacted]

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www.pkc.gov.uk

From: Rachel Affleck [redacted]
Sent: 13 January 2026 17:15
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Hope you're well.

Appreciate you are still discussing the proposals with management, however, given that our current extension of time runs out tomorrow, please could we agree a further extension to allow us time to receive your feedback and discuss with our client regarding next steps on the project?

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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From: Rachel Affleck
Sent: 06 January 2026 14:10
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

Hi Adam,

Happy New Year, hope you had a lovely Christmas!

Many thanks for the update, that is much appreciated. If you would like any further detail from us, please let us know.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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From: Adam Cairns [redacted]
Sent: 06 January 2026 10:24
To: Rachel Affleck <[redacted]
Cc: Jade Scott-Meikle [redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Rachel,

Happy New Year!

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Kind regards,
Adam

Adam Cairns

Planning Officer

Local Developments

Development Management
Economy, Development and Planning
Perth & Kinross Council
2 High Street,
Perth,
PH1 5PH

[redacted]

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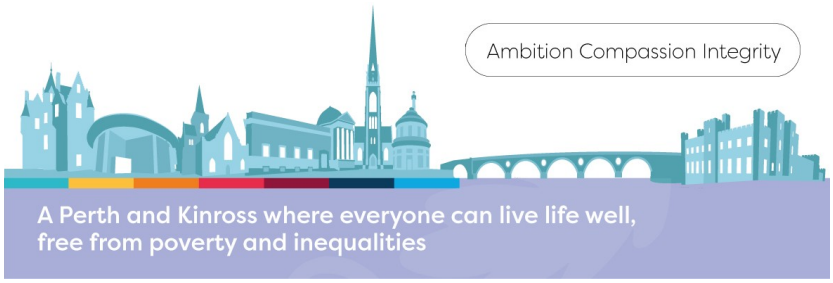

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From: Rachel Affleck <[redacted]>
Sent: 18 December 2025 17:20
To: Adam Cairns <[redacted]
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Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Many thanks for the update. As per our discussions, we would appreciate an update on the outcomes of that meeting before the application is determined.

Thanks in advance, and hope you have a lovely Christmas as well!

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
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Sent: 18 December 2025 16:35
To: Rachel Affleck <[redacted]
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Rachel,

I've now discussed your letter with my team leader and the policy team but the outcomes from that meeting are now being reviewed by wider management, so it's likely I won't be able to provide feedback until next week at the earliest.

Thank you for your patience and have a good festive break.

Kind regards,
Adam

Adam Cairns

Planning Officer

Local Developments

Development Management
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[redacted]

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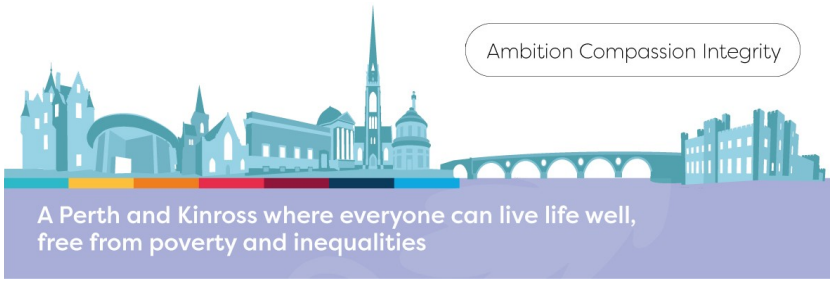

Click below to complete the survey from
1 of October 2025 to 9 January 2026.

From: Rachel Affleck <[redacted]>
Sent: 16 December 2025 16:16
To: Adam Cairns <[redacted]>

Cc: Jade Scott-Meikle <[redacted]
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

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Hi Adam,

Hope you're well.

Just wanted to send a quick email to let you know that me and Jade are both finishing up for Christmas this Friday (19 December) and will be back on Monday 5 January. If you are able to give us any insight into your discussions tomorrow or Thursday before we go off, it would be greatly appreciated.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

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From: Rachel Affleck
Sent: 10 December 2025 11:28
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

Hi Adam,

Great, many thanks for the update, much appreciated.

Kind regards,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

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From: Adam Cairns <[redacted]>
Sent: 09 December 2025 11:44
To: Rachel Affleck <[redacted]>
Cc: Jade Scott-Meikle <[redacted]>
Subject: RE: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

CAUTION: This email originated from an external source.
Hi Rachel,

Thanks for sending the letter across.

Just to provide an update- I'll be meeting with the policy team and my team leader at the start of next week to discuss this. I will endeavour to provide feedback promptly afterwards.

Kind regards,
Adam

Adam Cairns

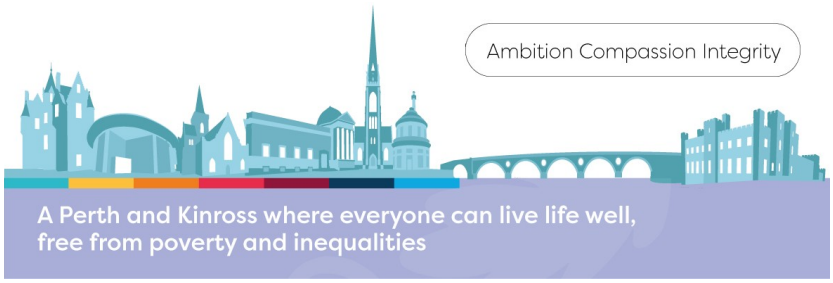
Planning Officer

Local Developments

Development Management
Economy, Development and Planning
Perth & Kinross Council
2 High Street,
Perth,
PH1 5PH

[redacted]

Perth and Kinross Council
www.pkc.gov.uk



Click below to complete the survey from
1 of October 2025 to 9 January 2026.

From: Rachel Affleck <[redacted]>
Sent: 25 November 2025 16:08
To: Adam Cairns <[redacted]>
Cc: Jade Scott-Meikle <[redacted]>
Subject: Planning application ref. 25/01116/FLL - Response to Policy Team [LICH-DMS.FID455928]

CAUTION: This email originated from an external organisation. Do not follow guidance, click links, or open attachments unless you have verified the sender and know the content is safe.

Hi Adam,

Hope you're well.

Apologies for the delay in my email, I was off sick and just back to the office today.

As previously discussed, we've prepared a letter to respond to the comments received from the policy team regarding planning application ref. 25/01116/FLL and have attached it to this email for you to review during your consideration of the planning application.

Please let us know if you have any comments, we'd be happy to have another chat once you have had a chance to review and discuss internally.

Many thanks,

Rachel

Rachel Affleck
Senior Planner
MA (Hons) MSc MRTPI
Lichfields, 115 George Street, Edinburgh EH2 4JN
[redacted]

Lichfields.uk

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Pullar House 35 Kinnoull Street Perth PH1 5GD Tel: 01738 475300 Email: onlineapps@pkc.gov.uk

Applications cannot be validated until all the necessary documentation has been submitted and the required fee has been paid.

Thank you for completing this application form:

ONLINE REFERENCE 100717703-001

The online reference is the unique reference for your online form only. The Planning Authority will allocate an Application Number when your form is validated. Please quote this reference if you need to contact the planning Authority about this application.

Type of Application

What is this application for? Please select one of the following: *

☒ Application for planning permission (including changes of use and surface mineral working).

☐ Application for planning permission in principle.

☐ Further application, (including renewal of planning permission, modification, variation or removal of a planning condition etc)

☐ Application for Approval of Matters specified in conditions.

Description of Proposal

Please describe the proposal including any change of use: * (Max 500 characters)

Erection of drive-thru restaurant (Class 3/Sui Generis) with associated access, servicing, car parking, landscaping and other associated works and infrastructure.

Is this a temporary permission? * ☐ Yes ☒ No

If a change of use is to be included in the proposal has it already taken place? (Answer 'No' if there is no change of use.) * ☐ Yes ☒ No

Has the work already been started and/or completed? *

☒ No ☐ Yes – Started ☐ Yes - Completed

Applicant or Agent Details

Are you an applicant or an agent? * (An agent is an architect, consultant or someone else acting on behalf of the applicant in connection with this application) ☐ Applicant ☒ Agent

Agent Details

Please enter Agent details

Company/Organisation:	Lichfields		
Ref. Number:		You must enter a Building Name or Number, or both: *	
First Name: *	Rachel	Building Name:	[redacted]
Last Name: *	Affleck	Building Number	
Telephone Number: *	[redacted]	Address 1 (Street): *	
Extension Number:		Address 2:	
Mobile Number:		Town/City: *	
Fax Number:		Country: *	
		Postcode: *	
Email Address: *			

Is the applicant an individual or an organisation/corporate entity? *

☐ Individual ☒ Organisation/Corporate entity

Applicant Details

Please enter Applicant details

Title:		You must enter a Building Name or Number, or both: *	
Other Title:		Building Name:	[redacted]
First Name: *		Building Number:	
Last Name: *		Address 1 (Street): *	
Company/Organisation	McDonald's Restaurants Limited	Address 2:	
Telephone Number: *		Town/City: *	
Extension Number:		Country: *	
Mobile Number:		Postcode: *	
Fax Number:			
Email Address: *	[redacted]		

Site Address Details

Planning Authority: Perth and Kinross Council

Full postal address of the site (including postcode where available):

Address 1:

Address 2:

Address 3:

Address 4:

Address 5:

Town/City/Settlement:

Post Code:

Please identify/describe the location of the site or sites

Land west of Perth Road, Blairgowrie.

Northing 743921 Easting 317399

Pre-Application Discussion

Have you discussed your proposal with the planning authority? * ☒ Yes ☐ No

Pre-Application Discussion Details Cont.

In what format was the feedback given? *

☒ Meeting ☐ Telephone ☒ Letter ☐ Email

Please provide a description of the feedback you were given and the name of the officer who provided this feedback. If a processing agreement [note 1] is currently in place or if you are currently discussing a processing agreement with the planning authority, please provide details of this. (This will help the authority to deal with this application more efficiently.) * (max 500 characters)

A Pre-Application Enquiry was submitted in July 2024 to Perth and Kinross Council's Planning Service. A meeting with Perth and Kinross Council was then held on 9 August 2024, with representatives from Lichfields and McDonald's in attendance at this meeting. Formal written advice was then received on 11 November 2024.

Title: Other title:

First Name: Alex Last Name: Gudgeon

Correspondence Reference Number: Date (dd/mm/yyyy):

Note 1. A Processing agreement involves setting out the key stages involved in determining a planning application, identifying what information is required and from whom and setting timescales for the delivery of various stages of the process.

Site Area

Please state the site area: 0.29

Please state the measurement type used: ☒ Hectares (ha) ☐ Square Metres (sq.m)

Existing Use

Please describe the current or most recent use: * (Max 500 characters)

The site currently comprises undeveloped, vacant land. It benefits from Planning Permission as part of a wider development site for a mixed-use development, which has been implemented.

Access and Parking

Are you proposing a new altered vehicle access to or from a public road? * ☒ Yes ☐ No

If Yes please describe and show on your drawings the position of any existing. Altered or new access points, highlighting the changes you propose to make. You should also show existing footpaths and note if there will be any impact on these.

Are you proposing any change to public paths, public rights of way or affecting any public right of access? * ☐ Yes ☒ No

If Yes please show on your drawings the position of any affected areas highlighting the changes you propose to make, including arrangements for continuing or alternative public access.

How many vehicle parking spaces (garaging and open parking) currently exist on the application Site? 0

How many vehicle parking spaces (garaging and open parking) do you propose on the site (i.e. the Total of existing and any new spaces or a reduced number of spaces)? * 38

Please show on your drawings the position of existing and proposed parking spaces and identify if these are for the use of particular types of vehicles (e.g. parking for disabled people, coaches, HGV vehicles, cycles spaces).

Water Supply and Drainage Arrangements

Will your proposal require new or altered water supply or drainage arrangements? * ☒ Yes ☐ No

Are you proposing to connect to the public drainage network (eg. to an existing sewer)? *

☒ Yes – connecting to public drainage network

☐ No – proposing to make private drainage arrangements

☐ Not Applicable – only arrangements for water supply required

Do your proposals make provision for sustainable drainage of surface water?? * (e.g. SUDS arrangements) * ☒ Yes ☐ No

Note:-

Please include details of SUDS arrangements on your plans

Selecting ‘No’ to the above question means that you could be in breach of Environmental legislation.

Are you proposing to connect to the public water supply network? *

☒ Yes

☐ No, using a private water supply

☐ No connection required

If No, using a private water supply, please show on plans the supply and all works needed to provide it (on or off site).

Assessment of Flood Risk

Is the site within an area of known risk of flooding? * ☐ Yes ☒ No ☐ Don't Know

If the site is within an area of known risk of flooding you may need to submit a Flood Risk Assessment before your application can be determined. You may wish to contact your Planning Authority or SEPA for advice on what information may be required.

Do you think your proposal may increase the flood risk elsewhere? * ☐ Yes ☒ No ☐ Don't Know

Trees

Are there any trees on or adjacent to the application site? * ☐ Yes ☒ No

If Yes, please mark on your drawings any trees, known protected trees and their canopy spread close to the proposal site and indicate if any are to be cut back or felled.

Waste Storage and Collection

Do the plans incorporate areas to store and aid the collection of waste (including recycling)? * ☒ Yes ☐ No

If Yes or No, please provide further details: * (Max 500 characters)

Recycling and waste facilities will be provided across the site, in line with McDonald's waste management.

Residential Units Including Conversion

Does your proposal include new or additional houses and/or flats? * ☐ Yes ☒ No

All Types of Non Housing Development – Proposed New Floorspace

Does your proposal alter or create non-residential floorspace? * ☒ Yes ☐ No

All Types of Non Housing Development – Proposed New Floorspace Details

For planning permission in principle applications, if you are unaware of the exact proposed floorspace dimensions please provide an estimate where necessary and provide a fuller explanation in the 'Don't Know' text box below.

Please state the use type and proposed floorspace (or number of rooms if you are proposing a hotel or residential institution): *

Not in a Use Class

Gross (proposed) floorspace (In square meters, sq.m) or number of new (additional) Rooms (If class 7, 8 or 8a): * 315

If Class 1, please give details of internal floorspace:

Net trading spaces:

Non-trading space:

Total:

If Class 'Not in a use class' or 'Don't know' is selected, please give more details: (Max 500 characters)

The development comprises a drive-thru restaurant (Class 3/Sui Generis).

Schedule 3 Development

Does the proposal involve a form of development listed in Schedule 3 of the Town and Country Planning (Development Management Procedure (Scotland) Regulations 2013 * ☒ Yes ☐ No ☐ Don't Know

If yes, your proposal will additionally have to be advertised in a newspaper circulating in the area of the development. Your planning authority will do this on your behalf but will charge you a fee. Please check the planning authority's website for advice on the additional fee and add this to your planning fee.

If you are unsure whether your proposal involves a form of development listed in Schedule 3, please check the Help Text and Guidance notes before contacting your planning authority.

Planning Service Employee/Elected Member Interest

Is the applicant, or the applicant's spouse/partner, either a member of staff within the planning service or an elected member of the planning authority? * ☐ Yes ☒ No

Certificates and Notices

CERTIFICATE AND NOTICE UNDER REGULATION 15 – TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (SCOTLAND) REGULATION 2013

One Certificate must be completed and submitted along with the application form. This is most usually Certificate A, Form 1, Certificate B, Certificate C or Certificate E.

Are you/the applicant the sole owner of ALL the land? * ☐ Yes ☒ No

Is any of the land part of an agricultural holding? * ☐ Yes ☒ No

Are you able to identify and give appropriate notice to ALL the other owners? * ☒ Yes ☐ No

Certificate Required

The following Land Ownership Certificate is required to complete this section of the proposal:

Certificate B

Land Ownership Certificate

Certificate and Notice under Regulation 15 of the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

[redacted]

Signed: Rachel Affleck

On behalf of: McDonald's Restaurants Limited

Date: 24/07/2025

☒ Please tick here to certify this Certificate. *

Checklist – Application for Planning Permission

Town and Country Planning (Scotland) Act 1997

The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

Please take a few moments to complete the following checklist in order to ensure that you have provided all the necessary information in support of your application. Failure to submit sufficient information with your application may result in your application being deemed invalid. The planning authority will not start processing your application until it is valid.

a) If this is a further application where there is a variation of conditions attached to a previous consent, have you provided a statement to that effect? *

☐ Yes ☐ No ☒ Not applicable to this application

b) If this is an application for planning permission or planning permission in principal where there is a crown interest in the land, have you provided a statement to that effect? *

☐ Yes ☐ No ☒ Not applicable to this application

c) If this is an application for planning permission, planning permission in principle or a further application and the application is for development belonging to the categories of national or major development (other than one under Section 42 of the planning Act), have you provided a Pre-Application Consultation Report? *

☐ Yes ☐ No ☒ Not applicable to this application

Town and Country Planning (Scotland) Act 1997

The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

d) If this is an application for planning permission and the application relates to development belonging to the categories of national or major developments and you do not benefit from exemption under Regulation 13 of The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013, have you provided a Design and Access Statement? *

☐ Yes ☐ No ☒ Not applicable to this application

e) If this is an application for planning permission and relates to development belonging to the category of local developments (subject to regulation 13. (2) and (3) of the Development Management Procedure (Scotland) Regulations 2013) have you provided a Design Statement? *

☐ Yes ☐ No ☒ Not applicable to this application

f) If your application relates to installation of an antenna to be employed in an electronic communication network, have you provided an ICNIRP Declaration? *

☐ Yes ☐ No ☒ Not applicable to this application

g) If this is an application for planning permission, planning permission in principle, an application for approval of matters specified in conditions or an application for mineral development, have you provided any other plans or drawings as necessary:

☒ Site Layout Plan or Block plan.
☒ Elevations.
☒ Floor plans.
☐ Cross sections.
☒ Roof plan.
☐ Master Plan/Framework Plan.
☒ Landscape plan.
☐ Photographs and/or photomontages.
☐ Other.

If Other, please specify: * (Max 500 characters)

Provide copies of the following documents if applicable:

A copy of an Environmental Statement. *	☐ Yes	☒ N/A
A Design Statement or Design and Access Statement. *	☐ Yes	☒ N/A
A Flood Risk Assessment. *	☐ Yes	☒ N/A
A Drainage Impact Assessment (including proposals for Sustainable Drainage Systems). *	☐ Yes	☒ N/A
Drainage/SUDS layout. *	☒ Yes	☐ N/A
A Transport Assessment or Travel Plan	☒ Yes	☐ N/A
Contaminated Land Assessment. *	☐ Yes	☒ N/A
Habitat Survey. *	☒ Yes	☐ N/A
A Processing Agreement. *	☐ Yes	☒ N/A

Other Statements (please specify). (Max 500 characters)

Please see application covering letter for submission documents.

Declare – For Application to Planning Authority

I, the applicant/agent certify that this is an application to the planning authority as described in this form. The accompanying Plans/drawings and additional information are provided as a part of this application.

Declaration Name: Miss Rachel Affleck

Declaration Date: 24/07/2025

Payment Details

[redacted]

Proposed McDonald's drive-thru restaurant - Land at Perth Road, Blairgowrie

Statement of Appeal

McDonald's Restaurants Ltd

08 June 2026

LICHFIELDS

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67496/01/NWO/JSM
41204269v1

Executive Summary

This Statement of Appeal has been prepared by Lichfields on behalf of McDonald's Restaurants Ltd in association with an appeal against Perth and Kinross Council's decision to refuse an application for planning permission (ref. 25/01116/FLL) at land north of Westpark Retail Park at Perth Road, Blairgowrie.

The purpose of this Statement is to assist Members of the Perth and Kinross Local Review Body in their consideration of the proposed development. The Statement identifies the planning matters relevant to this appeal and provides the Appellant's case as to why the appeal should be allowed and planning permission should be granted.

A planning application was submitted by Lichfields in July 2025 seeking the approval of a drive-thru restaurant on the site. During the application, the Appellant sought to work with Officers as much as possible. The application was however refused by delegated powers on 13 March 2026 on the basis of concerns with NPF4 Policy 27 (d) and public access.

This Statement has addressed each refusal reason in full and can be summarised as follows:

1 Refusal Reason One:

i. Officers considered that the proposals do not accord with NPF4 Policy 27 (d) which sets out that drive-thru developments will only be supported where they are specifically supported in the LDP. However, this refusal reason does not acknowledge the Transitional Arrangements set out by Scottish Government's Chief Planner which emphasises that drive-thru developments should be located adjacent to Class 1/Class 3 uses. This site is located adjacent to an existing retail park which has several retail and food and drink uses, including an existing drive-thru coffee shop. Furthermore it would redevelop a long-term vacant site, helping to improve the appearance and viability of the area while attracting new investment into the town. The development would create valuable local employment opportunities, particularly for young people and those seeking flexible working arrangements.

ii. Officers considered that the proposals would not encourage active travel and would impact on local living. However, this does not acknowledge the retail/employment nature of this location which benefits from sustainable methods of access.

iii. Officers considered that the proposals do not reflect the original Planning Permission in Principle for the site, given the site was originally identified as a hotel use. Not only is that analysis in error but no hotel operator has been identified in over 7 years and if the Council's significant concern is active travel in the area, the proposed development is more conducive to this than a hotel would be.

2 Refusal Reason Two:

i. Officers considered that the proposed development would have an adverse impact on the existing public access, as it would result in the stopping up of a core path without providing an alternative route. However, this refusal reason does not acknowledge the Stopping Up and Diversion Order for the Core Path at the site (BLAI/29), which was approved in February 2024. The residential development to the north of the site has now started construction, and the landowner has implemented the temporary core path, in line with the approved Stopping Up

and Diversion Order. Images are included in Section 6.0 of this Statement. On this basis, the proposed development will not impact on public access.

On the basis of the above, it is considered that there is no evidence which supports the reasons for refusal provided by the Council and the proposed development is acceptable in terms of complementing an existing 20-minute neighbourhood; encouraging active travel; and ensuring continued public access.

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1.0 Introduction

1.1 This Statement of Appeal has been prepared by Lichfields on behalf of McDonald's Restaurants Ltd ("the Appellant").

1.2 This Statement of Appeal has been prepared in association with an appeal against an Officer made decision, under delegated powers granted by Perth and Kinross Council ('PKC'/ 'The Council'), to refuse an application for Planning Permission (ref. 25/01116/FLL) at land north of Westpark Retail Park, Perth Road, Blairgowrie on 13 March 2026.

1.3 The planning application sought permission for the following description of development:

"Erection of restaurant unit with drive thru facilities and formation of vehicular access, parking areas, landscaping and associated works".

1.4 Planning Permission was refused for the following reasons:

1 *"The proposal is contrary to NPF4 Policy 27 (d) as it involves a class 3 and sui generis drive-thru format located outwith a LDP2-allocated retail location. The site lies adjacent to retail facilities and a planning permission (19/00163/AMM) which would partially function as a local centre, where active travel should be encouraged, reinforcing the case for supporting food and drink uses rather than drive-thru facilities. Additionally, the site was previously earmarked for a hotel, and therefore the proposal would dilute the overall qualities of the mixed-use development originally approved in 2018 (17/00939/IPM)"*; and

2 *"The proposal is considered contrary to LDP2 Policy 15 (Public Access) as it would have an adverse impact on the integrity of an existing core path and right of way (BLAI/29). Approving the application in its current form would result in the stopping up of a core path and right of way without providing an alternative route."*

1.5 The Decision Notice, issued on 13 March 2026, is enclosed at Appendix 1. The Delegated Report is enclosed at Appendix 2.

Scope of appeal

1.6 The Appellant requests that this appeal be dealt with by way of the hearing procedure.

1.7 This Statement of Appeal identifies the planning matters relevant to this appeal and provides the Appellant's case as to why the appeal should be allowed and planning permission granted.

1.8 The appeal is accompanied by a suite of documents that the Appellant considers necessary for the Local Review Body to form a view; these are listed in Appendix 3.

1.9 The structure of this Statement of Appeal is set out as follows:

- Section 2.0 – details the appeal site, surrounding area and planning history;
- Section 3.0 – describes the appeal proposals;
- Section 4.0 – summarises the relevant planning policy framework and guidance;

- Section 5.0 – outlines matters that the Appellant understands to be agreed and therefore not part of this appeal;
- Section 6.0 – puts forward the case for the Appellant; and
- Section 7.0 – sets out the Appellant's overall conclusions.

2.0 The appeal site and surrounding area

Appeal site

2.1 The appeal site lies to the west of Perth Road (A93) in Blairgowrie and comprises approximately 0.29 hectares of vacant land.

2.2 The site is bounded:

- To the south by Westpark Retail Park, which includes retail units occupied by Lidl and Home Bargains, as well as a stand-alone drive-thru Starbucks cafe;
- To the east by Perth Road (A93), with residential properties beyond;
- To the west by an area of Ancient Woodland; and
- To the north by grassland which has Planning Permission for a housing development – 71 houses and 32 flats. Please see the Planning History section below for details.

2.3 Figure 2.1 shows the site location.

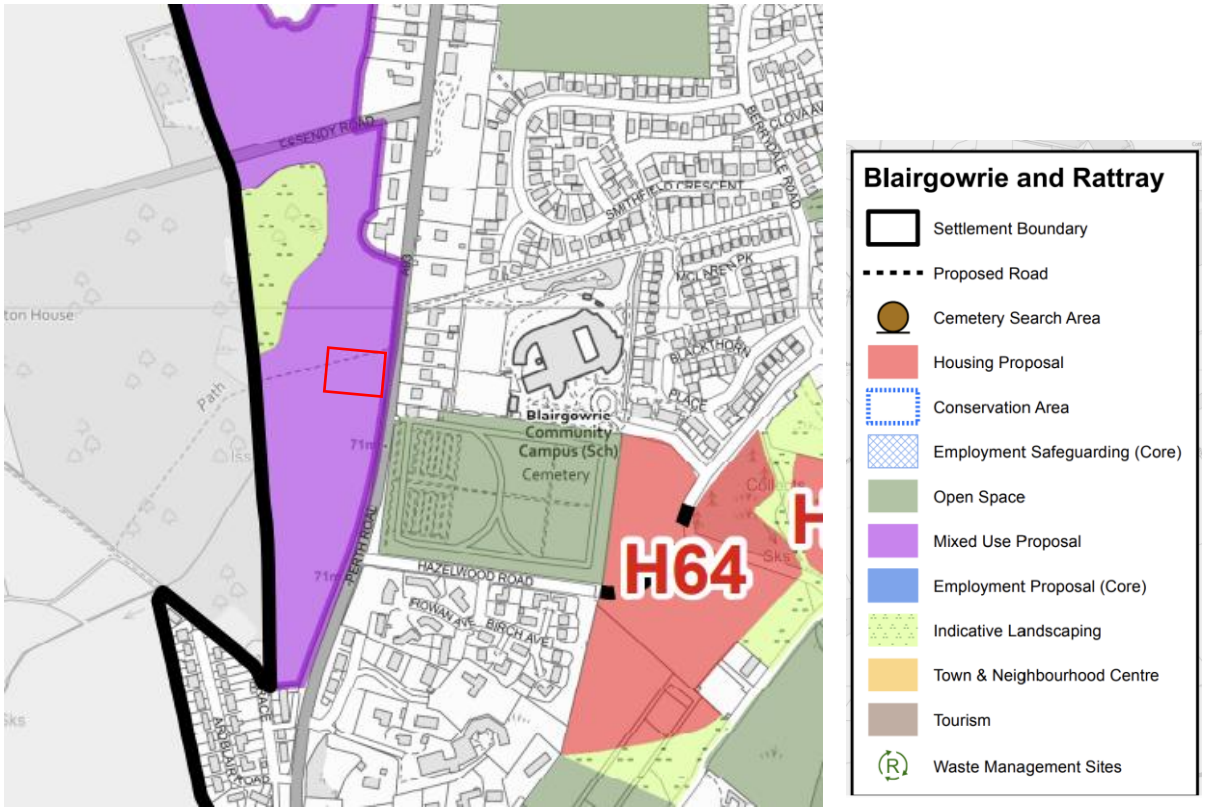
Figure 2.1 – Approximate site location (site outlined in red)

2.4 The site location is commercial in nature being on the edge of the existing Westpark retail park immediately to the south of the site.

2.5 The site is already consented for a commercial use (hotel) under the existing Planning Permission in Principle. This is as part of a wider development site for a mixed-use development. This is discussed further below under Planning History.

2.6 As shown on Perth and Kinross Council's LDP Proposals Map (adopted November 2019), the site is allocated for a mix of uses, as part of a wider development of 29 hectares.

Figure 2.2 – Perth and Kinross LDP Proposals Map (approximate appeal site location outlined in red)



Source: Perth and Kinross LDP

2.7 The site does not contain or adjoin any listed buildings and is not located within a conservation area.

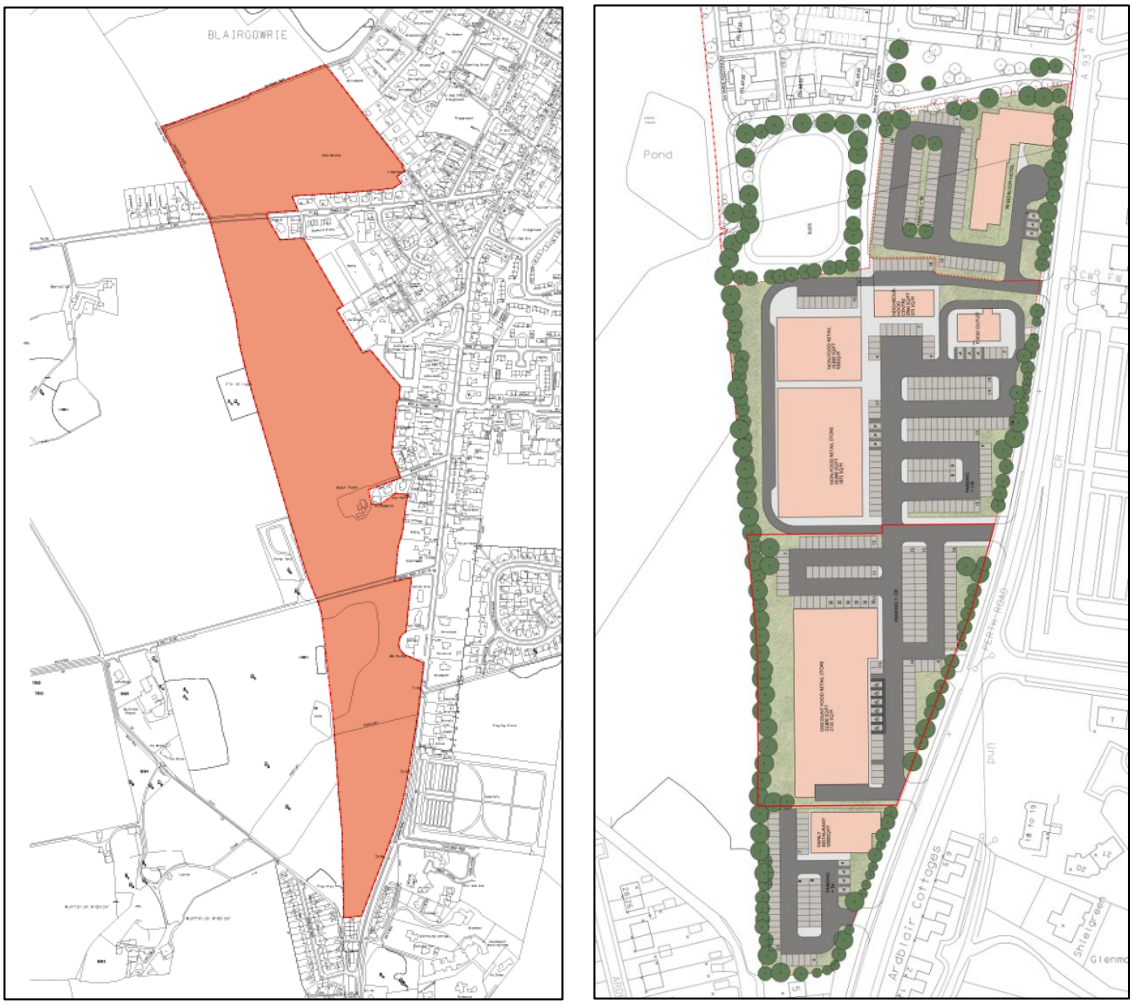
2.8 The proposed development is located in a sustainable location in terms of the Sustainable Travel Hierarchy. The site benefits from having a local community within a 10-minute walk and Blairgowrie Town Centre is just a 15-minute walk away. Opportunities for cycling from surrounding neighbourhoods and further afield are provided by the surrounding road network. The entirety of Blairgowrie and Rattray can be accessed within a 5km cycle, as well as the surrounding residential areas to the north, south and east. The site is also within walking distance of several bus stops along Perth Road, providing frequent services to Blairgowrie and Perth.

Planning history

Wider development site

2.9 Planning Permission in Principle (ref. 17/00939/IPM) was granted in December 2018 by PKC for a mixed-use development on the wider development site. This comprised a residential development, employment land and commercial units, which indicatively included a restaurant, hotel and drive-thru café.

Figure 2.3 – Approved location plan and indicative site plan for southern commercial area (Planning Permission in Principle ref. 17/00939/IPM)



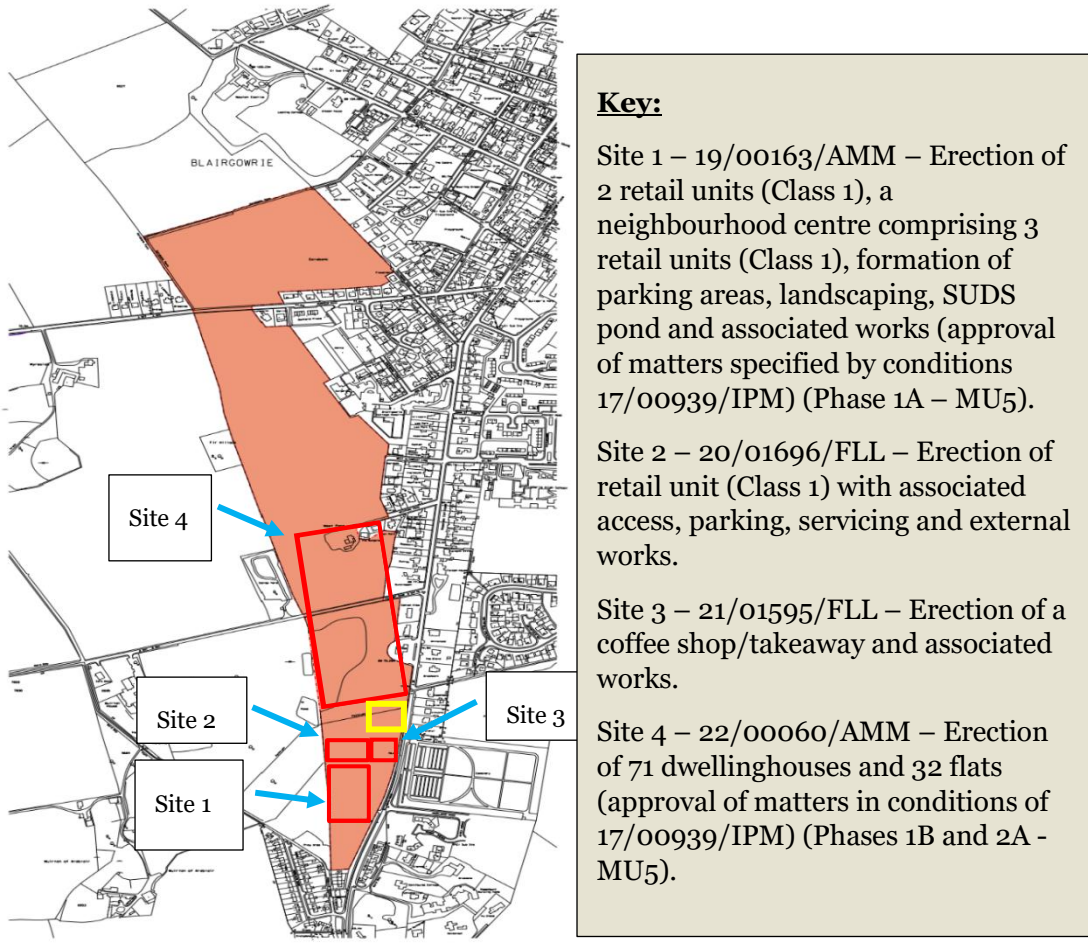
Neighbouring sites

2.10 A review of the e-planning portal has identified the following applications that have been submitted to PKC since the approval of the Planning Permission in Principle that are relevant to these proposals. Figure 2.4 below shows the location of each of these development parcels.

- Ref. 19/00163/AMM – Planning Permission was granted on 16 January 2020 for the approval of matters specified in conditions for the erection of retail units (Class 1A) and the formation of parking areas. This development has been built out to the south of the appeal site and is now operational as Westpark Retail Park.
- Ref. 20/01696/FLL – Planning Permission was granted on 20 January 2021 for the erection of a retail unit (Class 1) with associated access, car parking and servicing. This sought to extend the previously approved retail unit as per Planning Permission ref. 19/00163/AMM. This relates to the Planning Permission for the Home Bargains to the south of the site, which is now operational;

- Ref. 21/01595/FLL – Planning Permission was granted on 20 December 2021 for the erection of a coffee shop/takeaway and associated works. This relates to the now operational Starbucks drive-thru to the south of the site;
- Ref. 22/00060/AMM – Planning Permission was granted on 23 March 2023 for the approval of matters specified in conditions in relation to the earlier Planning Permission in Principle (ref. 17/00939/IPM) for the erection of 71 no. dwellinghouses and 32 no. flats. This development is located immediately to the north of the appeal site. A number of non-material variations have been considered by the Council and conditions discharged since the permission was granted; and
- Ref. 24/01573/FLL – A planning application was submitted for an EV charging hub at Westpark Retail Park in November 2024. This application was refused in February 2025.

Figure 2.4 – Location of development parcels approved following Planning Permission in Principle (ref. 17/00939/IPM) (appeal site outlined in yellow)



2.11 The first of the applications listed above is an AMSC application for the site immediately to the south of the appeal site associated with Planning Permission ref. 17/00939/IPM. This

was for a Lidl retail store, Home Bargains and Neighbourhood Centre within the retail park area with associated parking. The Lidl and Home Bargains are currently operational, but the neighbourhood centre was not developed.

2.12 The fourth application listed above is also an AMSC application associated with Planning Permission ref. 17/00939/IPM. This is for residential development to the north of the appeal site and is currently being developed out.

2.13 The other applications (applications at Sites 2 and 3 as shown in Figure 2.4) are new detailed slot in applications within the retail park area to the south of the appeal site. The appeal site itself which was identified for a hotel has not previously had an AMSC or detailed application associated with it and remains undeveloped. The site at the most southerly point of the development area also remains undeveloped. It was identified in the Planning Permission in Principle for a family restaurant but site levels are a significant constraint and this site has no further planning history.

Subject planning application

2.14 Lichfields submitted a planning application on behalf of McDonald's for a proposed drive-thru restaurant. This was submitted in July 2025 (validated August 2025), following pre-application engagement with Officers. The approximate site location is shown in Figure 2.1 above.

2.15 During the application, the Appellant sought to work with Officers as much as possible. The application was however refused by delegated powers on 13 March 2026.

2.16 In summary the reasons for refusal, which are set out in detail above, were because the proposals were considered to be contrary to NPF4 Policy 27 (City, town, local and commercial centres) part (d) as the proposal is out with an allocated retail location and LDP2 Policy 15 (Public Access) as it was considered that the proposals would result in the stopping up of a core path.

2.17 It is the view of the Applicant that neither of these reasons for refusal are justified and this will be explored in detail in Section 6.0 of this Statement.

3.0 Appeal proposals

3.1 This section provides a description of the proposed development which is the subject of this appeal.

The proposed development and its location

3.2 McDonald's are looking to locate a restaurant within the Blairgowrie area due to its strategic position within Perthshire. The nearest McDonald's restaurant to Blairgowrie is currently in Perth which necessitates customers to travel a significant distant to visit. The preference is for a site in Blairgowrie adjacent to existing retail uses that is easily accessible by a range of transport modes to negate this need for customers to travel, largely by private car to restaurants out with the town.

3.3 The appeal site is an obviously good location adjacent to other retail uses at a retail park that does not currently have a restaurant use within it. This is an established retail area within the town with good walking, cycling and other transport links. The subject location adjacent to Westpark Retail Park provides opportunities to complement the established retail offer there, attract passing trade from Perth Road and meet customer demand for convenient food and drink services.

3.4 The proposed development comprises a restaurant (Class 3) with drive-thru facility (Sui Generis) and a floorspace area of 315 sq.m GEA, to be operated by McDonald's. This is McDonald's most popular format in Scotland and will meet identified customer needs in a location such as Blairgowrie. Internally, there will be a dining area, toilet facilities, kitchen space, staff room and other associated spaces needed for the operation of such a premises, such as stores and chillers. Externally, the restaurant will include a drive-thru lane and a small patio area with tables and chairs.

3.5 The scheme incorporates a range of soft landscape measures, including new grass verges established with flowering lawn mix and new native hedgerows and trees for ecological enhancement. Hard landscape includes surface footways to provide a legible and safe pedestrian environment.

3.6 The proposed development will provide a new meeting place for users of the retail park and local residents alike. It will create up to 100 jobs for the area, in particular creating opportunities for young people and it will provide community benefits. It is in a location that benefits from good sustainable travel options and it will not impact unduly on local amenity. These matters are explored further below.

Socio-economic benefit

3.7 The economic benefits of the proposed development are considerable. In addition to the commercial opportunities presented by the site, they include:

- Supporting 140 direct FTE construction jobs, as well as supporting a further 120 indirect and induced FTE jobs during the construction phase;
- Generating an additional £4.1 million of GVA during construction;

- Creating 80-100 direct headcount jobs (55-75 direct FTE jobs) on-site once the development is completed and operational – and a further 30 indirect and induced jobs; and
- Delivering an uplift in business rates revenue in the range of £39,000 to £42,500.

3.8 McDonald's also support local communities in a wide variety of ways. This includes delivering strong staff training programmes, investing more than £43 million in training each year; providing financial support to improve the standards and growth of community-led football teams; and McDonald's operate their own independently registered charity, Ronald McDonald's House Charities UK, which helps support families while their children are in a hospital or hospice.

3.9 In the context of the above, it is clear that the proposed development would have a significant positive impact in economic terms. Further detail is explored in Section 6.0 of this Statement.

Access and parking

3.10 The proposed site layout has been designed with the Sustainable Travel Hierarchy in mind. The site already benefits from good pedestrian and cycle access and, the site is located directly adjacent to one of Blairgowrie's main arteries (Perth Road) which is served by two existing bus routes that operate seven days a week. These services (58 and 63) connect the existing retail park with Blairgowrie Town Centre and further afield. This affords good opportunity for passing trade.

3.11 It is proposed that the existing footway to the south of the site will be extended to provide access into the site, providing safe pedestrian access, this is coupled with new pedestrian routes via paved footways and marked crossing facilities within and connection to the retail park.

3.12 Access for cyclists is proposed to be via the main site access and there will be provision of six cycle parking spaces adjacent to the restaurant building.

3.13 Within the proposed drive-thru restaurant development site, a total of 38 general parking bays will be provided which will include three accessible bays directly adjacent to the restaurant building as well as three motorcycle spaces. This is 31 less parking spaces than anticipated for the hotel development identified on this site and has been confirmed to be acceptable by Perth and Kinross Council's Roads Team. Given the site will effectively provide an extension to the retail park, it is expected that a large proportion of customers travelling to the proposed McDonald's restaurant will be linked trips with the adjacent retail units.

3.14 Vehicle access to and from the proposed development is proposed via the unnamed access road to the south of the site, which is currently used as the servicing access for the retail park. This will be widened and improved. The current bell mouth serving the development plot will be stopped up and access to the site will be via a new priority junction.

3.15 The main vehicle access into the retail park will remain unchanged.

3.16 No issues were raised by the Council regarding the access arrangements for the site, or the level of car and cycle parking to be provided.

Local amenity

3.17 In designing the scheme, careful consideration has been given to ensuring that the amenity of neighbouring residential uses is protected (notably for the new residential scheme to the north of the site). A number of technical assessments were commissioned prior to the submission of the planning application to ensure that the scheme would not have an adverse impact on either the amenity of users or neighbouring residents. The technical assessments included:

- A Noise Impact Assessment, (Appeal Document 10.1 and Document 10.2);
- An Odour Control Assessment, (Appeal Document 8);
- An Air Quality Assessment, (Appeal Document 9); and
- A Lighting Impact Assessment, (Appeal Document 16).

3.18 The Council did not raise issue with the findings of the above assessments, with no issues raised regarding the impact of the development on local amenity.

Summary

3.19 The proposed McDonald's restaurant would bring a number of positive benefits to Blairgowrie. It would redevelop a long-term vacant site, helping to improve the appearance and viability of the area while attracting new investment into the town. The development would create valuable local employment opportunities, particularly for young people and those seeking flexible working arrangements.

3.20 In addition, the restaurant would provide a welcoming, family-friendly and alcohol-free social space where residents of all ages can meet. Blairgowrie is situated in an important location which services a wide rural catchment area, and many local residents currently travel significant distances to access a McDonald's restaurant. The proposed location is therefore well placed to meet existing demand from both local customers and visitors travelling through the area. By capturing spending that currently leaves town, the development has the potential to support the wider local economy, increase footfall to nearby businesses and strengthen Blairgowrie's role as a destination for residents and visitors alike.

3.21 Visual impact and landscape have been carefully considered to ensure that the proposed development is not detrimental in this respect. Technical assessments which accompanied the application demonstrated that the proposals would not have an adverse impact on either the amenity of users or neighbouring residents.

3.22 It is clear from the above that the proposals are for a new retail compatible use in an existing retail area within Blairgowrie – this is not a standalone application in an inappropriate location. The location on one of Blairgowrie's main arteries (Perth Road) provides good access for all modes of travel and the presence of the existing Retail Park provide the opportunity for linked trips. As noted above the reasons for refusal were attributed to the location of the development and its perceived impact on a Core Path. However, it is the Appellants view that this is an entirely acceptable location for such a use and that matters to do with the Core Path have already been resolved. These matters are explored in detail in Section 6.0 of this Statement.

4.0 Planning policy framework and guidance

Relevant planning policy and guidance

4.1 The planning policy and guidance documents that are of relevance to the planning application are as follows:

- National Planning Framework 4 ('NPF4') – adopted February 2023;
- Perth and Kinross Local Development Plan ('LDP') – adopted November 2019; and
- Supplementary guidance – Perth and Kinross Council.

NPF4 – adopted 23 February 2023

4.2 The following policies are of relevance to the proposed development:

- Policy 1 – Tackling the climate and nature crises – states that proposals should consider the climate and nature crises;
- Policy 2 – Climate mitigation and adaptation – seeks to ensure development mitigates climate change impacts, including by having low carbon infrastructure;
- Policy 3 – Biodiversity – requires proposals to avoid adverse impacts on biodiversity and demonstrate biodiversity enhancement;
- Policy 6 – Forestry, woodland and trees – encourages new tree planting where appropriate and has a presumption against the removal of trees;
- Policy 13 – Sustainable transport – promotes development that prioritises active travel.
- Policy 14 – Design, quality and place – highlights the need for high quality and sustainable design and should improve the quality of an area, regardless of the scale of development;
- Policy 15 – Local living and 20-minute neighbourhoods – encourages development that allows people to access every day services within short, sustainable journeys from their home;
- Policy 22 – Flood risk and water management – requires sustainable drainage measures as part of development proposals;
- Policy 25 – Community wealth building – supports development that contributes to economic growth and retention of economic benefits within local communities; and
- Policy 27 – City, town, local and commercial centres – requires development to follow the town centre first approach. Part (d) specifically mentions drive-thru developments and states "*drive-thru developments will only be supported where they are specifically supported in the LDP*".

Perth and Kinross LDP – adopted 29 November 2019

4.3 The key policies to the assessment are as follows:

- Policy 1 – Placemaking – seeks proposals to be sustainable and compatible with the surrounding area;

- Policy 5 – Infrastructure Contributions – sets out when proposals will be required to provide developer contributions;
- Policy 7B – Mixed-Use Sites – supports development on allocated mixed-use sites where proposals deliver a compatible mix of uses and contribute positively to the overall site. It also identifies that areas identified for mixed-use should promote the integration of employment opportunities with housing;
- Policy 15 – Public Access – requires development to ensure public access routes remain safe and functional;
- Policy 26B – Archaeology – requires proposals to protect areas of archaeological interest and their setting;
- Policy 41 – Biodiversity – seeks to protect and enhance biodiversity;
- Policy 53C – Surface Water Drainage – requires development proposals to incorporate appropriate surface water drainage;
- Policy 56 – Noise Pollution – seeks to ensure development does not adversely affect residential amenity; and
- Policy 60B – New Development Proposals – seeks to ensure proposals are compatible with surrounding land uses and reduce impact on amenity.

4.4 There were other policies that were referenced in the Officer's report, but these did not form part of the Officer's assessment. It is therefore considered that they are not of relevance to the determination of the application.

Supplementary guidance (Perth and Kinross Council)

- Supplementary Guidance – Placemaking (statutory);
- Planning Guidance – Delivery of Development Sites (non-statutory); and
- Planning Guidance – Planning and Biodiversity (non-statutory).

Emerging planning policy

Perth and Kinross LDP 3

4.5 PKC is currently preparing a new LDP (LDP3). The Council's Evidence Report is currently going through the Gate Check process, and further written submissions have been requested.

4.6 The Council's development plan scheme was adopted in April 2026 and advises that the proposed plan is expected to be published early 2027 for consultation. However, it is noted that this could be delayed depending on the length of the Gate Check process. The Development Plan Scheme sets out that the Proposed Plan is anticipated to be adopted in 2028.

4.7 As the Proposed Plan has not yet been published or submitted for examination, only LDP2 is relevant to the determination of this appeal.

5.0 Common ground and unresolved matters

5.1 This section sets out the agreed position in relation to key planning considerations associated with the appeal proposals.

5.2 In determining the planning application, Officers focused on the following topic areas:

- Principle of development;
- Design and layout;
- Residential amenity;
- Roads and access/public access;
- Drainage and flooding;
- Conservation considerations;
- Natural heritage and biodiversity;
- Developer contributions; and
- Economic impact.

5.3 This section sets out the matters that are not disputed and are agreed between the two parties (PKC and the Appellant). It also sets out the remaining unresolved matters. Where relevant, this section refers to the Report of Handling dated 12 March 2026, which is appended at Appendix 2 of this Statement of Appeal.

Principle of development

Town Centre First Assessment

5.4 The parties agree that there are no suitable sites within Blairgowrie Town Centre that would be able to accommodate the proposed development. Page 9 of the Report of Handling states "*the submitted town centre first assessment is considered to have met the requirements of NPF4 Policy 27 (b)*". It is therefore agreed that this matter is concluded.

Health and wellbeing

5.5 NPF4 Policy 27 (c) states that proposals for non-retail uses, including hot food takeaways will not be supported if they will undermine the character and amenity of the area or the health and wellbeing of communities.

5.6 The Appellant provided evidence to set out why the proposal will not impact health and wellbeing of the surrounding community (Appeal Document 26). Page 10 of the Report of Handling states "*it is considered that there is not sufficient policy weight within NPF4 Policy 27 (c), especially when compared with other national planning policy frameworks within the UK to justify refusal on public health grounds*".

5.7 The parties agree that the proposal therefore complies with NPF4 Policy 27 (c).

Drive-thru development

5.8 Officers considered that the proposals do not comply with NPF4 Policy 27 (d). This remains an unresolved matter and indeed was one of the reasons for refusal. Further information is set out in Section 6.0 below, in relation to the Appellants view in terms of this policy part including guidance from Scotland's Chief Planning Officer in respect of the application of this policy.

Design and layout

5.9 Page 11 of the Report of Handling states that the proposed development *"would be appropriate in terms of its effect on visual amenity and would be of a scale which would reflect the design standards and appearance of the adjacent retail park"*.

5.10 While no policies were assessed for this topic in the Report of Handling, it is considered that the parties are in agreement that the proposals are in accordance with NPF4 Policy 14 and LDP Policies 1, 7B and 60B.

5.11 Under this subheading, the Report of Handling states that the inclusion of drive-thru facilities would be *"unacceptable outwith an unallocated retail location"*. It is unclear how this relates to design and layout, as it is considered that this relates to the principle of the development. This will be considered in Section 6.0 of this Statement.

Residential amenity

5.12 The parties agree that the development will result in no adverse amenity impacts in terms of outlook, noise, lighting and odour. Page 11 of the Report of Handling confirms that Environmental Health confirmed they had no objection during the course of the planning application, subject to conditions.

5.13 The parties therefore agree that the proposals accord with NPF4 Policy 14 and LDP Policies 1A, 1B and 56 in terms of residential amenity.

Roads and access/ public access

5.14 The Report of Handling confirms that Transportation and Development had no objection to the proposed vehicular access, subject to conditions. The parties therefore agree that there are no operational/safety concerns with the proposed vehicular access to the development.

5.15 While NPF4 Policy 13 was not assessed in the Report of Handling, it is considered that the parties are in agreement that the proposals comply with NPF4 Policy 13, as this policy is not listed within the reasons for refusal.

5.16 Officers considered that public access would be impacted by the proposed development as it would result in the stopping up of a core path with no alternative route. It was therefore considered the proposals were contrary to LDP Policy 15. This remains an unresolved matter and indeed was one of the reasons for refusal. Further information on this topic is set out in Section 6.0 of this Statement below, but in summary the concern of the officers appears to be as to timing, which has now been overcome as the alternative route has been implemented.

Drainage and flooding

5.17 The parties agree that the site is acceptable in terms of flooding and drainage. The development will incorporate sustainable drainage methods and the drainage design is accepted by the LPA. Page 12 of the Report of Handling confirms that Structures and Flooding were consulted and raised no objection.

5.18 While no policies were assessed for this topic in the Report of Handling, it is considered that the parties are in agreement that the proposals comply with NPF4 Policy 22 and LDP Policy 53C.

Conservation considerations

5.19 Page 12 of the Report of Handling states "*the proposal is unlikely to detrimentally impact on the nearby ancient woodland inventory or sites of archaeological interest"*.

5.20 While no policies were assessed for this topic in the Report of Handling, it is considered that the parties are in agreement that the proposals comply with NPF4 Policy 6 and LDP Policies 26 and 41.

Natural heritage and biodiversity

5.21 Page 12/13 of the Report of Handling states that *"the proposed site clearance is not expected to result in any significant ecological impact"*. The proposals include a comprehensive landscaping scheme which the LPA have accepted.

5.22 While no policies were assessed for this topic in the Report of Handling, it is considered that the parties are in agreement that the proposals comply with NPF4 Policy 3 and LDP Policy 41.

Developer contributions

5.23 The parties agree that no developer contributions are required. Page 13 of the Report of Handling states *"the Developer Contributions Guidance does not identify any contributions are required"*.

Economic benefits

5.24 Page 13 of the Report of Handling states that *"the proposal is likely to result in the creation of employment, GVA generation during construction and uplift in business rates revenue during operation"*. The parties therefore agree that the proposal will create economic benefits to the area.

5.25 While no policies were assessed for this topic in the Report of Handling, it is considered that the parties are in agreement that the proposals comply with LDP Policy 7 (Employment and Mixed-Use areas). Part b) states areas identified for mixed-use are intended to promote the integration of employment generating opportunities with housing, as this will reduce the potential need to commute between home and employment.

Matters in dispute

5.26 As noted above the principal matters which remain in dispute are as follows:

1 Compliance with NPF4 Policy 27 (d) and the potential for the proposals to impact on local living; and

2 Compliance with LDP Policy 15 in relation to public access arrangements.

5.27 These matters are discussed in detail in the next section of this report.

Summary

5.28 The table below summarises the scheme's compliance with the relevant development plan policies.

Table 5.1 – Compliance of the appeal scheme with relevant development plan policy

Topic	Relevant policy	Compliance
Principle	NPF4 Policy 27	Comply with NPF4 Policy 27 (b) and 27 (c) in relation to the Town Centre First Assessment and health and wellbeing.
		Officers consider that the proposals do not comply with NPF4 Policy 27 (d). This matter is discussed in Section 6.0 of this Statement.
Design and layout	NPF4 Policy 14 and LDP Policies 1, 7B and 60B.	Comply The Officer's report confirms the proposals *"would be of a scale which would reflect the design standards and appearance of the adjacent retail park".*
Residential amenity	NPF4 Policy 14 and LDP Policies 1 and 56	Comply The Officer's report confirms *"there are no concerns with residential amenity".*
Roads and access/public access	NPF4 Policy 13 and LDP Policy 15	Comply with NPF4 Policy 13 as no issues were raised in this regard in the Officer's report.
		Officers consider that the proposals do not accord with LDP Policy 15 in relation to public access. This matter is discussed in Section 6.0 of this Statement but realtes more to timing than an objection in principle
Drainage and flooding	NPF4 Policy 22 and LDP Policy 53C	Comply The Officer's report confirms Structures and Flooding had no objection.
Conservation considerations	NPF4 Policy 6 and LDP Policies 26B and 41	Comply The Officer's report confirms *"the proposal is unlikely to detrimentally impact on the nearby*

		ancient woodland inventory or sites or archaeological interest".
Natural heritage and biodiversity	NPF4 Policy 3 and LDP Policy 41	Comply The Officer's report confirms the site is currently *"low ecological value".*
Developer contributions	LDP Policy 5	Comply The Officer's report confirms no developer contributions are required.
Economic impact	LDP Policy 7B	Comply The Officer's report confirms that the proposals will generate economic benefits. This aligns with LDP Policy 7.

5.29 NPF4 makes clear that the plan and its policies should be read as a whole and it is for the decision maker to determine the weight that should be attached to each policy. In making the delegated decision on this application, Officers clearly concluded that the apparent non-compliance with NPF4 Policy 27 part (d) and, potentially, LDP2 Policy 15 outweighed compliance with all other relevant polices. It is the Appellant's view that this is not reasonable.

5.30 Table 5.1 above demonstrates that the proposals are compliant with the majority of the policies that they were assessed against (17 policies); was compliant with NPF4 Policy 27 parts (b) and (c); but not (d) and was considered non-compliant with LDP2 Policy 15. This would seem to demonstrate that on planning balance, the scheme would be acceptable. It is the view of the Appellant that the matters of non-compliance, even if accepted, which they are not, do not outweigh compliance with the development plan as a whole. This conclusion is reinforced when considering the advice on the application of NPF4 Policy 27(d) provided by Scotland's Chief Planner and on the actual circumstances in terms of the Core Path and its agreed diversion (discussed further below).

5.31 Section 6 of this Statement considers in detail these two matters and sets out why in the Appellant's view it was not correct to conclude that these two matters were indeed a reason for refusal. Moreover, in any event there are material circumstances which would justify a decision otherwise than in accordance with the development plan.

6.0 The case for approval

6.1 The application was refused by PKC on two grounds, as follows:

1 *"The proposal is contrary to NPF4 Policy 27 (d) as it involves a class 3 and sui generis drive-thru format located outwith a LDP2-allocated retail location. The site lies adjacent to retail facilities and a planning permission (19/00163/AMM) which would partially function as a local centre, where active travel should be encouraged, reinforcing the case for supporting food and drink uses rather than drive-thru facilities. Additionally, the site was previously earmarked for a hotel, and therefore the proposal would dilute the overall qualities of the mixed-use development originally approved in 2018 (17/00939/IPM)"; and*

2 *"The proposal is considered contrary to LDP2 Policy 15 (Public Access) as it would have an adverse impact on the integrity of an existing core path and right of way (BLAI/29). Approving the application in its current form would result in the stopping up of a core path and right of way without providing an alternative route."*

6.2 This section of the Statement of Appeal deals with the reasons for refusal and sets out the Appellant's case regarding the matters raised.

Refusal Reason One – local living and active travel

6.3 There are two main concerns raised within refusal reason one. However, only the first actually relates to NPF4 Policy 27 (d). The refusal reasons are stated as follows:

i the proposals do not accord with NPF4 Policy 27 (d) as the proposal is out with an LDP allocated retail location; and

ii the proposals do not reflect the original Planning Permission in Principle for the site, given the site was originally identified as a hotel use.

6.4 These points are considered in detail below.

i. Do not accord with NPF4 Policy 27 (d)

6.5 While the Appellant does not dispute the conclusion that Drive-thru developments are not specifically supported by the LDP, it is not accepted that this is sufficient grounds for refusal for the following reasons:

- The extant LDP2 predates NPF4 and so it is unreasonable to expect there to be a specific mention of drive-thru development and where they could be acceptably located;
- Sufficient weight has not been given to the Chief Planner's transitional guidance for NPF4; and
- Sufficient weight has not been given to the to the specific circumstances of the appeal site.

The extant LDP2 predates NPF4

6.6 The extant LDP2 predates NPF4 so it is unsurprising that it contains no specific mention of drive-thru developments in this location. This is a clearly a relevant consideration by

itself,to the extent there is a conflict with NPF4 Policy 27(d). Furthermore, this is a location allocated for mixed use development in the extant LDP and it is an area that already benefits from planning permissions for commercial and retail development. This is also a location where a coffee drive-thru development has already been consented, establishing that the Council do consider it to be a reasonable location for drive-thru developments.

6.7 There is also an inconsistency in the Officer's report to NPF4 Policy 27 overall. The assessment concludes that the proposal *"is considered to comply with the requirements of NPF4 Policy 27 (b), as well as there being insufficient policy basis to be contrary to NPF4 Policy 27 (c)"*. In circumstances where the principle of food and drink use is accepted, and no unacceptable town centre impact has been identified, it is considered that a finding that there was conflict with either Policy 27 or NPF4 as a whole is not a balanced or proportionate approach.

6.8 In addition to this, the suggestion that the proposal should instead comprise a traditional Class 3 unit because the centre role is "*more suited to Class 3 provision"* appears to reflect a preference for a particular operational format, rather than specific policy requirement. NPF4 Policy 27 does not set out that food and drink uses within emerging centres must exclude drive-thru elements, particularly where the wider development already accommodates a drive-thru use.

6.9 The proposed development comprises in part a Class 3 restaurant which is a use that PKC are seeking to encourage at this mixed-use location. The proposals will provide indoor seating for around 50 customers. The proposals are therefore not solely a drive-thru use. This complies with the Transitional Arrangements which sets out that Class 3 uses should be viewed as compatible with the drive-thru function.

Chief Planner advice and transitional arrangements

6.10 The Report of Handling acknowledges that there is *"no moratorium on drive-thru's"* as stated in the Chief Planner's letter of February 2023 on transitional arrangements following the adoption of NPF4. The Report of Handling further recognises that *"LDP allocated retail locations can be considered appropriate depending on the nature of the proposal and the potential impacts, alongside the specific circumstances of each individual case"*. This clearly establishes that drive-thru proposals are not prohibited in principle and must instead be assessed on their site-specific planning merits.

6.11 However, despite this acknowledgement, the report does not adequately, in the Appellant's view, take into account the specific circumstances of the appeal site as set out below. This a site that has already been deemed suitable for retail, commercial and drive-thru uses and so this proposal should have been judged in that light.

Circumstances of the site

6.12 As noted above this is an allocated mixed use development area within which is a retail park and an existing Drive-thru. These are immediately adjacent to this appeal site which clearly forms part of this consented commercial / retail area. The rest of the mixed-use allocation has planning permission for residential development.

6.13 The proposal is for a use that is entirely in keeping with the retail park location and adjacent to an existing drive-thru development. It would increase the mix of uses at the

retail park and contribute to its long-term sustainability as a mixed-use centre. This is in keeping with the Council's stated aim to consider the allocation of the area as a local or commercial centre in the emerging LDP3.

6.14 Within the reason for refusal the decision notice states "*the site lies adjacent to retail facilities and a planning permission (19/00163/AMM) which would partially function as a local centre, where active travel should be encouraged, reinforcing the case for supporting food and drink uses rather than drive-thru facilities".*

6.15 The suggestion that the proposal is somehow incompatible with consideration of the wider site as a local centre that supports active travel is not clear. The site is not currently a Local Centre and if it was the proposals could be supported by NPF4 Policy 27 (a). Since the site is not currently a local centre, a Town Centre First Assessment was undertaken and the findings of this were accepted. In terms of active travel, this was a key consideration in these proposals with new pedestrian links proposed and cycle parking provided. Furthermore, this part of the reason for refusal seems to suggest that a food and drink use would be acceptable but a food and use with a drive-thru would not. These three matters are discussed in more detail below.

Local centre

6.16 The site is not currently identified within the adopted LDP as a local centre and is instead allocated for mixed-use development. The inclusion of this in Report of Handling and in the reason for refusal is not reasonable as the retail park does not currently have any status as a local centre. The proposal seeks to provide a Class 3 and Sui Generis facility on an allocated mixed-use site, where there is existing Class 1A/Class 3/Sui Generis uses. It is therefore considered that it would be an appropriate location for the proposed use as it would be located in an existing commercial area that has already be deemed appropriate for a drive-thru development.

6.17 It is also questioned why a local centre would not be an appropriate place for the proposed development, given the Chief Planner's advice on Transitional Arrangements for NPF4 that clearly sets out that proposals for drive-thru development may be suitably located in areas allocated for Class 1 or Class 3 uses. This would clearly cover local centres but also this mixed use allocated area which through planning permissions granted by the Council has been established as an area of Class 1A retail uses, as well as an area suitable for drive-thru development.

6.18 The proposal has been demonstrated to not prejudice town centre vitality and viability, as per the submitted Town Centre First Assessment, which has been accepted by Officers. The proposal seeks to deliver a commercial use on a long-vacant site, which will increase consumer choice at the retail park and complement the existing services already provided.

Mixed-use development

6.19 The proposed development comprises in part a Class 3 restaurant which is a use that PKC are seeking to encourage at this mixed-use location. While the Officer's report sets out that the site would be *"more suited to Class 3 provision"*, this should not be the determining factor in the circumstances of the case, as the proposed development should be viewed as a whole.

6.20 As set out above, it appears that the consideration that the site is more suited to Class 3 provision reflects a preference for a particular operational format, rather than a specific policy requirement. The wider site already comprises a drive-thru use, and it is therefore considered that the site lends itself well to this form of development.

6.21 While takeaway sales will be important to ensure the viability of the development, the proposals are intended to be a restaurant in the first instance, and it will provide indoor seating for around 50 customers. This is reflective of the fact that McDonald's are keen to promote the site as a restaurant.

Accessible location and linked trips

6.22 The Report of Handling suggests that "*a drive-thru format would likely significantly encourage customers who live within walking distance to drive rather than walk/cycle*". However, there is no evidence to suggest this.

6.23 In practice, the surrounding retail park is designed to accommodate a mix of vehicular and pedestrian trips and already serves a broad catchment area and is designed around multi-purpose trips. The Report of Handling also appears to overlook the fact that the site is accessible by a range of transport modes.

6.24 As outlined above, the site can be accessed by walking, cycling and public transport, so is easily accessible by employees and communities living in Blairgowrie who will be able to access the site by non-vehicular, sustainable modes of travel.

6.25 The proposed development will be accessible on foot from surrounding residential areas and lies within 70m of two bus stops on Perth Road, which provide regular services to Perth, Blairgowrie and Rattray. A toucan crossing provides access across Perth Road adjacent to the site and provides a convenient crossing point to the residential area to the east. The presence of a drive-thru development does not undermine local living principles, particularly where they are integrated within walkable areas, as is the case for the appeal site.

6.26 In addition to the above, customers visiting the proposed development are likely to visit as part of linked trips associated with the wider retail park or will be passing trade from Perth Road which is a main artery into and out of Blairgowrie. This is set out in the submitted Transport Assessment (Appeal Document 3, dated June 2025) which shows that on the predicted Friday afternoon peak, 87% of the trips to the McDonald's restaurant will be from vehicles already on the local road network and on the predicted Saturday afternoon peak, 84% will be from vehicles already on the local road network. This means that the drive-thru restaurant is not generally a destination in its own right and will typically attract customers who are already travelling in the local area, including those who are visiting the other facilities within the retail park. This is contrary to the likely circumstances should this site have been brought forward as a hotel. The hotel being a destination in its own right and as such a traffic generator in its own right – it is unlikely that the hotel would generate linked trips with the established retail park.

6.27 Furthermore, the addition of a new McDonald's restaurant in Blairgowrie would clearly be beneficial as it would provide an opportunity to reduce the distance local people are travelling to access a McDonald's restaurant and thereby reduce overall travel demand/traffic levels in the wider area.

6.28 The proposals are therefore entirely in keeping with the Sustainable Travel Hierarchy and does not conflict with the broader aims to encourage more sustainable travel.

iii. Principle of development

6.29 The second element of Refusal Reason One states "*the site was previously earmarked for a hotel, and therefore the proposal would dilute the overall qualities of the mixed-use development originally approved in 2018 (17/00939/IPM)*".

6.30 It is not considered that this is an accurate representation of the position While the wider masterplan approved under application 17/00939/IPM included provision for a hotel use, it was noted in Condition 2 of the permission that *"the submitted masterplan, site layout plan and indicated scale of development, of up to 400 dwellings and 4 hectares of business land, are purely indicative and are hereby not approved".*

6.31 This clearly demonstrates that the Planning Permission in Principle established a broad mixed-use development rather than creating a fixed use for each individual plot. The site was not "earmarked" in any real sense for any use, and indeed the Council at the time made it clear that the uses show on the masterplan were indicative. It is arguably inconsistent to suggest that any part of the site was earmarked. The statement also ignores that the proposal is a mixed use proposal itself, as noted above. Certainly, one if not both aspects of the mixed use proposed are entirely considered within the proposals for the broader site, as note above.

6.32 In any case, this permission was approved in December 2018 (over 7 years ago) and since then, the site has not come forward for a hotel use. This should be a material consideration and reflects the commercial realities and challenges with delivering a hotel in this location. The site has however been identified as suitable for restaurant and drive-thru development by the landowner, which would be beneficial in terms of the mix of uses in this commercial area of the mixed-use allocation and which will in turn bring significant economic benefits to the area.

6.33 The proposed development would ensure the productive use of a currently vacant parcel of land, enhancing the local economy, rather than leaving the site undeveloped for a hotel operator which has not materialised since the original Planning Permission in Principle was granted.

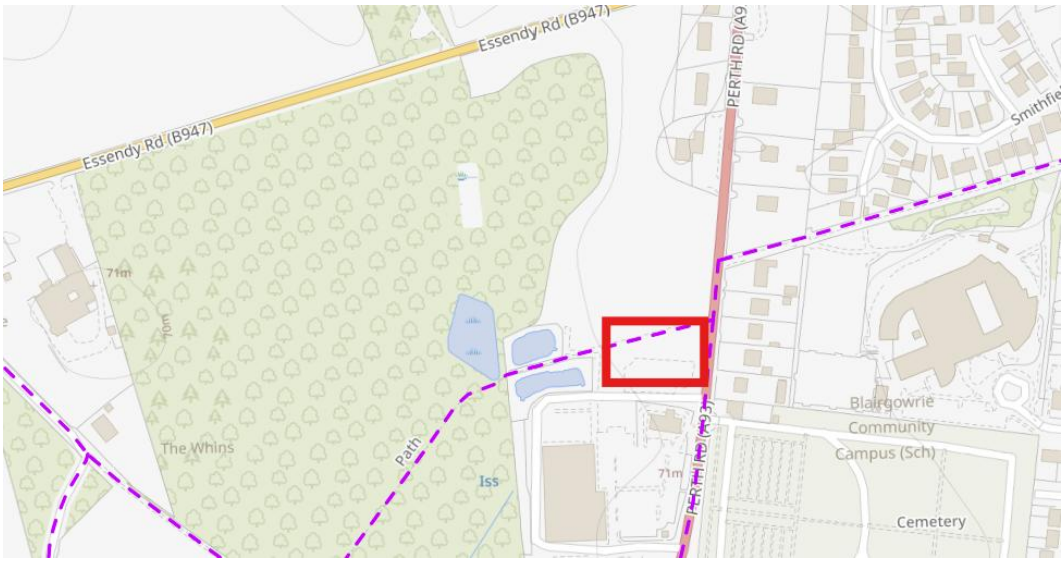
6.34 Furthermore, the LDP does not safeguard the site specifically for hotel use, and there is no evidence to show that the loss of the hotel use would result in an adverse impact to the wider mixed-use development. The proposal would continue to contribute to the mixed-use nature of the area and instead should be viewed as complementary to the surrounding retail and food/drink offer.

6.35 Indeed, as noted above, in respect of the Council's stated desire for more active travel access to the site rather than car-based trips, the now proposed use is beneficial.

Refusal Reason Two - core path

6.36 Refusal reason two relates to concerns regarding the implementation of the diversion of Core Path ref. BLAI/29, which currently runs through the north-western part of the appeal site. The existing route for the Core Path is shown in Figure 6.1 below.

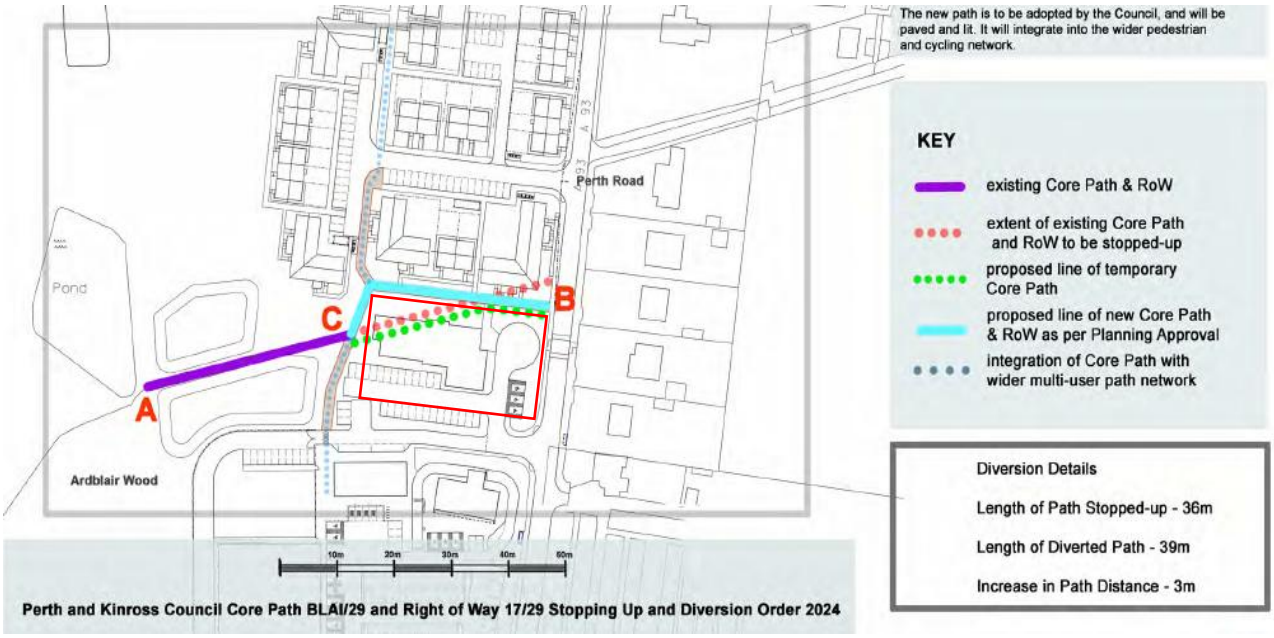
Figure 6.1 – Location of existing Core Path BLAI/29 (appeal site outlined in red and existing core path in purple)



6.37 The refusal reason appears to have been based primarily on uncertainty surrounding the implementation of the approved diversion route, rather than the acceptability of the diversion itself.

6.38 The Officer's Report acknowledges that "*the core path was subject to a Stopping Up and Diversion Order associated with 22/00060/AMM*". This is a significant material consideration. A Stopping Up and Diversion Order of the existing Core Path (BLAI/29) was approved in February 2024 and is included at Appendix 4 of this Statement. The plan showing the approved diversion route is shown in Figure 6.2 below.

Figure 6.2 – Approved diversion route of Core Path BLAI/29 (appeal site outlined in red)



6.39 The principle of diverting the existing route had therefore already been accepted through the relevant statutory process, subject to implementation requirements. The concern instead related to the fact that the Order *"had not yet taken effect"*.

6.40 Page 12 of the Report of Handling states *"there is currently no indication that the adjacent affordable housing development (application reference 22/00060/AMM) is progressing on site and therefore no guarantee that the diversion will be delivered)"*. This therefore suggests that the concern related to uncertainty of the timing of the adjacent development, rather than any policy conflict arising from the diversion itself.

6.41 The Stopping Up and Diversion Order states "*during construction* (of the residential development to the north of the appeal site)*, a temporary footpath will be in place before moving to the permanent, diverted route. The diverted route is to be 3m wide, paved and lit. It is intended that it is adopted by Perth and Kinross Council"*. There is therefore a duty on the landowner and/or developer of the site to the north to implement the diversion, first through a temporary diversion (while construction of the neighbouring development is underway) and then through a permanent diverted route, constructed to a standard agreed with PKC.

Implementation of temporary diversion

6.42 Circumstances have now materially changed since the decision was issued. The residential development to the north of the site has started construction and the temporary diversion of the Core Path has been implemented by the developer to the required specification, as per the approved Stopping Up and Diversion Order.

6.43 Images of the temporary diversion are provided below.

Figure 6.3 – Photo of Diverted Core Path (image taken from Perth Road)

Source: Yeoman McAllister Architects (dated 21.05.26)

Figure 6.4 – Photo of Diverted Core Path (image taken looking toward retail park)

Source: Yeoman McAllister Architects (dated 21.05.26)

Figure 6.5 – Photo of Diverted Core Path (image taken from Perth Road, looking west to Ardblair Wood)

Source: Yeoman McAllister Architects (dated 21.05.26)

Figure 6.6 – Photo of Diverted Core Path (image taken looking toward Perth Road)

Source: Yeoman McAllister Architects (dated 21.05.26)

6.44 Given that the approved Order only requires the temporary path to be implemented while construction takes place, the core path is no longer considered to be a barrier to the development of the appeal site. There is no restriction on public access and the diverted core path is now operational and fully functional, with clear signage in place to direct users, as shown by the images provided.

6.45 The Council's concern that *"approving the application in its current form would therefore result in the stopping up of a core path and right of way without providing an alternative route"* therefore no longer applies.

6.46 Given the Core Path has now been diverted in accordance with the Stopping Up and Diversion Order, it is considered that this refusal reason has now been resolved and is no longer a consideration. The implementation of the temporary Core Path continues to allow public access via an alternative route which has already been approved by Scottish Ministers.

6.47 The refusal reason related to a temporary implementation and timing issue rather than a specific policy conflict. LDP Policy 15 seeks to safeguard public access and path networks from unacceptable adverse impacts. In this instance, the proposal did not seek to remove public access without replacement provision, and the approved replacement route has now been fully implemented. On that basis, the policy conflict with LDP Policy 15 no longer exists. It is therefore considered that there is no policy conflict and that refusal reason 2 is no longer relevant.

Other material considerations

6.48 This section considers the appeal scheme in the context of other relevant material planning considerations.

McDonald's in Scotland

6.49 McDonald's Restaurants in Perth and Kinross are operated under franchise by local businesspeople. They are local people with local roots and networks, who are invested in their community. The specific community investment that the proposed restaurant will take part in is at the discretion of the franchisee, however, the majority are active in their communities through charity donations, sports club sponsorships, litter pick and volunteering. Additionally, Scottish franchisees pool together the money received from bag tax to donate to various causes across Scotland. Recently, a franchisee in Coatbridge donated £8,000 to local Motor Neurone Disease Charity, MND. The donation was raised by the 10p carrier bag charge.

Economic contribution

6.50 The economic benefits of the proposed development are considerable. In addition to the commercial opportunities presented by the site, they include:

- Supporting 140 direct FTE construction jobs, as well as supporting a further 120 indirect and induced FTE jobs during the construction phase;
- Generating an additional £4.1 million of GVA during construction;
- Creating 80-100 direct headcount jobs (55-75 direct FTE jobs) on-site once the development is completed and operational – and a further 30 indirect and induced jobs; and
- Delivering an uplift in business rates revenue in the range of £39,000 to £42,500.

6.51 In addition, McDonald's itself employs around 171,415 people (as of 2023) across the UK, with a mix of all ages and life stages. People are at the heart of the business and, as a responsible and proud employer, McDonald's are committed to investing in them. To ensure the needs of all staff are met, and to attract and retain the best talent, the range of

employment options has been expanded, with the Guaranteed Minimum Hours Contracts (GMHC) rolled out to all UK restaurants.

6.52 In the workplace, flexibility, opportunity, equality and development are promoted. McDonald's believes in hiring people on their qualities and giving them the opportunity to progress and gain qualifications. McDonald's commitment to learning and development is seen in McDonald's Investors in People Gold award as well as the £62.5 million invested in training in 2023.

6.53 McDonald's regularly review pay and benefits to ensure they remain competitive. All staff in restaurants are offered a choice between flexible and guaranteed minimum hours contracts, allowing employees to select the approach that best meets their needs. McDonald's offer great opportunities for those seeking their first job to develop important skills and progress their career. In their restaurants currently, 37% of Business Managers and 24% of People Managers started working for McDonalds before their 18th birthday. They also offer an extensive apprenticeship programme with over 20 courses available, ranging from Level 2 (GCSE equivalent) to Level 7 (post-graduate Diploma equivalent).

6.54 In the context of the above, it is clear that the proposed development would have a significant positive impact in economic terms.

Social contribution

6.55 The proposed new restaurant in Blairgowrie will deliver significant social benefits – in a highly accessible location.

Training

6.56 McDonald's commitment to staff education incorporates both internal training programmes and externally recognised qualifications. The McDonald's training philosophy centres on career long learning – "from the crew room to the boardroom". McDonald's is recognised as a "heavy lifter" by the Work Foundation as it recruits on the qualities not the qualifications of applicants. Crew members receive ongoing training of which regular assessment forms a part. The ratings from these assessments are then discussed at each employee's Performance Review. McDonald's invested £62.5 million in training in 2023 and those employed at the proposed restaurant would be given the chance to undertake structured training including the opportunity to gain nationally recognised qualifications in hospitality, literacy and numeracy all the way up to full business degrees.

Football

6.57 Since 2002, McDonald's has provided financial support to improve the standards and growth of grassroots football across England, Scotland, Wales and Northern Ireland. Local employees and restaurants have also been involved. McDonald's Club Twinning was launched in 2008 and there are now over 900 restaurants twinned with local clubs, providing coaching and business support as well as providing thousands of players with donated kit and equipment. McDonald's Fun Football programme is the UK's largest mass participation football programme and has successfully provided five million hours of free fun football for children across the UK ahead of the 2022 target.

6.58 The ongoing partnership will help ensure that McDonald's can continue to play a role in encouraging young people to have a lifelong love of sport and an active lifestyle. To date, the programme has included:

- Training over 30,000 new qualified grassroots coaches
- Supporting over 10,000 grassroots clubs
- Providing over 250,000 new football kits to kids' teams across the UK
- Recognising over 5,000 local football volunteers, clubs, and projects to date via our nationwide Grassroots Football Awards programme

House Charities

6.59 Ronald McDonald House Charities UK (RMHC) is an independently registered charity which helps support families while their children are in hospital or a hospice. RMHC provide free 'home away from home' accommodation to allow families to stay close to their ill children. They operate 12 Houses from NHS hospitals across the UK and give families a warm and comfortable place to rest, eat and relax, just moments away from their child's hospital ward. Since 1989, RMHC have supported over 50,000 families and now support 6,000 families each year.

6.60 RMHC has been McDonald's charity of choice since it was founded in the UK in 1989. Since then, McDonald's and its Franchisees have raised over £85 million for the charity.

6.61 As well as donating part of their profits, McDonald's and its Franchisees also hold annual fundraising days, provide free office space, business resources and advertising. The charity's biggest source of income comes from the collection boxes in McDonald's restaurants, through which customers give millions of pounds each year. In 2017, these boxes provided over £3 million donated by McDonald's generous customers. In 2019, the option of donating to RMHC via the cashless in-store kiosks was introduced, which has significantly increased the amount donated by customers. This allows customers to round up to the nearest pound or give set donations of 1p, 10p or 20p of which 100% is given to RMHC.

Littering

6.62 McDonald's is committed to tackling litter in as many different ways as possible. It is company policy to conduct a minimum of three daily litter patrols, whereby employees pick up not only McDonald's packaging, but also any other litter that may have been discarded in a 150m vicinity of a restaurant. This may be expanded to suit local needs. Litter bins are provided outside all restaurants, as shown on the drawings and packaging carries antilittering symbols to encourage customers to dispose of litter responsibly. Anti-littering signage is displayed within restaurants and car parks, and support is given to Keep Britain Tidy.

Environmental contribution

6.63 McDonald's was the first global restaurant chain to set science-based greenhouse gas reduction targets at a global level. Working with all franchisees, their aim is to reduce greenhouse gas emissions related to all restaurants and offices by 36% by 2030.

Additionally, McDonald's are committed to a 31% reduction in emissions intensity (per metric tonne of food and packaging) across the supply chain by 2030.

6.64 In the UK and Ireland, McDonald's have committed to Net Zero Restaurants and Offices by 2030. McDonald's already buy 100% renewable electricity and have invested in long term partnership agreements to develop the renewable energy infrastructure in the UK. McDonald's are now focusing on the phase-out of gas used in their restaurants and have moved to the latest reduced GWP air conditioning refrigerants ahead of any legislation in this regard.

Waste and Use of Recycled Material in Construction

6.65 Materials used in the construction of the restaurant will include recycled materials, where possible.

6.66 Materials for the building are selected to provide the required aesthetics combined with maximum durability and robustness. The requirement for replacement, maintenance and repair will be minimal during the building lifecycles, thus providing a good low level of energy input over the whole lifecycle. The furniture used in all new build and refurbished McDonald's restaurants is sourced from recycled or certified materials and designed to recycled or reused at end of life, as part of the McDonald's Plan to Change.

The Restaurant Building

6.67 The design of the new building has been directly influenced by sustainability and the standard practices to enable the reduction in their carbon footprint. McDonald's have developed a restaurant blueprint in line with the UKGBC Net Zero Framework for construction and operational energy which is verified through independent advisors. The new restaurant for Bingley will be developed against this blueprint.

6.68 The external shell is designed to prevent air leakage and achieve the U-value required by current building regulation standards, and McDonald's utilise a sophisticated building management control system with specifically engineered energy reduction strategies to maximise operating efficiencies. McDonald's kitchen appliances have standby reminders, and a metering system has been introduced which measures the amount of electricity used in every half hour of the day. Restaurant Managers receive daily graphs to help them make energy saving adjustments.

6.69 All new restaurants are fitted with standard equipment and maintenance programmes, in line with Green Building Guidelines, which were introduced as a McDonald's Europe initiative and include:

- Lighting - LED lighting is also used, resulting in a 50% reduction in energy use compared to fluorescent lights.
- Water - Auto shut-off taps fitted to wash-hand basins in addition to flow control limited to 6l/min; replacement of urinals with waterless units and WCs fitted with dual flush of 4.5l and 3l flushes (unless external drainage requires greater volume). In addition, systems are leak checked with hot water temperatures reduced to a maximum of 60 degrees C. Pipes are checked for missing insulation.

- HVAC - Automatic closures fitted to all internal doors and draft-proofing fitted or repaired to all doors and windows, including the use of energy save reminder stickers in the back of house area. Variable speed control fans are installed so that they are not required to run when ventilation is not required, and room sensors installed to monitor internal air temperatures.

Minimising Transport Impacts and Reducing Carbon Dioxide Emissions

6.70 Cooking oil from restaurants is recycled into biodiesel using local collectors. The biodiesel is then used as fuel by McDonald's vehicles. Biodiesel is now being used in all delivery trucks and results in a significant carbon saving.

Recycling Strategy and use of Recycled Materials.

6.71 Within the supply chain, McDonald's vision is one where all food and packaging is sourced sustainably. They have undertaken a number of measures in recent years to try to promote better environmental standards through the whole supply chain.

6.72 McDonald's is committed to using recycled materials wherever possible, throughout the business and have stepped up their commitment to recycling further, setting UK goals, including 100% of McDonald's customer packaging will be made from renewable, recycled or certified sources and will be designed to be recycled or reused at end of life, by the end of 2025.

6.73 As a business, McDonald's has taken a number of steps to continue to lead when it comes to sustainable packaging and further address the issue of reducing plastic across the supply chain.

6.74 The removal of plastic lids from McFlurry will see 385 tonnes of plastic removed from the supply chain each year, and the introduction of fibre-based salad boxes will also see 105 tonnes of plastic removed annually, and the new salad boxes can be recycled with any other paper. Indeed, McDonald's are a member of the National Cup Recycling Scheme which brings together major retailers waste management companies and UK paper mills with the shared aim of growing the infrastructure needed to increase the number of paper cups being collected and recycled across the UK. McFlurry cups can be recycled along with other paper cups in one of the many recycling points that have been established across the country through the collaboration of retailers including Pret a Manger, Costa and McDonald's restaurants.

6.75 22k tonnes of outer packaging cardboard are now recycled from restaurants every year, with zero waste to landfill. Only 8% of the packaging used for McDonald's products is made from plastic, with the majority already being made from fully certified fibre. McDonald's reuses delivery packaging wherever possible, in accordance with food safety laws. The vast majority of kitchen waste is recycled. Staff separate corrugated cardboard, used cooking oil, food waste, clean plastic paper and tin from all back of house areas for recycling.

6.76 All restaurants aim to recycle 100% of their corrugated cardboard, which in itself accounts for 15% of a restaurant's average total waste. In addition, the delivery trays and crates are returned to suppliers for reuse. Delivery vehicles also carry recyclable materials on return trips, backhauling over 80% of all cardboard.

6.77 McDonald's UK has a long-term goal to send zero waste to landfill by reducing operational waste, recycling as much as possible, and diverting the remainder to a more sustainable solution. To further minimise waste, McDonald's has joined the Valpak distributor take back scheme, which ensures that redundant equipment is recycled with accredited companies.

6.78 Customer recycling stations are installed in all new restaurants, to allow customers to separate paper cups, plastic bottles and cups, and decant liquids. The cups will be sent to a specialist paper cup recycler, and the plastic will be recycled along with the plastic from the kitchens.

6.79 Once operational, the proposed restaurant will therefore support efforts to reduce waste and increase recycling, in line with CBMDC's strategic policy 16 to promote the sustainable management of waste and recycling and wider national policy strategies.

Summary

6.80 As set out above, the site lies in a mixed-use commercial area, which includes established retail and drive-thru uses and would complement the existing function of the retail park, resulting in linked trips. The proposals would support the wider viability and vitality of the retail park by providing another use for customers to visit. This is in line with the Transitional Arrangements set out by the Chief Planner of the Scottish Government.

6.81 The proposed development would also allow customers to visit the proposed restaurant via active travel modes, such as walking, cycling and public transport, given the highly accessible location of the site.

6.82 In planning terms, the addition of a new restaurant in Blairgowrie would clearly be beneficial as it would provide an opportunity to reduce the distance local people are travelling to access a McDonald's restaurant and thereby reduce overall travel demand/traffic levels.

6.83 Furthermore, Core Path BLAI/29 has been formally diverted, as per the approved Stopping Up and Diversion Order. The public right of way is therefore not being impacted by the proposed development and therefore there is no restriction on public access as a result of the appeal site coming forward.

6.84 It is the Appellants view that the proposed development is clearly in accordance with LDP Policy 15 and refusal on the grounds of NPF4 Policy 27(d) is not justifiable for the reasons set out above.

6.85 In this context, it is the Appellants view that the proposed development is in compliance with all relevant policies within the Development Plan when taken as a whole and there are no justifiable reasons for refusal of planning permission for the proposed development.

6.86 Even if it is deemed that there is a conflict identified with the Development Plan, there are extensive benefits of the proposal, as set out above, and these provide more than adequate material considerations to justify a decision otherwise than in accordance with the Plan.

6.87 In summary, it is essential that planning balance is applied to the decision on the proposed drive-thru development at Blairgowrie. Planning judgement should be made on the individual facts and circumstances of the case and should not be based on compliance with

one policy alone. The material considerations here indicate that the balance weighs clearly in favour of the grant of planning permission, particularly when considering the significant economic and social benefits that the proposed development will bring to Blairgowrie and the wider Perth and Kinross area.

7.0 Conclusions

7.1 This Statement of Appeal sets out why the appeal scheme is acceptable in planning terms and should be allowed. Moreover, it has shown that the two reasons for refusal are not currently justifiable.

7.2 The proposed development comprises a restaurant with drive-thru facility and a floorspace area of 315 sq.m GEA, to be operated by McDonald's.

7.3 This Statement has addressed each refusal reason in full and can be summarised as follows:

1 Refusal Reason One:

i Officers considered that the proposals do not accord with NPF4 Policy 27 (d) which sets out that drive-thru developments will only be supported where they are specifically supported in the LDP. However, this refusal reason does not acknowledge the Transitional Arrangements set out by Scottish Government's Chief Planner which emphasises that drive-thru developments should be located adjacent to Class 1/Class 3 uses. This site is located adjacent to an existing retail park which has several retail and food and drink uses, including an existing drive-thru coffee shop. Furthermore, it would redevelop a long-term vacant site, helping to improve the appearance and viability of the area while attracting new investment into the town. The development would create valuable local employment opportunities, particularly for young people and those seeking flexible working arrangements.

ii Officers considered that the proposals would not encourage active travel and would impact on local living. However, this does not acknowledge the retail/employment nature of this location which benefits from sustainable methods of access.

iii Officers considered that the proposals do not reflect the original Planning Permission in Principle for the site, given the site was originally identified as a hotel use. Not only is that analysis in error but no hotel operator has been identified in over seven years and if the Council's significant concern is active travel in the area, the proposed development is more conducive to this than a hotel would be.

2 Refusal Reason Two:

i Officers considered that the proposed development would have an adverse impact on the existing public access, as it would result in the stopping up of a core path without providing an alternative route. However, this refusal reason does not acknowledge the Stopping Up and Diversion Order for the Core Path at the site (BLAI/29), which was approved in February 2024. The residential development to the north of the site has now started construction, and the landowner has implemented the temporary core path, in line with the approved Stopping Up and Diversion Order. Images are included in Section 6.0 of this Statement. On this basis, the proposed development will not impact on public access.

7.4 On the basis of the above, there is therefore no evidence which supports the reasons for refusal provided by the Council and it is considered that the proposed development is acceptable in terms of the development plan.

7.5 There are no other reasons for refusal. There are also a number of other material considerations, which should be given significant weight in determining the appeal – this ranges from the development of a long-term vacant site; the broadening of the food and beverage offer within an existing retail park; and the significant economic benefits that the development will bring to the area.

7.6 The development accords with the development plan when read as a whole and given the large number of material considerations, which weigh in favour of the scheme, it is the appellants view that planning permission should be granted.

7.7 Even if the view is reached that there is some conflict with the Development plan, contrary to the Appellant's view, there are ample material considerations in favour of the proposal to justify the grant of Planning Permission nonetheless.

7.8 . The Local Review Body is therefore humbly asked to reconsider this Council's position and allow this appeal, granting Planning Permission for the development.

Appendix 1 Planning application 25/01116/FLL Decision Notice

McDonald's Restaurants Limited
c/o Lichfields
Rachel Affleck
115 George Street
Edinburgh
EH2 4JN

2 High Street
Perth
PH1 5PH

Date of Notice: 13th March 2026

Town and Country Planning (Scotland) Act (as amended)
Planning, etc. (Scotland) Act 2006 (as amended)

Application Reference: **25/01116/FLL**

I am directed by the Planning Authority under the Town and Country Planning (Scotland) Acts currently in force, to **refuse** your application registered on 4th August 2025 for Planning Permission for **Erection of restaurant unit with drive thru facilities and formation of vehicular access, parking areas, landscaping and associated works Land 70 Metres West Of Langdale Perth Road Blairgowrie PH10 6EN**

Kristian Smith
Development Management & Building Standards Service Manager

Reasons for Refusal

1. The proposal is contrary to NPF4 Policy 27 (d) as it involves a class 3 and sui generis drive-thru format located outwith a LDP2-allocated retail location. The site lies adjacent to retail facilities and a planning permission (19/00163/AMM) which would partially function as a local centre, where active travel should be encouraged, reinforcing the case for supporting food and drink uses rather than drive-thru facilities. Additionally, the site was previously earmarked for a hotel, and therefore the proposal would dilute the overall qualities of the mixed-use development originally approved in 2018 (17/00939/IPM).

2. The proposal is considered contrary to LDP2 Policy 15 (Public Access) as it would have an adverse impact on the integrity of an existing core path and right of way (BLAI/29). Approving the application in its current form would result in the stopping up of a core path and right of way without providing an alternative route.

Justification

The proposal is not in accordance with the Development Plan and there are no material reasons which justify departing from the Development Plan.

Notes

The plans and documents which form part of this decision are listed below and are displayed as 'refused' on Perth and Kinross Council's website at www.pkc.gov.uk "Online Planning Applications" page

Plan Reference
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Should you require further information regarding the decision please contact either developmentmanagement@pkc.gov.uk or call 01738 475300, quoting the above planning reference number, and you'll be directed to the most appropriate person.

Appendix 2 Planning application 25/01116/FLL Report of Handling

REPORT OF HANDLING

DELEGATED REPORT

Ref No	**25/01116/FLL**	
Ward No	**P3- Blairgowrie And Glens**	
Due Determination Date	**3rd October 2025 Extended to 18th March 2026**	
Draft Report Date	**25th February 2026**	
Report Issued by	**Adam Cairns**	**Date 12th March 2026**

PROPOSAL: Erection of restaurant unit with drive thru facilities and formation of vehicular access, parking areas, landscaping and associated works

LOCATION: Land 70 Metres West Of Langdale, Perth Road, Blairgowrie PH10 6EN

SUMMARY:

This report recommends **refusal** of the application as the development is considered to be contrary to the relevant provisions of the Development Plan and there are no material considerations apparent which justify setting aside the Development Plan.

BACKGROUND AND DESCRIPTION OF PROPOSAL

The application site is an area of rough grassland located in close proximity to Westpark Retail Park at the south-western edge of Blairgowrie, immediately adjacent to the A93 (Perth Road). The site forms part of a wider allocated site under the adopted Local Development Plan 2 (LDP2) for mixed use development (MU5).

The proposed development comprises of a McDonald's drive-thru restaurant with 38 parking spaces (including three accessible and two grill bays), three motorcycle bays and six cycle spaces. Access will be provided for vehicles via the unnamed southern access road, with pedestrian access from the south and internal paved footways and crossings.

The application site was earmarked for a 90-bedroom hotel on the indicative site plan for the in-principle permission for the wider site (application reference: 17/00939/IPM).

SITE HISTORY

Wider Site

17/00939/IPM Mixed use development comprising residential development, employment land, education/recreation/community facilities, infrastructure including roads, footpaths, landscaping, drainage, open space and associated works. Application Approved - 21 December 2018.

19/00163/AMM Erection of 2 retail units (Class 1), a neighbourhood centre comprising 3 retail units (Class 1), formation of parking areas, landscaping, SUDS pond and associated works (approval of matters specified by conditions 17/00939/IPM) (Phase 1A - MU5). Application Approved - 16 January 2020

22/00046/AMM S42 application to amend condition 16 (service delivery times) of permission 19/00163/AMM Application Approved - 14 April 2022.

Neighbouring Sites

20/01696/FLL Erection of retail unit (Class 1) with associated access, parking, servicing and external works. Application Approved - 20 January 2021.

21/01595/FLL Erection of a coffee shop/takeaway and associated works. Application Approved - 20 December 2021.

22/00060/AMM Erection of 71 dwellinghouses and 32 flats (approval of matters in conditions of 17/00939/IPM) (Phases 1B and 2A - MU5). Application Approved - 23 March 2023.

22/02023/FLL S42 application to modify condition 3 (service delivery times) of permission. Application Approved - 21/01595/FLL.

24/01573/FLL Formation of EV charging hub comprising 6 charging points,12 parking bays, substation and associated works. Application Refused - 10 February 2025.

PRE-APPLICATION CONSULTATION

Pre-application Reference: 24/00119/PREAPL

Summary of Pre-Application Advice

The site is not an allocated retail location, and while the historic 17/00939/IPM permission established retail and restaurant use, it did not establish hot food takeaway or drive-thru use. A drive-thru here raises conflicts with NPF4 Policy 27 due to its proximity to Blairgowrie High School and with NPF4 Policy 13 as it would encourage car-based travel. A sequential town centre assessment would therefore be required, with consideration of a scaled-down restaurant/takeaway format rather than a drive-thru. Even if sequential and health impacts were addressed, policy concerns would remain, as a drive-thru would undermine walkability in what is functioning partly as a neighbourhood centre, whereas a restaurant use, consistent with the earlier IPM, would better support active travel while still accommodating some parking.

DEVELOPMENT PLAN

The Development Plan for the area comprises National Planning Framework 4 (NPF4) and the Perth and Kinross Local Development Plan 2 (2019) (LDP2).

National Planning Framework 4

The National Planning Framework 4 (NPF4) is the Scottish Government's long-term spatial strategy with a comprehensive set of national planning policies. This strategy sets out how to improve people's lives by making sustainable, liveable and productive spaces.

NPF4 was adopted on 13 February 2023. NPF4 has an increased status over previous NPFs and comprises part of the statutory development plan.

The Council's assessment of this application has considered the following policies of NPF4:

Policy 1: Tackling the Climate and Nature Crises

Policy 3: Biodiversity

Policy 6: Forestry, Woodland and Trees

Policy 13: Sustainable Transport

Policy 14: Design, Quality and Place

Policy 15: Local Living and 20 Minute Neighbourhoods

Policy 23: Health and Safety

Policy 27: City, Town, Local and Commercial Centres

Perth and Kinross Local Development Plan 2 – Adopted November 2019

The Local Development Plan 2 (LDP2) is the most recent statement of Council policy and is augmented by Supplementary Guidance.

The principal policies are:

Policy 1A: Placemaking

Policy 1B: Placemaking

Policy 5: Infrastructure Contributions

Policy 6: Settlement Boundaries

Policy 7B: Mixed-Use Sites

Policy 13: Retail and Commercial Leisure Proposals

Policy 15: Public Access

Policy 23: Delivery of Development Sites

Policy 26B: Archaeology

Policy 32: Embedding Low & Zero Carbon Generating Technologies in New Development

Policy 41: Biodiversity

Policy 47: River Tay Catchment Area

Policy 52: New Development and Flooding

Policy 53B: Water Environment and Drainage: Foul Drainage

Policy 53C: Water Environment and Drainage: Surface Water Drainage

Policy 53E: Water Environment and Drainage: Water Supply

Policy 56: Noise Pollution

Policy 60B: Transport Standards and Accessibility Requirements: New Development Proposals

Statutory Supplementary Guidance

- Supplementary Guidance - Developer Contributions & Affordable Housing (adopted in 2020)
- Supplementary Guidance - Placemaking (adopted in 2020)

OTHER MATERIAL CONSIDERATIONS

Non-Statutory Guidance

- Planning Guidance - Delivery of Development Sites
- Planning Guidance - Loch Leven SPA, the Dunkeld-Blairgowrie Lochs SAC and the River Tay SAC
- Planning Guidance - Planning & Biodiversity

National Guidance

The Scottish Government expresses its planning policies through, Planning Advice Notes, Creating Places, Designing Streets, National Roads Development Guide and a series of Circulars.

Creating Places 2013

Creating Places is the Scottish Government's policy statement on architecture and place. It sets out the comprehensive value good design can deliver. It notes that successful places can unlock opportunities, build vibrant communities and contribute to a flourishing economy and set out actions that can achieve positive changes in our places.

National Roads Development Guide 2014

This document supports Designing Streets and expands on its principles and is considered to be the technical advice that should be followed in designing and approving of all streets including parking provision.

Local Place Plans

Local Place Plans (LLP) are community-led plans setting out proposals for the development and use of land and set out a community's aspirations for its future development. The application site lies within the Blairgowrie & Rattray Local Place Plan 2025-2035.

The Local Place plan supports a "*Town Centre First approach in line with current national policies, development in the future requires focus on encouraging, promoting and facilitating revitalisation of the town centre. The Town Centre First approach helps towns adapt positively to long-term economic, environmental and societal changes."*

CONSULTATION RESPONSES

Structures and Flooding: *No objection.*

Development Contributions Officer: *No contribution required.*

Commercial Waste Team: *No comments made.*

Development Plan Team: *Objection. Advised proposal is considered contrary to NPF4 Policy 27 (d), as it comprises a sui generis drive-thru format located out with an LDP2-allocated retail location. The site is adjacent to a retail location intended to function as a local centre, where active travel should be encouraged, with supporting food and drink uses rather than sui generis drive-thru developments. Additionally, it could potentially be considered contrary to NPF4 Policy 27 (c), in that this fast-food outlet is being proposed within proximity to the high school, and not within the town centre situated alongside other healthy eating choices. As such it could potentially be considered to 'undermine the character and amenity of the area or the health and wellbeing of communities' under NPF4 Policy 27(c).*

Scottish Water: *No objection.*

Transportation and Development: *Conditions recommended relating to vehicular access, parking and Travel Plan. Further details were requested and provided in relation to the re-routing of the core path, which was subject to a Stopping Up and Diversion Order associated with application 22/00060/AMM. See 'Roads and Access/Public Access' section for further details.*

Environmental Health (Noise Odour): *No objection subject to conditions relating to hours of operation, servicing and deliveries, plant noise, ventilation system, external lighting, hours of construction, noise from operations on site & noise complaint procedures.*

REPRESENTATIONS

51 objections and 14 support comments were received. The main issues raised were:

Objections

- Public health concerns
- Close proximity to schools
- Impact on local businesses
- Inappropriate land use
- Out of character with the area
- Road safety concerns
- Traffic congestion
- Adverse effect on visual amenity
- Light pollution
- Noise pollution
- Increased litter (not a material planning consideration)
- Over intensive development
- Loss of open space
- Over-provision of car parking
- Road safety concerns
- Contrary to development plan policy
- Impact of development on nearby ancient woodland

Support

- Economic development benefits
- Employment provision
- Re-use of under-utilised land
- Increased choice of eatery options

Additional Statements Received:

Screening Opinion	Not EIA Development
Environmental Impact Assessment (EIA): Environmental Report	Not Required/Not applicable
Appropriate Assessment under Habitats Regulations	AA Not Required
Design Statement or Design and Access Statement	Not Required
Report on Impact or Potential Impact e.g. Flood Risk Assessment	Not Required

APPRAISAL

Sections 25 and 37 (2) of the Town and Country Planning (Scotland) Act 1997 require that planning decisions be made in accordance with the development plan unless material considerations indicate otherwise. The Development Plan comprises NPF4 and the Perth and Kinross Local Development Plan 2019. The relevant policy considerations are outlined in the policy section above and are considered in more detail below. In terms of other material considerations, involving considerations of the Council's other approved policies and supplementary guidance, these are discussed below only where relevant.

The determining issues in this case are whether; the proposal complies with development plan policy; or if there are any other material considerations which justify a departure from policy.

Principle

NPF4 Policy 27 (b) (City, Town, Local and Commercial Centres) states development proposals will be consistent with the town centre first approach. Proposals for uses which will generate significant footfall, including commercial, leisure, offices, community, sport and cultural facilities, public buildings such as libraries, education and healthcare facilities, and public spaces:

i. will be supported in existing city, town and local centres
ii. will not be supported outwith those centres unless a town centre first assessment demonstrates that:

• all centre and edge of centre options have been sequentially assessed and discounted as unsuitable or unavailable;

• the scale of development cannot reasonably be altered or reduced in scale to allow it to be accommodated in a centre; and

• the impacts on existing centres have been thoroughly assessed and there will be no significant adverse effect on the vitality and viability of the centres.

c) Development proposals for non-retail uses will not be supported if further provision of these services will undermine the character and amenity of the area or the health and wellbeing of communities, particularly in disadvantaged areas. These uses include:

i. Hot food takeaways, including permanently sited vans;

ii. Betting offices; and

iii. High interest money lending premises.

d) Drive-through developments will only be supported where they are specifically supported in the LDP.

In considering NPF4 Policy 27 (b), it is required by applicants to demonstrate a sequential approach, directing higher-footfall uses like hot food takeaways to town centres or edge-of-centre locations if possible. In this instance, supporting information submitted states that no sequentially preferable sites are available within town centre or edge-of-centre locations. This includes a former supermarket on Commercial Street, which was discounted as being too large (0.89ha) and located within Blairgowrie Conservation Area. Whilst it is considered that its position on the edge of the conservation area and the site area would not necessarily preclude a proposal of this nature, further clarification from the agent confirmed that the landlord would not consider a McDonalds on this site as it would not be as favourable versus retaining the existing building. It is also noted that within the Blairgowrie & Rattray Local Place Plan 2025-2035 Plan, the community aspiration for this former supermarket building is for *'a local indoor market/crafters space, indoor entertainment space, bowling or sports centre'*. With regard to edge-of-centre opportunities, the former Travis Perkins site on Welton Road, is considered to be significantly larger than the applicant's requirement. It is also advised that this property now appears to have been sold or temporarily withdrawn from the market. The category B-listed church and former 'Littles Restaurant' on Riverside Road was also ruled out due to the constraints and complexities associated with converting a listed building. As such, the submitted town centre first assessment is considered to have met the requirements of NPF4 Policy 27(b).

In terms of NPF4 Policy 27 (c), it states that development proposal for non-retail uses, including hot-food takeaways, will not be supported if further provision of these services will undermine the character and amenity of the area or the health and wellbeing of communities. Many of the objections focus on public health impacts and the site's close proximity to schools. The Development Plan team also advised that due to the site's close proximity to Blairgowrie High School and not being situated within the town centre

alongside other healthy eating options, the proposal could potentially be considered contrary to NPF4 Policy 27 (c). However, it is considered that there is not sufficient policy weight within NPF4 Policy 27 (c), especially when compared with other national planning policy frameworks within the UK, to justify refusal on public health grounds.

Furthermore, within LDP2, MU5 is allocated for housing, employment, and education; with the proposed sui generis drive-thru use not identified in the LDP or established by permission 17/00939/IPM. That permission identified this site for a hotel, and within the wider approval, only a class 3 food and drink allocation was supported: not a sui generis use with a strong focus on car borne visits. Permission 19/00163/AMM also did not establish a drive-thru/sui generis use, leaving this area as a matter to be considered via a further planning application, as is the case in this instance.

Importantly NPF4 Policy 27 (d) states drive-through developments will only be supported where they are specifically supported in the LDP. When considering the Chief Planner's letter on transitional arrangements (dated 08 February 2023), it is appreciated that there is no moratorium on drive-thrus, and LDP allocated retail locations can be considered appropriate depending on the nature of the proposal, and the potential impacts, alongside the specific circumstances of each individual case. Consideration is therefore required to be given to the wider policies within NPF4, including those aimed at reducing emissions that contribute to climate change, as well as policies that seek to enhance town centres and support local living.

Taking account of the permissions granted and development to date, this retail site is not an identified LDP2 retail 'centre' but may ultimately be identified in LDP3 as both a local and a commercial centre. This reflecting the scale of retail provision (Home Bargains and Lidl). When considering the extant planning permissions and evolving function as a local and commercial centre, a drive-thru format would likely significantly encourage customers who live within walking distance to drive rather than walk/cycle. In addition, it is likely that car journeys from a larger catchment would also result, potentially drawing trade away from existing/sustainable locations. This local centre role is seen to be more suited to class 3 provision within MU5 as per the 17/00939/IPM permission, with a proportionate level of parking. Moreover, while it is acknowledged that that the site is adjacent to an existing drive-thru coffee shop, which approved in 2021, a further drive-thru facility would seek to promote car-based travel at time when NPF4 explicitly aims to enhance local living, 20 minute neighbourhoods and reduce reliance on the private car.

In summary, while the proposal is considered to comply with the requirements of NPF4 Policy (b), as well as there being insufficient policy basis to be contrary to NPF4 Policy 27(c), the proposal is considered contrary to NPF4 Policy 27(d); as it involves a class 3 and sui generis drive-thru format located outwith an LDP2-allocated retail location. The site lies adjacent to retail facilities and a planning permission (19/00163/AMM) which would partially function as a local centre, where active travel should be encouraged, reinforcing the case for supporting food and drink uses rather than drive-thru facilities. Additionally, the site was previously earmarked for a hotel, and therefore the proposal

would dilute the overall qualities of the mixed-use development originally approved in 2018.

Design and Layout

The proposed development, in theory, would be appropriate in terms of its effect on visual amenity and would be of a scale which would reflect the design standards and appearance of the adjacent retail park. However, as discussed above, a drive-thru format would likely significantly encourage customers who live within walking distance to drive rather than walk/cycle. Moreover, given the reasons outlined above, the inclusion of drive-thru facilities would be unacceptable outwith an unallocated retail location.

Residential Amenity

The proposal is within close proximity to a retail park area; there are no concerns associated with residential amenity. Environmental Health (Noise Odour) were consulted and had no objection subject to conditions relating to hours of operation, servicing and deliveries, plant noise, ventilation system requirements, external lighting, hours of construction, noise from operations on site & noise complaint procedures.

The proposal complies with NPF4 Policy 14 and LDP2 Policies 1A, 1B and 56 in terms of residential amenity.

Roads and Access/Public Access

The vehicle access to the public road network for the site will be via the existing retail park vehicle access north of the Starbucks. The proposals set out to remove the existing kerb and footway on the north side of the access as the width of the access is currently 4 metres and widen the unadopted road to 6 metres. Street lighting infrastructure is present on the north side of the access; this would need to be relocated to facilitate the access widening.

An existing junction bellmouth has been constructed to the site but this will be removed as part of the proposals with a new access constructed in the southwest corner. No other businesses can exit the retail park from this access; retail park users must exit via the main retail park access at the ghost island junction to the south. This new access will allow for approximately 50-metre of vehicle stacking capacity from the yield line on Perth Road. While the proposed 50-metre stacking capacity may operate adequately in traffic engineering terms, as noted earlier in the report, it would nonetheless embed a more car-centric pattern of travel and may introduce the potential for internal congestion during peak periods.

Conditions were recommended by Transportation & Development relating to vehicular access, parking provision and the Travel Plan. Further details were requested by Transportation & Development with respect to re-routing the existing core path and right of way (BLAI/29) running through the site. Clarification was provided by the agent that the core path was subject to a Stopping Up and Diversion Order associated with 22/00060/AMM. However, it was advised by the Council's legal team that while a confirmed path order exists, it has not yet taken effect, with its implementation contingent on the diverted path being fully constructed to the required standard (3m wide, paved, lit, and intended for adoption) outwith the redline and ownership boundary of this application. There is currently no indication that the adjacent affordable housing development (application reference: 22/00060/AMM) is progressing on-site, and therefore no guarantee that the diversion will be delivered. Approving the application in its current form would therefore result in the stopping up of a core path and right of way without providing an alternative route, adversely impacting the integrity of an existing core path and right of way (BLAI/29) and is considered contrary to LDP2 Policy 15.

Drainage and Flooding

The proposal will connect to the public drainage network. Structures and Flooding were consulted and raised no objection. The developer has designed the drainage system to accommodate the 200-year storm event plus 39% climate change allowance and has submitted pre- and post-exceedance drawings. Due to existing surface-water issues at the current discharge point for the wider site's SuDS infrastructure, Structures and Flooding have advised that the development should consider providing betterment where possible by limiting discharge to the 2-year runoff rate for all return periods up to 200-year event plus climate change. The core path located adjacent to the existing SuDS discharge point has been found to be susceptible to surface water issues and therefore all developments proposed as part of the wider site will be asked to provide betterment where achievable.

Conservation Considerations

An area of ancient woodland inventory is located approximately 65 metres west of the application site. Furthermore, there are several sites of archaeological interest within 1km of the site, including the Fir Hillock Scheduled Monument (SM9612). However, the proposal is unlikely to detrimentally impact on the nearby ancient woodland inventory or sites of archaeological interest.

Natural Heritage and Biodiversity

NPF4 Policy 3 (Biodiversity) states proposals for local development will include appropriate measures to conserve, restore and enhance biodiversity.

The site currently consists of a grassland habitat assessed as being of low ecological value. As a result, the proposed site clearance is not expected to result in any

significant ecological impact. Furthermore, the report has identified that the site is unlikely to support protected or notable species. Notwithstanding this, mitigatory measures have been proposed which include implementing a wildlife-friendly design to minimise negative impacts on nocturnal wildlife and 45-degree angled kerbs to prevent amphibians from becoming trapped in drains. As part of the proposed landscaping scheme: tree planting, shrubs & hedgerow planting, and wildflower grassland are proposed to promote ecological activity and enhance biodiversity.

Developer Contributions

The Developer Contributions Guidance does not identify any contributions are required.

Economic Impact

The economic impact of the proposal is likely to result in the creation of employment, GVA generation during construction and uplift in business rates revenue during operation.

VARIATION OF APPLICATION UNDER SECTION 32A

This application was varied prior to determination, in accordance with the terms of section 32A of the Town and Country Planning (Scotland) Act 1997, as amended. This related to changes to the proposed site plan to demonstrate an acoustic fence on the northern, western and eastern boundaries of the site.

PLANNING OBLIGATIONS AND LEGAL AGREEMENTS

None required.

DIRECTION BY SCOTTISH MINISTERS

None applicable to this proposal.

CONCLUSION AND REASONS FOR DECISION

To conclude, the application must be determined in accordance with the Development Plan unless material considerations indicate otherwise. In this respect, the proposal is considered to be contrary to the Development Plan. Account has been taken of the relevant material considerations and none has been found that would justify overriding the Development Plan.

Accordingly, the proposal is refused on the grounds identified below.

Conditions and Reasons

1. The proposal is contrary to NPF4 Policy 27 (d) as it involves a class 3 and sui generis drive-thru format located outwith a LDP2-allocated retail location. The site lies adjacent to retail facilities and a planning permission (19/00163/AMM) which would partially function as a local centre, where active travel should be encouraged, reinforcing the case for supporting food and drink uses rather than drive-thru facilities. Additionally, the site was previously earmarked for a hotel, and therefore the proposal would dilute the overall qualities of the mixed-use development originally approved in 2018 (17/00939/IPM).

2. The proposal is considered contrary to LDP2 Policy 15 (Public Access) as it would have an adverse impact on the integrity of an existing core path and right of way (BLAI/29). Approving the application in its current form would result in the stopping up of a core path and right of way without providing an alternative route.

Justification

The proposal is not in accordance with the Development Plan and there are no material reasons which justify departing from the Development Plan.

Informatives

None

Procedural Notes

Not Applicable.

PLANS AND DOCUMENTS RELATING TO THIS DECISION

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Appendix 3 Appeal submission document table

Appeal document reference	Planning application reference as submitted
Document 1	Planning Statement
Document 2	Economic Statement
Document 3	Transport Assessment
Document 4	Travel Plan
Document 5	Ecological Appraisal Survey
Document 6	Landscape Scheme
Document 7	Landscape Management Plan
Document 8	Odour Report
Document 9	Air Quality Assessment
Document 10.1	Noise Impact Assessment
Document 10.2	Additional Acoustic Calculations
Document 11	Flood Risk Screening and Drainage Impact Assessment
Document 12	Drainage Maintenance Plan
Document 13	Construction Environmental Management Plan
Document 14	Low and Zero Carbon Report
Document 15	Lighting Plot
Document 16	Lighting Impact Assessment
Document 17	Location Plan (ref. 13638_AEW_2473_1001A)
Document 18	Existing Site Plan (ref. 13638_AEW_2473_1003A)
Document 19	Proposed Site Plan (ref. 13638_AEW_2473_1004F)
Document 20	Proposed Floor and Roof Plans (ref. 13638_AEW_2473_1006)
Document 21	Proposed Elevations and Sections (ref. 13638_AEW_2473_1005B)
Document 22	Proposed Block Plan (ref. 13638_AEW_2473_1002A)
Document 23	External Consultee from Scottish Water
Document 24	Internal Consultation from Flooding
Document 25	Internal Consultee Response (Development Plans)
Document 26	Agent Response to Development Plan Team
Document 27	Internal Consultee Response (Transport Planning)
Document 28	Agent Response to Transport Planning Team
Document 29	Email correspondence with Planning Officer (17 February 2026)
Document 30	Agent response to Planning Officer (24 February 2026)
Document 31	Planning application form
Document 32	Statement of Appeal
Document 33	Decision Notice for planning permission ref. 17/00939/IPM
Document 34	Approved Masterplan for planning permission ref. 17/00939/IPM
Document 35	Notice of Review Form – Perth and Kinross Council

Appendix 4 BLAI/29 Stopping Up and Diversion Order

TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997

PERTH AND KINROSS COUNCIL CORE PATH BLAI/29 AND RIGHT OF WAY 17/29 STOPPING UP AND DIVERSION ORDER 2024

Perth and Kinross Council, in exercise of the powers conferred on them by Section 208 of the Town and Country Planning (Scotland) Act 1997 (hereinafter referred to as 'the Act') and of all other powers enabling them in that behalf, being satisfied that it is necessary to stop up and divert part of the footpath specified in the Schedule to this Order to enable development to be carried out in accordance with planning permission granted under Part III of the Act, hereby make the following Order:-

1 This Order may be cited as the "Perth and Kinross Council Core Path BLAI/29 and Right of Way 17/29 Stopping Up and Diversion Order 2024" and shall come into operation when the developers have completed the stopping up and diversion works and made the diverted footpath operational, to the satisfaction of Perth and Kinross Council as the planning authority.

2 The stopping up of the footpath BLAI/29 and 17/29 described in Part I of the Schedule to this Order and indicated on the plan entitled "Perth and Kinross Council Core Path BLAI/29 and Right of Way 17/29 Stopping Up and Diversion Order 2024" (hereinafter referred to as "the said Plan") and diversion of the said footpath to a route described in Part II of the said Schedule and indicated on the said Plan, which said Schedule and Plan are annexed and executed as relative to this Order, are hereby authorised.

3 West Park Partnership LLP, registered number SO300164 and having their registered office at Waterside Studios, 64 Coltbridge Avenue, Edinburgh, EH12 6AH, as the developer, has agreed to meet the costs of making and advertising this Order together with building the new path and making arrangements for its future maintenance.

4 Where immediately before the date on which this Order comes into operation in terms of Article 1 above, there are any statutory undertakers having apparatus of theirs which is under, in, over, along or across the said stopped up and diverted footpath then any such statutory undertakers shall, without prejudice to the provisions of Section 224 of the Town and Country Planning (Scotland) Act 1997, have the same rights in respect of that apparatus as they had immediately before that date.

Given under the common seal of Perth and Kinross Council at Perth on the FIFTH day of FEBRUARY TWO THOUSAND AND TWENTY-FOUR.

.....

Legal Manager

Legal & Governance Services

This is the Schedule referred to in the foregoing Perth and Kinross Council Core Path BLAI/29 and Right of Way 17/29 Stopping Up and Diversion Order 2024

TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997

PERTH AND KINROSS COUNCIL CORE PATH BLAI/29 AND RIGHT OF WAY 17/29 STOPPING UP AND DIVERSION ORDER 2024

SCHEDULE

Part I (Description of Stopped Up Section of Footpath)

That section of the footpath forming part of the existing Core Path BLAI/29 and existing Right of Way 17/29 as shown in red on the said plan.

Part II (Description of Diverted Route of Footpath)

That route shown in light blue on the said plan.

STATEMENT OF REASONS

for the making of

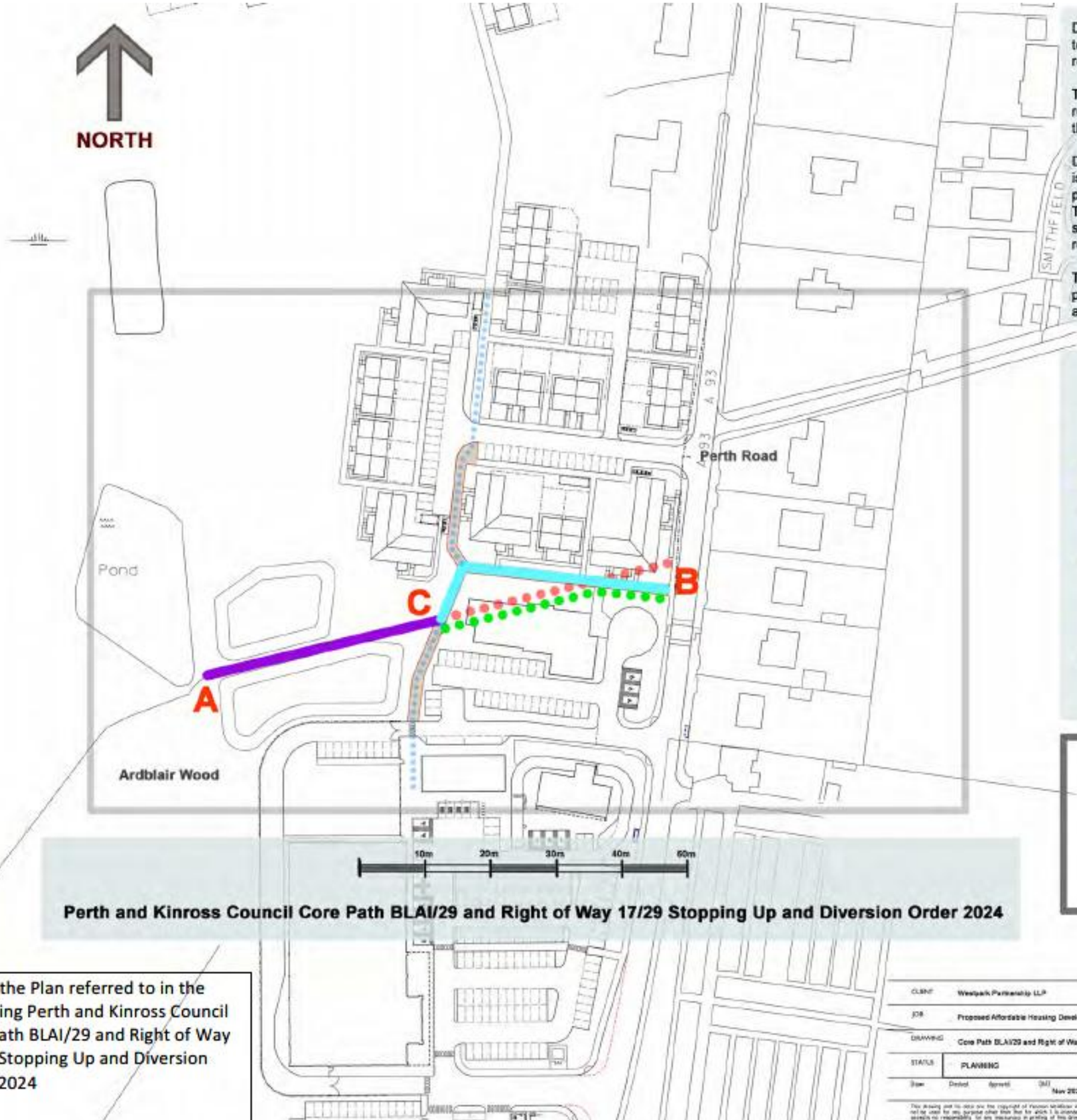
Perth and Kinross Council Core Path BLAI/29 and Right of Way 17/29 Stopping Up and Diversion Order 2024

Permission (Approval of Matters Specified in Conditions) 22/00060/AMM was issued on 22 March 2023 for a development by West Park Partnership LLP and Others for the erection of 71 dwellinghouses and 32 flats at land 200 metres West of Blairgowrie and Rattray Cottage Hospital, Perth Road, Blairgowrie. The houses and flats will be affordable housing. Permission was amended by what is known as non-material variation, granted on 13 October 2023. This permission is part of the Planning in Principle permission, 17/00939/IPM, issued 21 December 2018 for a mixed use development including residential development, employment land, education/recreation/community facilities, and infrastructure including roads and footpaths.

The existing footpath is both a core path and a right of way. The section of existing footpath to be stopped up is shown in red on the attached plan. The proposed new route is shown in light blue on the attached plan.

The construction of flats and garden ground will obstruct a section of the footpath where it meets Perth Road, Blairgowrie. By also diverting the footpath northwards as it moves away from Perth Road, the footpath will be integrated into a wider pedestrian and cycling network and will allow for the future construction of what is intended to be a hotel to the south, as part of the wider West Park, Blairgowrie development. The stopped up section is approximately 36m in length. The proposed new, diverted route is approximately 39m in length, an addition of 3m. During construction, a temporary footpath will be in place before moving to the permanent, diverted route. The diverted route is to be 3m wide, paved and lit. It is intended that it is adopted by Perth and Kinross Council.

Perth and Kinross Council is satisfied that a stopping up and diversion order is necessary in order to enable the above development for which planning consent has been granted to be carried out.



Drawing illustrating the alterations and improvements to the line of the existing Core Path and Right of Way reference BLAI/29 and RoW 17/29.

This plan reflects the approved Planning Consent reference 22/00060/AMM, as amended, which include the wider multi-user footpath and cycleway integration.

Depicted to the north of the alterations to the footpath is the affordable housing to be constructed under planning consent reference, 22/00060/AMM.
The large unit and car parking depicted immediately to the south of the path alterations is intended for the future. The retail units further to the south have mostly been constructed.

The new path is to be adopted by the Council, and will be paved and lit. It will integrate into the wider pedestrian and cycling network.

KEY

- existing Core Path & RoW
- extent of existing Core Path and RoW to be stopped-up
- proposed line of temporary Core Path
- proposed line of new Core Path & RoW as per Planning Approval
- integration of Core Path with wider multi-user path network

Diversion Details

Length of Path Stopped-up - 36m

Length of Diverted Path - 39m

Increase in Path Distance - 3m

Perth and Kinross Council Core Path BLAI/29 and Right of Way 17/29 Stopping Up and Diversion Order 2024

This is the Plan referred to in the foregoing Perth and Kinross Council Core Path BLAI/29 and Right of Way 17/29 Stopping Up and Diversion Order 2024

CLIENT	Westpark Partnership LLP
JOB	Proposed Affordable Housing Development, Perth Road, Blairgowrie
DRAWING	Core Path BLAI/29 and Right of Way 17/29 Stopping Up and Diversion Order Plan
STATUS	PLANNING
Date / Drawn / Approved / DWG	Nov 2023 / 6457 / a208/01 / REV
SCALE	ref drawing
SHEET SIZE	A3

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35 Kinnoull Street
PERTH
PH1 5GD

Date 21 December 2018

Town and Country Planning (Scotland) Acts.

Application Number **17/00939/IPM**

I am directed by the Planning Authority under the Town and Country Planning (Scotland) Acts currently in force, to grant your application registered on 5th June 2017 for planning permission in principle for Mixed use development comprising residential development, employment land, education/recreation/community facilities, infrastructure including roads, footpaths, landscaping, drainage, open space and associated works at Land 200 Metres West Of Blairgowrie And Rattray Cottage Hospital Perth Road Blairgowrie subject to the undernoted Direction and Conditions.

Interim Development Quality Manager

Direction referred to above

Perth and Kinross Council direct that sub-sections (2)(a)(i) and (3) of Section 59 of the Town and Country Planning (Scotland) Act 1997 apply with respect to the in Principle Permission (17/00939/IPM) with the substitution of the period of 3 years referred to in each of those subsections, with the period of 16 years.

Conditions referred to above

1 Application for the approval required by a condition imposed on this Planning Permission in Principle shall conform with the requirements of Regulation 12 of the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013 and of Section 59 (2) and (3) of the Town and Country Planning (Scotland) Act 1997 as amended by Section 21 of the Planning etc. (Scotland) Act 2006 and, in particular, must be made before whichever is the latest of the following:

(i) the expiration of 6 months from the date on which an earlier application for the requisite approval was refused, or

(ii) the expiration of 6 months from the date on which an appeal against such refusal was dismissed.

Reason: In accordance with the terms of Section 59 of the Town and Country Planning (Scotland) Act 1997 as amended by Section 21 of the Planning etc. (Scotland) Act 2006.

2 The submitted masterplan, site layout plan and indicated scale of development, of up to 400 dwellings and 4 hectares of business land, are purely indicative and are hereby not approved.

Reason: The application is for planning permission in principle only at this stage and an appropriate level of development, layout and design shall be determined through applications for the Approval of Matters Specified in Conditions.

3 No works in connection with the development hereby approved shall take place until full details of the siting, design, external appearance and landscaping of the development and the means of access serving the development (hereinafter referred to as the 'Matters Specified in Condition') have been submitted to and approved in writing by the Planning Authority. The specified matters include:

(i) a detailed phasing plan;

(ii) a detailed levels survey (existing and proposed) and cross sections showing proposed finished ground and floor levels of all buildings forming part of the development phase, relative to existing ground levels and a fixed datum point;

(iii) the siting, design, height and external materials of all buildings or structures;

(iv) the details of all roads, footpaths, cycleways, core path connections throughout the development;

(v) details of any screen walls/fencing to be provided (including any acoustic barriers);

(vi) measures to maximise environmental sustainability through design, orientation and planting or any other means;

(vi) details of all landscaping, structure planting and screening associated with the development of each site;

(vii) the lighting of all streets and footpaths;

(viii) the layout of play areas and the equipment to be installed;

(ix) full details of the proposed means of disposal of foul and surface water from the development;

(x) details of car charging points to be provided within the development; and

(xi) A minimum 40% of dwellings shall incorporate swift bricks and bat roost bricks at eaves height.

(xii) no development above 90 metres AOD.

Reason: This is a Planning Permission in Principle under Section 59 of the Town and Country Planning (Scotland) Act 1997 as amended by Section 21 of the Planning etc. (Scotland) Act 2006.

4 No work shall start on the relevant parts of the site unless the trees to be retained as identified in the submitted surveys have been protected by suitable fencing in accordance with BS5837 2012 (Trees in Relation to Construction). The details of the protective fencing and its location shall be first submitted to and agreed in writing by the Planning Authority.

Reason: to ensure adequate protection for the trees on the site during the construction, in the interests of the visual amenity of the area.

5 All existing rights of way, core paths within or adjacent to the completed development shall at all times be protected and remain operational during the construction phases.

Reason: In the interest of sustainable transportation.

6 Prior to the commencement of development of each phase a Construction Environmental Management Plan (CEMP) must be submitted for the approval of the Planning Authority. The measures outlined in the agreed CEMP shall be adhered to at all times during the construction period.

Reason: In the interests of protecting environmental quality and of biodiversity.

7 The times of construction should be limited to Monday to Friday 07.00 to 19.00, Saturday 08.00 to 13.00 with no noise generating work on a Sunday.

Reason: In the interests of residential amenity.

8 Development shall not commence until the developer has secured the implementation of a programme of archaeological work in accordance with a written scheme of archaeological investigation which has been submitted by the applicant, and agreed in writing by the Council as Planning Authority, in consultation with Perth and Kinross Heritage Trust. Thereafter, the developer shall ensure that the programme of archaeological works is fully implemented including that all excavation, preservation, recording, recovery, analysis, publication and archiving of archaeological resources within the development site is undertaken. In addition, the developer shall afford access at all reasonable times to Perth and Kinross Heritage Trust or a nominated representative and shall allow them to observe work in progress

Reason: In the interest of protecting archaeological interest within the site.

9 Dust control measures as outlined in Appendix 3 of the Air Quality Impact Assessment dated 19 December 2017 shall but put in place throughout the construction of this development.

Reason: In the interests of residential amenity

10 Development shall not commence on site until a detailed sustainable urban drainage system (SUDS) has been submitted for the further written agreement of the Council as Planning Authority, in consultation with SEPA where necessary. The scheme shall be developed in accordance with the technical guidance contained in The SUDS Manual (C753) and the Council's Flood Risk and Flood Risk Assessments Developer Guidance, and shall incorporate source control. All works shall be carried out in accordance with the agreed scheme and be operational prior to the bringing into use of the development

Reason: To prevent flood risk; to ensure that the efficiency of the existing drainage network is not affected.

11 Concurrent with the initiation of the development hereby approved and for the duration of construction, a temporary surface water treatment facility shall be implemented on site and maintained for the duration of the approved development works. The temporary surface water treatment facility shall remain in place until the permanent surface water drainage scheme is implemented unless otherwise agreed in writing by the Council as Planning Authority.

Reason: To prevent flood risk; to ensure that the efficiency of the existing drainage network is not affected

12 As part of any application for the Approval of Matters Specified in Condition, all schemes of hard and soft landscaping works shall be submitted to the Local Planning Authority.

Details of the schemes shall include:

(i) existing and proposed finished ground levels relative to a fixed datum point;

(ii) existing landscape features and vegetation to be retained;

(iii) existing and proposed services including cables, pipelines and substations;

(iv) the location of new trees, shrubs, hedges, grassed areas and water features;

(iv) a schedule of plants to comprise species, plant sizes and proposed numbers and density;

(vi) the location, design and materials of all hard landscaping works including, footpaths, walls, fences, gates, any other means of enclosure, street furniture and play equipment;

(vii) an indication of existing trees, shrubs and hedges to be removed;

(viii) a programme for the completion and subsequent maintenance of the proposed landscaping;

(ix) a woodland management plan;

(x) separation distances between residential buildings and edge trees;

(xi) separation distances between residential buildings and existing woodland.

All soft and hard landscaping proposals shall be carried out in accordance with the approved scheme and shall be completed during the planting season immediately following the commencement of the development on that part of the site, or such other date as may be agreed in writing with the Planning Authority.

Reason: To ensure the implementation of satisfactory schemes of landscaping which will help to integrate the proposed development into the local landscape in the interests of the visual amenity of the area.

13 Any planting which, within a period of 5 years from the completion of the approved phase of development, in the opinion of the Planning Authority is dying, has been severely damaged or is becoming seriously diseased, shall be replaced by plants of similar size and species to those originally required to be planted.

Reason: To ensure the implementation of satisfactory schemes of landscaping which will help to integrate the proposed development into the local landscape in the interests of the visual amenity of the area.

14 Prior to the occupation of the first dwelling all matters regarding access, car parking, public transport facilities, walking and cycling facilities, the road layout, design and specification (including the disposal of surface water) shall be in accordance with the standards required by the Council as Roads Authority (as detailed in the National Roads Development Guide) and to the satisfaction of the Planning Authority.

Reason: In the interests of road safety; to ensure that a satisfactory standard of road and footpath is provided timeously in the interest of the amenity of the residents.

15 No part of the development shall be occupied until a Travel Plan (TP), aimed to encourage more sustainable means of travel, has been submitted and approved in writing by the Council. The TP will have particular regard to provision for walking, cycling and public transport access to and within the site and will identify the measures to be provided, the system of management, monitoring, review, reporting and the duration of the plan.

Reason: To be consistent with the requirements of Scottish Planning Policy (SPP) and PAN 75 Planning for Transport.

16 Prior to the commencement of works on the development, the applicant shall submit for the written approval of the Planning Authority a Construction Traffic Management Scheme (TMS) which shall include the following:

a) restriction of construction traffic to approved routes and the measures to be put in

place to avoid other routes being used;

b) timing of construction traffic to minimise impact on local communities particularly at school start and finishing times, on days when refuse collection is undertaken, on Sundays and during local events;

c) arrangements for liaison with the Roads Authority regarding winter maintenance;

d) emergency arrangements detailing communication and contingency arrangements in the event of vehicle breakdown;

e) arrangements for the cleaning of wheels and chassis of vehicles to prevent material from construction sites associated with the development being deposited on the road;

f) arrangements for cleaning of roads affected by material deposited from construction sites associated with the development;

g) arrangements for signage at site accesses and crossovers and on roads to be used by construction traffic in order to provide safe access for pedestrians, cyclists and equestrians;

h) details of information signs to inform other road users of construction traffic;

i) arrangements to ensure that access for emergency service vehicles are not impeded;

j) monitoring, reporting and implementation arrangements; and

k) arrangements for dealing with non-compliance.

The TMS as approved shall be strictly adhered to during the entire site construction programme all to the satisfaction of the Council as Planning Authority.

Reason: In the interests of road safety.

17 As part of the first application for the Approval of Matters Specified in Condition an updated District Heating Feasibility Study for the whole site shall be submitted in writing for the approval of the Planning Authority to assess the technical feasibility and financial viability of heat network/district heating for this site, identifying all available sources of heat (either within the site or offsite) and other factors such as where land will be safeguarded for future district heating infrastructure.

The accompanying Design and Access Statement or other document as agreed by the Council should show/demonstrate how the findings of the feasibility study has been incorporated into the finalised design and layout of the proposal.

Reason: To identify future district heating opportunities for the development.

18 A detailed Protected Species Survey, including breeding birds and ecological surveys, shall be submitted as part of any application for approval of Matters Specified by Condition submitted for approval under Condition 3 of this permission. The surveys shall include appropriate mitigation to protect identified species.

Reason: In the interests of employing best practice ecology and to ensure there is no adverse impact on any protected species as identified under the Wildlife and Countryside Act (1981).

19 The conclusions and recommended action points within the supporting Environmental Impact Assessment (EIA) and hereby approved shall be fully adhered to, respected and undertaken as part of the construction phase of development.

Reason: In the interests of employing best practice ecology and to ensure there is no adverse impact on any protected species.

20 No site clearance or removal of vegetation, including trees and shrubs will take place between 1st March and 31st August inclusive unless a competent ecologist has undertaken a careful and detailed survey of vegetation and trees for active birds' nests or bat roosts immediately before the vegetation or trees is to be cleared and provided written confirmation that no birds or bats will be harmed and/or that there are appropriate measures in place to protect nesting birds and bats on site. Any such written confirmation must be submitted to the planning authority prior to commencement of works.

Reason: In the interests of employing best practice ecology and to ensure there is no adverse impact on any protected species as identified under the Wildlife and Countryside Act (1981).

21 All road gullies within 500m of a waterbody or SuDS pond shall have wildlife kerbs installed adjacent to the gully.

Reason: In the interests of employing best practice ecology and to ensure there is no adverse impact on any protected species as identified under the Wildlife and Countryside Act (1981).

22 A scheme detailing measures to protect animals from being trapped in open excavations and/or pipe and culverts shall submitted for the written approval of the Planning Authority. The measures may include creation of sloping escape ramps for animals, which may be achieved by edge profiling of trenches/excavations or by using planks placed into them at the end of each working day and open pipework greater than 150 mm outside diameter being blanked off at the end of each working day. Thereafter, the approved scheme shall be implemented for the duration of the construction works of the development hereby approved.

Reason: In order to prevent animals from being trapped within any open excavations.

23 Where it is intended to create semi-natural habitats, all species used in the planting proposals shall be locally native species of local provenance unless otherwise agreed in writing with the local planning authority.

Reason: In the interests of protecting environmental quality and of biodiversity.

24 The development shall be in accordance with the requirements of Development Plan policy and Perth & Kinross Council's Supplementary Guidance in relation to affordable housing.

Reason: To ensure that the development approved makes a contribution towards provision of affordable housing, in accordance with Development Plan policy and Supplementary Guidance.

25 The development shall be in accordance with the requirements of Development Plan policy and Perth & Kinross Council's Supplementary Guidance in relation to primary education infrastructure.

Reason: To ensure that the development approved makes a contribution towards increasing primary school provision, in accordance with Development Plan policy and Supplementary Guidance.

26 As part of any application for Approval of Matters Specified in Conditions, as set out in Condition 3, a noise assessment shall be submitted to demonstrate acceptable internal noise levels of 35 dB within all dwellings taking into account any acoustic mitigation proposed.

Reason: In the interests of residential amenity.

27 The net sales floor area of any Food Retail Unit shall not exceed 1,900 sqm and shall be a minimum of 70% for convenience goods and a maximum of 30% for the sale of comparison goods; the net sales floor area of any Non-Food Retail Unit shall not exceed 1,500 sqm and shall be a minimum of 60% for comparison goods and a maximum of 40% for the sale of convenience goods.

Reason: To control the potential impact on the vitality and viability of Crieff town centre

28 All deliveries to any retail/commercial unit must be within the hours of 0700 and 2300 Monday to Saturday. Sunday deliveries must be within the hours of 0900 and 1700 hours.

Reason: To safeguard the amenity of neighbouring residential properties.

29 All fixed plant and equipment at the retail/business site shall be so enclosed, attenuated and/or maintained such that any noise therefrom shall not exceed a noise rating level of 35dB LAeq, 15 mins during the night time period when measured 1 metre from the window of the closest noise sensitive receptors and should not exceed a rating level of 40dB LAeq, 1 hr when measured at the closest noise sensitive receptor during the daytime period.

Reason: To safeguard the amenity of neighbouring residential properties.

Justification

The proposal is in accordance with the Development Plan and there are no material reasons which justify departing from the Development Plan.

Informatives

1 The applicant is advised that to enable some of the negative suspensive conditions to be fulfilled works which are operational development may have to be undertaken outwith the application site. These works themselves may require the submission of a planning application.

2 The applicant is advised that in terms of Section 56 of the Roads (Scotland) Act 1984 he must obtain from the Council as Roads Authority consent to open an existing road or footway prior to the commencement of works. Advice on the disposal of surface water must be sought at the initial stages of design from Scottish Water and the Scottish Environment Protection Agency.

3 The applicant is advised that in terms of Section 21 of the Roads (Scotland) Act 1984 they must obtain from the Council as Roads Authority consent to construct a new road prior to the commencement of roadworks. Advice on the disposal of surface water must be sought at the initial stages of design from Scottish Water and the Scottish Environment Protection Agency.

4 The applicants are advised that they must apply to the Roads Authority for construction consent to form a new street. Please contact The Construction and Maintenance Manager, The Environment Service, Perth and Kinross Council, Pullar House, Perth.

5 The applicant is advised that the granting of planning consent does not guarantee a connection to Scottish Water's assets. The applicant must make a separate application to Scottish Water Planning & Development Services team for permission to connect to the public wastewater system and/or water network and all their requirements must be fully adhered to.

6 The applicant is advised that the works may need a license under the Water (Controlled Activities) Regulations 2005 (CAR). The applicant should contact SEPA's Perth Environmental Protection and Improvement Team (Tel: 01738 627989) in regard to this. The applicant should ensure that all works on site comply with the best practice guidelines laid out in SEPA's published Pollution Prevention Guidance, found at www.sepa.org.uk

7 The Council's Community Waste Adviser in the Environment Service should be contacted to clarify the bin storage and recycling requirements for the development.

8 The applicant is reminded that, under the Wildlife and Countryside Act 1981, as amended, it is an offence to remove, damage or destroy the nest of any wild birds while that nest is in use or being built. Planning consent for a development does not provide a defence against prosecution under this act.

9 The applicant is reminded that, should any protected species be present a licence may be required from Scottish Natural Heritage to disturb a protected species.

Failure to obtain a licence may constitute a criminal act under the Habitats Regulations and penalties are severe for non-compliance.

10 The Council shall be immediately notified in writing if any ground contamination is found during construction of the development, and thereafter a scheme to deal with the contamination shall be submitted to, and agreed in writing by, the Council as Planning Authority.

11 The developer is advised to contact Mr David Strachan, Archaeologist to discuss terms of reference for work required Tel 01738 477080.

12 For guidance on cycle paths please see Sustrans Design Manual Handbook for cycle-friendly design (drawings on P21-22).

13 Please consult the Street Naming and Numbering Officer, The Environment Service, Perth and Kinross Council, Pullar House, 35 Kinnoull Street, Perth PH1 5GD.

14 Any structures & all walls/embankments that act singly or together to support a carriageway or footpath & retain over 1.5m fill will require Technical Approval.

15 The applicant is recommended to discuss with the Council's Public Transport Unit the supply of bus services and public transport infrastructure to ensure an adequate public transport provision for the site.

16 There is a Section 75 legal obligation associated with this planning permission. The terms of the obligation can be viewed via PKC Public Access or at the Registers of Scotland (www.ros.gov.uk).

E ENVIRONMENTAL IMPACT ASSESSMENT (EIA) DECISION

The proposed development was determined by Perth & Kinross Council under the provisions of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 to be EIA development. In accordance with Regulation 29, notice of this decision is hereby given in respect of the following:

a) Mixed use development comprising residential development, business, education/recreation/community facilities, infrastructure including roads, footpaths, landscaping, drainage, open space and associated works at land west of Blairgowrie and Rattray Cottage Hospital, Perth Road, Blairgowrie

b) Approval as the development is considered to comply with the relevant provisions of the Development Plan and there are no material considerations apparent which outweigh the Development Plan.

c) The expansion of the western edge of Blairgowrie is a longstanding proposal and is allocated in the LDP. The site is well placed to deliver a sustainable community, serving as a well-connected suburb of Blairgowrie. The proposal will provide a significant contribution toward meeting the projected population growth of Perth and Kinross. It will also help assist funding of significant community infrastructure improvements that will benefit Blairgowrie and the wider area.

d) Pre-application consultation with the local community was undertaken locally on 24 and 25 November 2014 with a follow up public exhibition held on 2 March 2017.

e) The following environmental constraints that have been taken into consideration:

- Ancient woodland
- Archaeology including Scheduled Monument of Fir Hillock burial mound
- Site of Special Scientific Interest (SSSI) known as Ardblair and Myreside Fens
- Existing Core Paths Network;
- Topography (regarding visual impact).
- Ecological protection and biodiversity enhancement

f) i) Please see above Direction and Conditions associated with the recommendation of approval.

ii) The impact of the development on the environmental designations in the area is not considered to be significant and can be mitigated.

iii) Perth & Kinross Council is satisfied that the reasoned conclusion provided is accurate and remains current.

iv) Please see above Conditions associated with the recommendation of approval that will help mitigate any environmental impact.
v) Environmental monitoring of site by the Council will be facilitated by the required Construction and Environmental Management Plan (CEMP) (Condition 6).

The plans and documents relating to this decision are listed below and are displayed on Perth and Kinross Council's website at www.pkc.gov.uk "Online Planning Applications" page

Plan and Document Reference

17/00939/1

17/00939/2

17/00939/3

17/00939/4

17/00939/5

17/00939/6

17/00939/7

17/00939/8

17/00939/9

17/00939/10

17/00939/11

17/00939/12

17/00939/13

17/00939/14

17/00939/15

17/00939/16

17/00939/17

17/00939/18

17/00939/19

N

Pond

2m WIDE FOOTPATH

FFL 67.50

FFL 67.50

FFL 68.50

FFL 69.50

SUDS

3m WIDE CYCLE PATH

DISCOUNT FOOD RETAIL STORE
22,800 SQ/FT
2125 SQ.M

FAMILY RESTAURANT
5000SQ/FT

PARKING = 56

PARKING = 120

NON-FOOD RETAIL STORE
20,000 SQ/FT
1875 SQ.M

NON-FOOD RETAIL
10,000 SQ/FT
930SQ.M

NEIGHBOUR-HOOD CENTRE
2960 SQ/FT
275 SQ.M

PARKING = 126

FOOD OUTLET

PARKING = 90

90 BEDROOM HOTEL

Ardblair Cottages

PERTH ROAD

A 93

A 93

CR

CW

FW

CW

CF

Ardlui

Lodge

18 to 19

Shielgreen

Glenmay

ROWAN AVENUE

HAZELWOOD R

REV	DATE	DRAWN	DESCRIPTION	CHECK	APP'D
H	16.11.17	LW	SITE LAYOUT AND MEASUREMENTS REVISED		
G	14.11.17	AK	SITE LAYOUT REVISED		
F	15.09.17	AK	LIDL SITE BOUNDARY ADDED		
E	16.08.17	AK	SERVICE ROAD + LIDL PARKING SPACES REVISED		
D	19.07.17	AK	COST COFFEE DRIVE THRU ADDED		
C	21.06.17	AK	LAYOUT REVISED FOLLOWING COMMENTS FROM CLIENT		
B	13.06.17	AK	LAYOUT REVISED FOLLOWING COMMENTS FROM CLIENT		
A	07.06.17	AK	LIDL LAYOUT & NO. OF PARKING SPACES REVISED		

REVISIONS

0 50 100

mm

CLIENT Westpark Partnership LLP

JOB Site MU 5 Westpark, Blairgowrie

DRAWING Site Plan

STATUS FOR DISCUSSION

Drawn AK Checked Approved DATE JUN 17 JOB NO s1/4457 DR NO 4457-(PL)-02 REV H

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SCALE 1:500 Do not scale from this drawing

SHEET SIZE A1

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NOTICE OF REVIEW

UNDER SECTION 43A(8) OF THE TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997 (AS AMENDED)IN RESPECT OF DECISIONS ON LOCAL DEVELOPMENTS

THE TOWN AND COUNTRY PLANNING (SCHEMES OF DELEGATION AND LOCAL REVIEW PROCEDURE) (SCOTLAND) REGULATIONS 2013

THE TOWN AND COUNTRY PLANNING (APPEALS) (SCOTLAND) REGULATIONS 2008

IMPORTANT: Please read and follow the guidance notes provided when completing this form. Failure to supply all the relevant information could invalidate your notice of review.

Use BLOCK CAPITALS if completing in manuscript

Applicant(s)

Name c/o agent

Address c/o agent

Postcode

Contact Telephone 1 c/o agent
Contact Telephone 2

E-mail* rachel.affleck@lichfields.uk

Agent

Name Rachel Affleck

Address Caledonian Exchange
Canning Street
Edinburgh

Postcode EH3 8EG

Contact Telephone 1 07586040330
Contact Telephone 2

E-mail* rachel.affleck@lichfields.uk

Mark this box to confirm all contact should be through this representative: ☒

*Do you agree to correspondence regarding your review being sent by e-mail? Yes

---

Planning Authority **Perth and Kinross**

Planning authority's application reference number 25/01116/FLL

Site address Land 70 Metres West Of Langdale Perth Road Blairgowrie PH10 6EN

Description of proposed development

Erection of restaurant unit with drive thru facilities and formation of vehicular access, parking areas, landscaping and associated works

Date of application 24/07/2025 Date of decision (if any) 13/03/2026

Note. This notice must be served on the planning authority within three months of the date of the decision notice or from the date of expiry of the period allowed for determining the application.

Nature of application

1. Application for planning permission (including householder application) ☒
2. Application for planning permission in principle ☐
3. Further application (including development that has not yet commenced and where a time limit has been imposed; renewal of planning permission; and/or modification, variation or removal of a planning condition) ☐
4. Application for approval of matters specified in conditions ☐

Reasons for seeking review

1. Refusal of application by appointed officer ☒
2. Failure by appointed officer to determine the application within the period allowed for determination of the application ☐
3. Conditions imposed on consent by appointed officer ☐

Review procedure

The Local Review Body will decide on the procedure to be used to determine your review and may at any time during the review process require that further information or representations be made to enable them to determine the review. Further information may be required by one or a combination of procedures, such as: written submissions; the holding of one or more hearing sessions and/or inspecting the land which is the subject of the review case.

Please indicate what procedure (or combination of procedures) you think is most appropriate for the handling of your review. You may mark more than one box if you wish the review to be conducted by a combination of procedures.

1. Further written submissions ☒
2. One or more hearing sessions ☒
3. Site inspection ☒
4. Assessment of review documents only, with no further procedure ☐

If you have marked box 1 or 2, please explain here which of the matters (as set out in your statement below) you believe ought to be subject of that procedure, and why you consider further submissions or a hearing are necessary:

Further written submissions are requested to provide opportunity to respond if further representations are made by the Council / other parties.
A hearing is requested to enable the opportunity to put forward the applicant's case for development and to demonstrate that there are inconsistencies with the Officer's reasons for refusal. This is also important to ensure that the wider socio-economic benefits of the scheme can be considered.

Site inspection

In the event that the Local Review Body decides to inspect the review site, in your opinion:

1. Can the site be viewed entirely from public land? Yes

2. Is it possible for the site to be accessed safely, and without barriers to entry? Yes

If there are reasons why you think the Local Review Body would be unable to undertake an unaccompanied site inspection, please explain here:

N/A

Statement

You must state, in full, why you are seeking a review on your application. Your statement must set out all matters you consider require to be taken into account in determining your review. Note: you may not have a further opportunity to add to your statement of review at a later date. It is therefore essential that you submit with your notice of review, all necessary information and evidence that you rely on and wish the Local Review Body to consider as part of your review.

If the Local Review Body issues a notice requesting further information from any other person or body, you will have a period of 14 days in which to comment on any additional matter which has been raised by that person or body.

State here the reasons for your notice of review and all matters you wish to raise. If necessary, this can be continued or provided in full in a separate document. You may also submit additional documentation with this form.

It is considered that there is no evidence which supports the reasons for refusal provided by the Council and the proposed development is acceptable in terms of complementing an existing 20-minute neighbourhood; encouraging active travel; and ensuring continued public access. Please see enclosed Statement of Appeal (document 32) for further detail.

Have you raised any matters which were not before the appointed officer at the time the determination on your application was made? Yes ☐ No ☒

If yes, you should explain in the box below, why you are raising new material, why it was not raised with the appointed officer before your application was determined and why you consider it should now be considered in your review.

No new matters are raised. The timing of the determination means that there are now further updates in relation to refusal reason two, and this is set out in the enclosed Statement of Appeal (document 32).

List of documents and evidence

Please provide a list of all supporting documents, materials and evidence which you wish to submit with your notice of review and intend to rely on in support of your review.

Document 1 Planning Statement Document 2 Economic Statement Document 3 Transport Assessment Document 4 Travel Plan Document 5 Ecological Appraisal Survey Document 6 Landscape Scheme

Document 7 Landscape Management Plan
Document 8 Odour Report
Document 9 Air Quality Assessment
Document 10.1 Noise Impact Assessment
Document 10.2 Additional Acoustic Calculations
Document 11 Flood Risk Screening and Drainage Impact Assessment
Document 12 Drainage Maintenance Plan
Document 13 Construction Environmental Management Plan
Document 14 Low and Zero Carbon Report
Document 15 Lighting Plot
Document 16 Lighting Impact Assessment
Document 17 Location Plan (ref. 13638_AEW_2473_1001A)
Document 18 Existing Site Plan (ref. 13638_AEW_2473_1003A)
Document 19 Proposed Site Plan (ref. 13638_AEW_2473_1004F)
Document 20 Proposed Floor and Roof Plans (ref. 13638_AEW_2473_1006)
Document 21 Proposed Elevations and Sections (ref. 13638_AEW_2473_1005B)
Document 22 Proposed Block Plan (ref. 13638_AEW_2473_1002A)
Document 23 External Consultee from Scottish Water
Document 24 Internal Consultation from Flooding
Document 25 Internal Consultee Response (Development Plans)
Document 26 Agent Response to Development Plan Team
Document 27 Internal Consultee Response (Transport Planning)
Document 28 Agent Response to Transport Planning Team
Document 29 Email correspondence with Planning Officer (17 February 2026)
Document 30 Agent response to Planning Officer (24 February 2026)
Document 31 Planning application form
Document 32 Statement of Appeal
Document 33 Decision Notice for planning permission ref. 17/00939/IPM
Document 34 Approved Masterplan for planning permission ref. 17/00939/IPM
Document 35 Notice of Review Form – Perth and Kinross Council

Note. The planning authority will make a copy of the notice of review, the review documents and any notice of the procedure of the review available for inspection at an office of the planning authority until such time as the review is determined. It may also be available on the planning authority website.

Checklist

Please mark the appropriate boxes to confirm you have provided all supporting documents and evidence relevant to your review:

☒ Full completion of all parts of this form

☒ Statement of your reasons for requiring a review

☒ All documents, materials and evidence which you intend to rely on (e.g. plans and drawings or other documents) which are now the subject of this review.

Note. Where the review relates to a further application e.g. renewal of planning permission or modification, variation or removal of a planning condition or where it relates to an application for approval of matters specified in conditions, it is advisable to provide the application reference number, approved plans and decision notice from that earlier consent.

Declaration

I the agent hereby serve notice on the planning authority to review the application as set out on this form and in the supporting documents.

Signed: Rachel Affleck Date: 08/06/2026