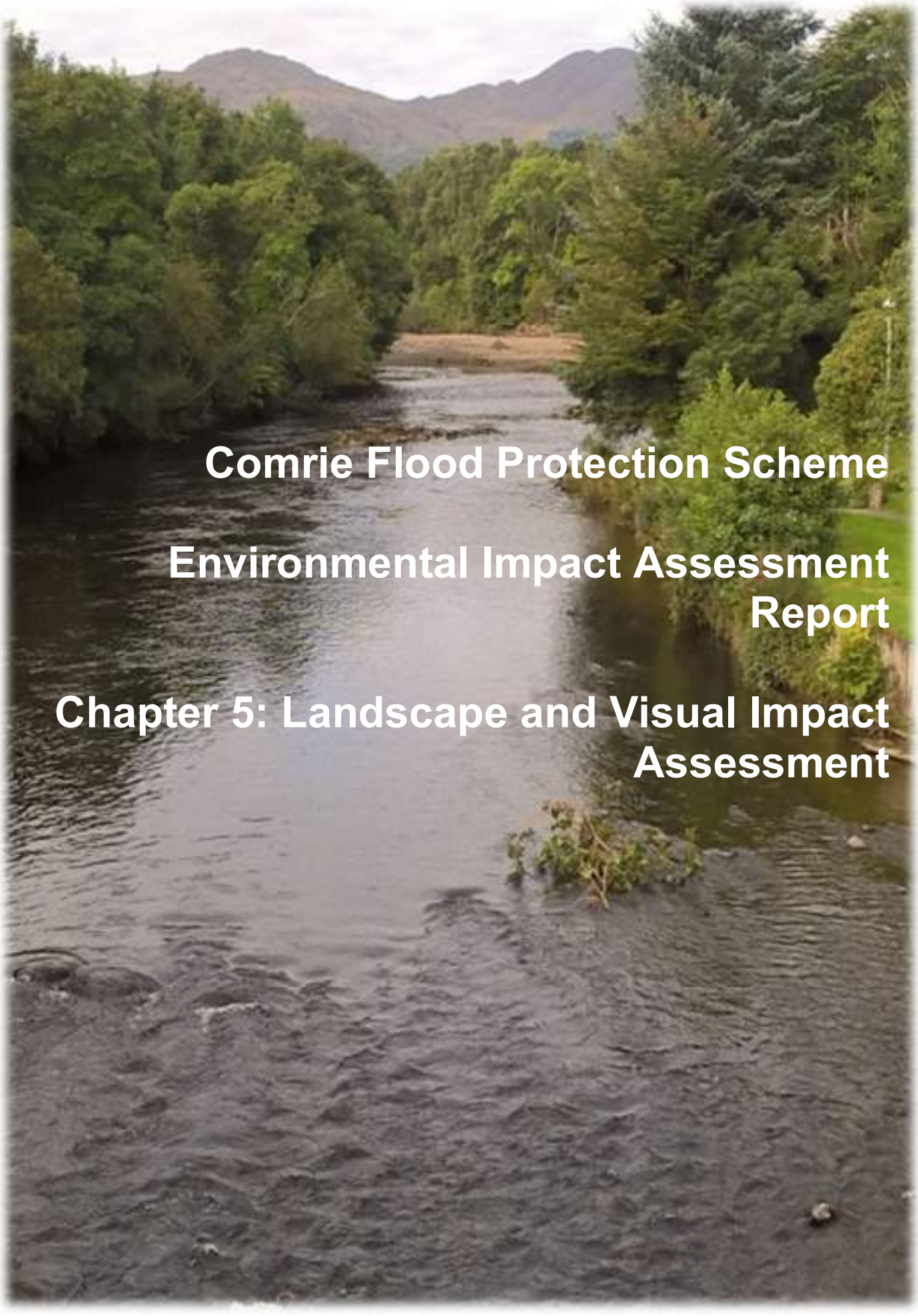

Comrie Flood Protection Scheme

Environmental Impact Assessment Report

Chapter 5: Landscape and Visual Impact Assessment

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5 Landscape and Visual Impact Assessment

5.1 Introduction

5.1.1 This chapter describes the findings of a landscape and visual impact assessment (LVIA) undertaken for the proposed Comrie Flood Protection Scheme (the Scheme). The scope of this chapter considers the potential landscape (including townscape) and visual effects of the Scheme, which comprises a series of flood protection walls and embankments associated with the River Earn, River Lednock and Water of Ruchill incorporating measures such as ramps, steps, footpaths and both hard and soft landscaping. The assessment was carried out by a team at Sweco UK Ltd comprising Chartered Members of the Landscape Institute.

5.1.2 Within this chapter, the environment surrounding the site is established and embedded mitigation measures described. Taking these measures into account, the residual effects of the Scheme are then predicted.

Proposed Development

5.1.3 A full scheme description is provided within **Chapter 3: Scheme Description and Alternatives**. For the purposes of the LVIA, the following comprises the development and its parameters:

Water of Ruchill

- Flood embankment defences located along the southwest settlement boundary of Dalginross ranging in height from approximately 2.6m to 3.3m on the property side and approximately 2.9m to 3.2 m on the field side. The embankment ties in with a proposed rubble whinstone clad wall ranging in height from approximately 1m to 2.2m along the north west garden boundary of No.4 Aros Field East. A stock proof fence is proposed along the field side of the embankment.
- Flood wall defences ranging in height from 1.6m to 1.8m on the property side and 2.7 to 3m on the field side with a drainage ditch to be located adjacent to the existing flood wall to the rear of properties on the west boundary of Dalginross from Lussa cottage in the south to Dalruchill in the north. The wall would be constructed of concrete cast with a stone wall relief texture.
- The reconfiguration of the driveway entrance to Tomnagaske to include ramped access to the driveway with a separate vehicle access to the adjacent field. Proposed walls either side of the vehicle access ramp would be clad in vernacular whinstone rubble cladding, ranging in height from approximately 2.5m to 3m.
- Erosion protection along the outer meander of the east bank of the Water of Ruchill in the form of root wad reinforced geotextile revetment over a section of approximately 150m.

- Flood wall defences adjacent to the boundary of residential properties at the Field of Refuge are proposed. The wall would range in height from 0.75m to 1.1m. The wall would be constructed of concrete cast with a stone wall relief texture with a drainage ditch to the field side. The existing residential garden boundary wall and fencing would be retained and would screen the structure from residential properties.
- Tree planting is proposed along two sections of the dismantled railway line to the south of The Ross. Planting includes broadleaf and evergreen species selected to replicate existing tree cover in the area. The proposed planting joins up areas of existing tree cover along the dismantled railway line to form a continuous green link.

River Earn

- Flood wall defences clad in vernacular style whinstone rubble with bull nosed rubble coping are proposed along the north bank of the River Earn to tie in with Dalginross Bridge, from Earnside in the east to Earnbank house located adjacent to the River Lednock. The wall ranges in height from approximately 0.8m to 1.6m on the river side and approximately 0.7m to 1.3m on the property side and has a stepped profile. Access steps to rear gardens are proposed at Earnside, Plum Cottage, opposite Commercial Lane, opposite East Riverside, and opposite Mansfield. A new maintenance vehicle access point with flood gate to the green space is proposed opposite Manse Lane.
- Flood wall defences along the southern boundary of Comrie Holiday Park are constructed of concrete cast with a stone wall relief texture and concrete coping. The wall ranges in height between approximately 0.7m to 0.9m on the river side and approximately 0.7m to 1.6m on the holiday park side with a stepped profile.
- A proposed embankment to the south of Comrie Holiday Park ranging from approximately 0.7m to 2m in height on the river side and approximately 0.6m to 1.8m on the holiday park side. A footpath is located along the top of the embankment with two sets of access steps at either end of the embankment. The embankment ties into existing ground levels at its eastern end. The embankment follows the southern boundary of Comrie Holiday Park then dog-legs to the north to follow the existing field pattern.
- Bank protection is proposed along the southern bank of the river Earn from Dalginross bridge over a length of approximately 120m. Bank protection would comprise of a block stone wall which will tie in with the new flood wall with a re-profiled, geotextile reinforced slope.
- Bank protection is proposed along the northern bank of the river Earn from the confluence of the River Lednock over a length of approximately 80m. This would comprise of a coir roll wall with a pre-established coir roll and rock roll toe.
- The existing footpath access to the green space along the northern banks of the River Earn located to the west of Dalginross bridge is to be regraded to ensure accessibility. This would include the installation of a low, natural stone wall to enable the regrading of the footpath and handrail. The adjacent steps are to be realigned and constructed in

natural stone to match the existing steps. In addition to this replacement trees and ornamental planting are proposed.

- Proposals along the southern bank include two sections of flood walling clad in the vernacular style whinstone, rubble with bull nosed rubble coping to tie in with Dalginross bridge. The section of wall to the east of the bridge ranges in height from approximately 0.4m to 1.4m on both sides and follows the northern edge of Strowan Road as far as Comrie Fire Station where it terminates to form steps and a - ramp enabling access to Core Path CMRI 35/2. The section of wall to the west of the bridge ranges in height from 0.5m to 0.7m on both sides and follows the back of the pavement of The Field of Refuge road, extending around the northern perimeter of the car park and terminating at the access track. Both sections of wall would have a stepped profile. A ramp is proposed across the entrance of the access track at the Field of Refuge. In addition to this, enhancements are proposed to the riverside green space at the Field of Refuge including the addition of an accessible footpath and the introduction of seating. Further details of the enhancement proposals are to be provided at detailed design stage.
- A section of proposed stone wall textured concrete flood walling with concrete coping extends along the south bank from the Comrie Fire Station to 5 Garry Place. The proposed wall would replace the existing mixed residential garden boundary treatments. The wall would range from approximately 1.3m to approximately 1.9m in height with a stepped profile. Stepped access points are proposed at Lochay drive and to the east of 4 Garry Place.
- A proposed embankment to the east of Dalginross is located within an arable field offset at approximately 6m from the boundaries of residential properties. The embankment ranges in height from ground level in the south to approximately 2.1m at its highest point. A stock proof fence is proposed along the field side of the embankment.
- Woodland planting is proposed to the south of the embankment located adjacent to the Comrie Holiday Park. Planting includes broadleaf and evergreen species selected to replicate existing tree cover in the area joins up groups of existing tree cover along the dismantled railway line to form a continuous green link.
- Broadleaf tree planting with ornamental shrub planting are proposed along Strowan road within three separate build outs into the highway. The build outs would include the addition of bollards along with vehicle priority and give way road signage. This would provide some continuity of tree cover along the riverside.

River Lednock

- Flood walls are proposed along the east and west banks of the river. Cladding materials are to be natural stone and will be finalised at detailed design. The proposed walls extending along the driveway of St Margaret's Church would have a stepped profile and would range in height from approximately 1m to 1.2m along the boundary with Lednaig and Catonia Cottage, and between approximately 0.3m and 1.3m along the riverside. A railing is proposed along the top of the northern section of the riverside wall. The proposed wall along the

north east bank of the river, in the vicinity of St Serf's Church ranges in height from approximately 0.4m to 1.6m. Maintenance steps are proposed within this wall at Lednock Bridge.

- To the south of Lednock Bridge a wall clad in natural stone is proposed to replace a section of the existing garden wall of Glenbuckie house adjacent to the river Lednock. The flood wall clad in natural stone continues around Glenbuckie house meeting its western garden boundary and extending along the southern garden boundary with Earnbank. The natural stone clad wall would continue along the eastern side of Earnbank garden forming a continuation of the flood walling proposed along the north bank of the River Earn. The wall ranges in height from approximately 0.6m to 1.5m with a stepped profile.
- A short section of stone wall textured concrete walling is proposed along the Comrie Holiday Park boundary which ties into the holiday park's proposed southern boundary wall. This wall ranges in height from approximately 0.3m to 0.9m and is stepped in profile.

Construction

5.1.4 Detailed construction methods and information will be provided by the appointed Contractor in consultation with Perth & Kinross Council at the next stage of this development. To enable assessment of potential construction effects, reasonable assumptions have been made with regards to likely construction methods and locations for access and compounds. This information is provided in **Chapter 3: Scheme Description and Alternatives** of the EIAR. The following assumptions have been made to enable the assessment of potential landscape and visual effects:

- Six potential construction compounds could be used during construction as illustrated on **Figure 3.2 Indicative Construction Plan**. For the purposes of assessment, it has been assumed that all construction compounds are utilised simultaneously over the full three-year construction period.
- Typical construction plant is expected to be used on site including: tracked excavators; dumper trucks; and HGV's for delivery and removal of materials.
- A 5m construction working area has been assumed either side of the flood defence structures for the purposes of the assessment.
- Silt traps are to be installed along the rivers during tree removal and construction to prevent soil entering the water course.

5.2 Statutory Planning Policy and Guidance Context

5.2.1 This section considers all European, National, Regional and Local planning policy and guidance that is relevant to the Scheme and this assessment. Two of the key documents are TAYplan Strategic Development Plan and Perth & Kinross Council Local Development Plan 2.

5.2.2 TAYplan is one of four strategic development planning authorities each covering the city-regions for Scotland's four largest cities. TAYplan covers the City-regions of Dundee and Perth and is a statutory partnership of Dundee City, Angus, Perth & Kinross and Fife Councils. The TAYplan Strategic Development Plan (2016-2036) adopted in 2017, sets out land use planning policies to guide development.

5.2.3 The Perth & Kinross Local Development Plan 2 (LDP2) was adopted on 29th November 2019. A summary of relevant national, regional and local planning policy is provided below.

Table 5.1: Landscape Planning Policy Summary

Policy	Key Provisions	Relevant Section
European Landscape Convention	The UK is a signatory to the European Landscape Convention (ELC) which seeks to achieve improved approaches to the planning, management and protection of landscapes throughout Europe. The ELC and its definition of landscape underpins the Guidelines for Landscape and Visual Impact Assessment (GLVIA3, 2013) which have informed the approach to the assessment.	
National Planning Policy Framework Scotland 3 (NPF3) 2014	The NPF3 recognizes the contribution landscape and historic townscape makes to quality of life, national identity and the visitor economy: *"Scotland's landscapes are spectacular, contributing to our quality of life, our national identity and the visitor economy. Landscape quality is found across Scotland and all landscapes support place-making. National Scenic Areas and National Parks attract many visitors and reinforce our international image…. Closer to settlements landscapes have an important role to play in sustaining local distinctiveness and cultural identity, and in supporting health."* *"The historic environment is an integral part of our well-being and cultural identity. Scotland currently has five World Heritage Sites, and many historic cities, towns and villages with a rich variety of buildings and townscapes."*	Paragraph 4.4 Paragraph 4.6
Planning for Natural Heritage: Planning Advice Note 60 (PAN 60) 2000	The Scottish Executive is committed to safeguarding Scotland's unique natural heritage and integrating the principles of sustainable development into all Government policies. PAN 60 state refers to the use of the SNH landscape Character Assessment programme in relation to the identification of development pressures which may significantly affect landscape character, and provide broad guidelines for maintaining, restoring and enhancing landscape quality and states: "*Safeguarding and enhancing landscape character is an important planning objective. Planning authorities can contribute to the protection and enhancement of landscape by:* *safeguarding the scenic quality and character of National Parks, National Scenic Areas, designed landscapes and wild land;* *promoting high standards of siting and design and the use of appropriate materials.* *Landscape Character Assessment"* *PAN 60 also notes the importance of building on landscape character through the careful choice of materials:* *"Siting, built form, choice of materials and detailing are all important considerations in achieving developments which are in harmony with the surrounding landscape and build on its existing character."*	Paragraph 23, 24 Paragraph 53
Scotland's Landscape Charter (2010)	The charter states the importance of Scottish landscapes to health, well-being, national identity, culture, tourism and the economy and highlights the commitment of the Scottish Government to increasing the value and enjoyment derived from landscape. The charter encourages individuals and organisations to sign it and demonstrate their commitment to its objectives of maintaining the quality and distinctiveness of the Scottish landscape.	

Policy	Key Provisions	Relevant Section
TAY plan Strategic Development Plan (2016-2036)	This policy seeks to ensure the responsible management of TAYplan's assets by: *"understanding and respecting the regional distinctiveness and scenic value of the TAYplan area through safeguarding the integrity of natural and historic assets; including habitats, wild land, sensitive green spaces, forestry, water environment, wetlands, floodplains (in-line with the Water Framework Directive), carbon sinks, species and wildlife corridors, and also geo-diversity, landscapes, parks, townscapes, archaeology, historic battlefields, historic buildings and monuments; and by allowing development where it does not adversely impact upon or preferably enhances these assets."*	Policy 9: Managing TAYplan's Assets
Perth &Kinross Council Local Development Plan (Adopted 29th November 2019)	*"Development must contribute positively to the quality of the surrounding built and natural environment. All development should be planned and designed with reference to climate change, mitigation and adaptation. The design, density and siting of development should respect the character and amenity of the place, and should create and improve links within and, where practical, beyond the site. Proposals should also incorporate new landscape and planting works appropriate to the local context and the scale and nature of the development.* *All proposals should meet all the following placemaking criteria:* *(b) Consider and respect site topography and any surrounding important landmarks, views or skylines, as well as the wider landscape character of the area.* *(c) The design and density should complement its surroundings in terms of appearance, height, scale, massing, materials, finishes and colours.* *(e) All buildings, streets, and spaces (including green spaces) should create safe, accessible, inclusive places for people, which are easily navigable, particularly on foot, bicycle and public transport.* *(f) Buildings and spaces should be designed with future adaptability, climate change and resource efficiency in mind wherever possible.* *(g) Existing buildings, structures and natural features that contribute to the local townscape should be retained and sensitively integrated into proposals.* *(h) Incorporate green infrastructure into new developments to promote active travel and make connections where possible to blue and green networks.* *(j) Sustainable design and construction."*	Policy 1: Placemaking
	"Development within a conservation area must preserve or enhance its character or appearance. The design, materials, scale and siting of new development within a conservation area, and development outwith an area that will impact upon its special qualities should be appropriate to its appearance, character and setting. Where a conservation area Appraisal has been undertaken for the area, the details contained in that appraisal should be used to guide the form and design of new development proposals. Applications for Planning Permission in Principle in conservation areas will not be considered acceptable without detailed plans, including elevations, which show the development in its setting."	Policy 28: Conservation areas

Policy	Key Provisions	Relevant Section
	"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 38B: National 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 38C: Local Designations
	"Development and land use change, including the creation of new hill tracks, should be compatible with the distinctive characteristics and features of Perth and Kinross's landscapes; which requires reference to the Tayside Landscape Character Assessment. Accordingly, development proposals will be supported where they do not conflict with the aim of maintaining and enhancing the landscape qualities of Perth and Kinross. They will need to demonstrate with reference to an appropriate landscape capacity study that either in the case of individual developments, or when cumulatively considered alongside other existing or proposed developments: *(a) they do not erode local distinctiveness, diversity and quality of Perth and Kinross's landscape character areas, the historic and cultural dimension of the area's landscapes, visual and scenic qualities of the landscape, or the quality of landscape experience;* *(b) they safeguard views, viewpoints and landmarks from development that would detract from their visual integrity, identity or scenic quality;* *(c) they safeguard the tranquil qualities of the area's landscapes;* *(e) they provide high-quality standards in landscape design, including landscape enhancement and mitigation schemes when there is an associated impact on a landscape's qualities;* *(f) they incorporate measures for protecting and enhancing the ecological, geological, geomorphological, archaeological, historic, cultural and visual amenity elements of the landscape.* *Local Landscape Areas (LLAs) are the local landscape designation. Development should only be permitted where it will not have a significant adverse impact on their special character or qualities, or where these impacts are clearly outweighed by social and economic benefits that are more than of local significance to Perth and Kinross."*	Policy 39: All Landscapes

Policy	Key Provisions	Relevant Section
	"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."*	Policy 40A: Forestry Woodland and Trees: Forest and Woodland Strategy
	"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 40B: Forestry Woodland and Trees: Trees Woodland and Development

Policy	Key Provisions	Relevant Section
	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.*	Policy 42: Green Infrastructure

5.2.4 Measures have been taken as part of the design process to ensure compliance with the above planning policies including the following:

- The proposed flood walls and embankments have been designed to follow existing boundaries where possible, respecting the existing character of the village. In order to protect the amenity of the area, flood walls and embankments have been sited where possible to minimise tree loss. Natural stone finishes consistent with the surrounding vernacular style have been specified in sensitive areas including within the Comrie conservation area, to assist in the preservation of the character or the conservation area, sustain local distinctiveness and respect the character and amenity of the place (Policies 1 and 28 Perth & Kinross Council Local Development Plan 2019).
- The proposals ensure access to all green spaces through the installation of ramps and the regrading of the footpaths and steps into the greenspaces to the north and south of the River Earn (Policy 1 Perth & Kinross Council Local Development Plan 2019).
- Proposals for the soft landscape design have been developed to be consistent with the surrounding landscape character. Replacement and compensatory tree planting have been proposed in agreement with Perth & Kinross Council and The Forestry Commission Scotland and have been located to avoid the fragmentation of tree networks. The proposals seek to maintain bands of tree cover along the rivers Lednock, Earn and the Water of Ruchill. Compensatory tree planting includes two areas of approximately 3168m2 and 1819m2 of young tree planting to join existing blocks of trees along the disused railway line to the south of The Ross creating a green corridor for wildlife. An additional area of approximately 2662m2 of native woodland transplant planting is proposed to the south of Comrie Holiday park to mitigate for tree removal and screen the proposed flood embankment. A range of native woodland tree and shrub species consistent with the landscape character, is proposed to assist in protecting the scheme against climate change by providing diversity (Policies 1, 39, 40A and 42 Perth & Kinross Council Local Development Plan 2019).
- A full tree survey to BS5837:2012 has been undertaken of the area surrounding the Scheme. (Policy 40B Perth & Kinross Council Local Development Plan 2019).

5.2.5 It is acknowledged that a large number of trees would be removed as a result of the proposed Scheme. However, the flood protection scheme would achieve public benefits by protecting the town from future flood events.

5.3 Methodology

General approach and guidance

5.3.1 Within the landscape and visual impact assessment, the term ‘landscape’ is used to refer to both the landscape and townscape effects of the Scheme.

5.3.2 The approach to the landscape and visual assessment draws on the following guidance:

- Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA 3) (Landscape Institute and Institute of Environmental Management and Assessment 2013)
- Landscape Character Assessment Guidance for England and Wales (Scottish Natural Heritage and The Countryside Agency 2002)
- Townscape Character Assessment Technical Information Note 05/2017 (Landscape Institute 2018)

5.3.3 This guidance is not prescriptive and appropriate modifications and refinements have been made in the approach to the assessment to reflect the specific nature of the Scheme, its location and its potential landscape and visual effects. The methodology has specifically focused on providing appropriate information regarding the following potential landscape and visual effects of the Scheme:

- the permanent landscape and visual effects of the introduction of flood walling along the banks of the River Earn and River Lednock;
- the permanent landscape and visual effects of the introduction of flood embankments to the east and west settlement boundaries of Dalginross;
- the permanent landscape and visual effects of the introduction of erosion protection along the banks of the Water of Ruchill and the River Earn;
- the landscape and visual effects of tree removal; and
- the effects of construction activity within a rural village context.

5.3.4 The assessment of landscape and visual effects has been undertaken in the following stages.

- identification of landscape and visual receptors and description of the existing environment baseline conditions including an assessment of the sensitivity of landscape and visual receptors to the changes likely to be associated with the Scheme (this combines assessments of both the value and the susceptibility of landscape and visual receptors);
- identification of mitigation;
- an assessment of the predicted environmental effects including an assessment of the magnitude of potential landscape and visual change (its degree, extent, duration and reversibility); and
- an assessment of the significance of the residual effects (taking account of the effectiveness of mitigation at year 20).

5.3.5 The scope of the assessment includes:

- landscape effects – the effect of the Scheme on identified landscape features and landscape character areas (identified as Scheme Areas) which make up the landscape resource; and

- visual effects – the effect of the Scheme on views experienced by people in different locations (visual amenity) through the assessment of an agreed set of representative viewpoints.

5.3.6 The effects of the Scheme have been assessed at the following three stages:

- **Construction Phase** - construction activities, temporary works during the approximately three-year construction period;
- **Operation Phase (year of opening in winter**) - the effects of the completed Scheme when the absence of leaves on the trees illustrates the worst-case scenario before mitigation planting has taken effect; and
- **Operation Phase (year 20 in summer)** - the effects of the completed scheme once mitigation planting has largely matured.

5.3.7 The landscape and visual assessment identifies the significant effects of the Scheme by categorising all landscape and visual effects as either:

- **significant (major or moderate)** - it has been an objective of the iterative design process to mitigate and minimise any such effects; and
- **not significant (minor or negligible)** - effects that are not considered to require further mitigation.

5.3.8 Based on GLVIA3 the following table summarises the factors that contribute to an overall assessment of the significance of landscape and visual effects. It identifies the principal considerations that are combined to assess significance of effect. How factors are combined, and the weighting attributed to each of these considerations requires the application of experienced professional judgement and may vary depending on the landscape or visual receptor or effect being assessed.

Table 5.2 Factors Contributing to an Overall Assessment of the Significance of Landscape and Visual Effects

Sensitivity of Receptor	Magnitude of Change
A combined judgement of susceptibility & value	A combined judgement of: the degree of change, the extent of change, the duration of change and the reversibility of change
high, medium or low	high, medium, low or negligible
Level of effect (significance)	
major or moderate (significant) minor or negligible (not significant)	

5.3.9 Criteria for each part of the assessment are provided separately for landscape and visual effects below.

Landscape assessment criteria

Landscape receptors

5.3.10 Landscape receptors comprise landscape character areas (referred to in this assessment as Scheme Areas).

Landscape Sensitivity Criteria

5.3.11 The sensitivity of landscape receptors is determined by combining judgements of their susceptibility to the proposed development and the value attached to the landscape.

5.3.12 The assessment of the sensitivity of landscape receptors uses the following criteria:

5.3.13 **High**: Landscapes which by nature of their character would be unable to accommodate change of the type proposed, typically these would be:

- high levels of existing tree cover
- small scale, intimate and/or fine grained
- unified built environment in the vernacular style utilising a harmonious palette of local materials
- of high quality with distinctive elements and features making a positive contribution to character and sense of place
- likely to be designated, but the aspects which underpin such value may also be present outside designated areas, especially at the local scale
- areas of special recognised value through use, perception or historic and cultural associations
- likely to contain features and elements that are rare and could not be replaced

5.3.14 **Medium**: Landscapes which by nature of their character would be able to partly accommodate change of the type proposed, typically these would be:

- moderate levels of existing tree cover
- moderate scale and/or grain
- comprised of commonplace elements and features creating generally unremarkable character but with some sense of place
- locally designated, or their value may be expressed through non-statutory local publications
- containing some features of value through use, perception or historic and cultural associations
- likely to contain some features and elements that could not be replaced

5.3.15 **Low**: Landscapes which by nature of their character would be able to accommodate change of the type proposed, typically these would be:

- large scale, open and/or coarse grained
- low levels of existing tree cover
- comprised of some features and elements that are discordant, derelict or in decline, resulting in indistinct character with little or no sense of place
- not designated
- containing few, if any, features of value through use, perception or historic and cultural associations
- likely to contain few, if any, features and elements that could not be replaced

Magnitude of landscape change criteria

5.3.16 The assessment of the magnitude of landscape change has used the following criteria regarding the degree and extent of change:

5.3.17 **High** - typically this would be:

- large-scale loss of existing the existing character or distinctive features and elements, and/or the addition of new but uncharacteristic conspicuous features and elements (adverse)
- large scale improvement of the existing character by the restoration of features and elements, and/or the removal of uncharacteristic and conspicuous features and elements, or by the addition of new distinctive features (beneficial)

5.3.18 **Medium** - typically this would be:

- partial loss or noticeable loss to the existing character or distinctive features and elements, and/or the addition of new but uncharacteristic noticeable features and elements (adverse)
- partial or noticeable improvement of the existing character by the restoration of existing features and elements, and/or the removal of uncharacteristic and noticeable features and elements, or by the addition of new characteristic features (beneficial)

5.3.19 **Low** - typically this would be:

- slight loss of the existing character or features and elements, and/or the addition of new but uncharacteristic features and elements (adverse)
- slight improvement of the existing character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements (beneficial)

5.3.20 **Negligible** - typically this would be:

- barely noticeable loss of the existing character or features and elements, and/or the addition of new but uncharacteristic features and elements (adverse)
- barely noticeable improvement of the existing character by the restoration of existing features and elements, and/or the removal of uncharacteristic features and elements, or by the addition of new characteristic elements (beneficial)

5.3.21 The duration of the landscape change to landscape elements or within each different Scheme Area is categorised as permanent, long term, medium term or short term/temporary. The following definitions have been adopted within this assessment:

- **permanent landscape change**: a change of either infinite duration or likely to persist for more than twenty years
- **long-term landscape change**: a change of finite duration likely to persist for less than twenty years but more than five years
- **medium-term landscape change**: a change likely to persist for more than one year but less than five years
- **short-term landscape change**: a change unlikely to persist for more than one year

5.3.22 Whatever the expected duration of a landscape change, consideration of reversibility relates to whether a landscape change could be reversed (rather than will be reversed). The following criteria have been adopted within this assessment:

- **irreversible** - major changes in landform or the removal or landscape elements, such as veteran trees, that could not be replicated within twenty years.
- **partially reversible** - changes that could be largely reversed within twenty years (e.g. recreation of areas of mature tree planting of similar but not identical species mix and character).
- **reversible** - changes that could be totally reversed within ten years (e.g. removal of introduced features or recreation of ornamental planting).

Significance of landscape effect - combining judgements

5.3.23 The level and significance of landscape effect is assessed by combining all of the considerations set out above. This is described by GLVIA 3 as an '*overall profile*' approach to combining judgements and requires that all the judgements against each of the identified criteria (susceptibility, value, degree, extent, duration and reversibility) are used within an informed professional assessment of the overall level of landscape effect. The relative weight attributed to each consideration is a matter for experienced professional judgement and will vary depending on the specific landscape receptor or effect being assessed. Where possible to do so with a reasonable level of professional objectivity the effects

of the Scheme on the landscape are identified as likely to be generally considered positive (beneficial), neutral or negative (adverse).

5.3.24 The significance of landscape effects is categorised as significant (major or moderate) or not significant (minor or negligible). GLVIA 3 states the following about the judgement of 'significant' landscape effects:

"*There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances vary with the location and landscape context and with the type of proposal. At opposite ends of a spectrum it is reasonable to say that:*

Major loss or irreversible negative effects, over an extensive area, on elements and/or aesthetic and perceptual aspects that are key to the character of nationally valued landscapes are likely to be of the greatest significance;

Reversible negative effects of short duration, over a restricted area, on elements and/or aesthetic and perceptual aspects that contribute to but are not key characteristics of the character of landscapes of community value are likely to be of the least significance and may, depending on the circumstances, be judged as not significant;

Where assessments of significance place landscape effects between these extremes, judgements must be made about whether or not they are significant, with full explanations of why these conclusions have been reached."

Visual assessment criteria

Visual receptors

5.3.25 The assessment of visual effects considers how landscape change affects views experienced by people and is based upon an assessment of visual effects at agreed representative viewpoints.

Visual sensitivity criteria

5.3.26 Assessment of the sensitivity of the representative viewpoints combines both an assessment of the value attributed to the view and the susceptibility of the represented visual receptor to changes in the view. The assessment of the sensitivity of viewpoints has been guided by the following criteria:

High:

- residential properties
- users of important footpaths or other recreational trails (e.g. national trails, core paths, bridleways etc.)
- users of recreational facilities where the purpose of that recreation is enjoyment of the countryside (e.g. Country Parks, National Trust

properties or other access land etc.)

- users of publicly accessible ornamental parks and gardens
- important views within or of a designated conservation area

Medium:

- outdoor workers
- users of scenic roads and railways or waterways
- schools and other institutional buildings, and their outdoor area

Low:

- indoor workers
- users of main roads (e.g. trunk roads) or passengers in public transport on main arterial routes
- users of recreational facilities where the purpose of that recreation is not related to the view (e.g. sports facilities)

5.3.27 The above criteria are indicative and reasoned professional judgement is applied throughout. The value of the available views within a particular context may lead to down grading or up grading of typical assessments.

Magnitude of visual change criteria

5.3.28 Assessment of the magnitude of visual change has used the following criteria regarding the degree and extent of change:

- **High** - the Scheme, or a part of it, would become the dominant feature or focal point of the view
- **Medium** - the Scheme, or a part of it, would form a noticeable feature or element of the view which is readily apparent to the receptor
- **Low** - the Scheme, or a part of it, would be perceptible but not alter the overall balance of features and elements that comprise the existing view
- **Negligible** - only a very small part of the Scheme would be discernible, or it is at such a distance that it would form a barely noticeable feature or element of the view, or no part of the Scheme, or activity associated with it, is discernible

5.3.29 The duration of visual change is categorised as permanent, long-term, medium-term or short-term/temporary. The following definitions have been adopted within this assessment.

- **permanent visual change**: a change of either infinite duration or likely to persist for more than twenty years
- **long-term visual change**: a change of finite duration likely to persist for less than twenty years but more than five years
- **medium-term visual change**: a change likely to persist for more than one year but less than five years

- **short term/temporary visual change**: a change unlikely to persist for more than one year

5.3.30 The reversibility of visual change is categorised as irreversible, partially reversible or reversible. The following criteria have been adopted within this assessment:

- **irreversible** - major changes in view that could not be reversed within 20 years (e.g. the introduction of large-scale infrastructure or the removal of a historic structure)
- **partially reversible** - changes in the view that could be largely reversed within twenty years (e.g. recreation of areas of mature tree planting of similar but not identical species mix and character)
- **reversible** - changes that could be totally reversed within 10 years (e.g. removal of introduced features or recreation of ornamental planting)

Significance of visual effect - combining judgements

5.3.31 The significance of visual effects is categorised as significant (major or moderate) or not significant (minor or negligible). The level and significance of visual effects is assessed by combining all the considerations set out above. This is described by GLVIA3 as an 'overall profile' approach to combining judgements and requires that all the judgements against each of the identified criteria are used within an informed professional assessment of the overall level of visual effect. The relative weight attributed to each consideration is a matter for experienced professional judgement and will vary depending on the specific receptor or effect being assessed. Where possible to do so with a reasonable level of professional objectivity the effects of the Scheme are identified as likely to be generally considered positive (beneficial), neutral or negative (adverse).

Verified Photomontage Methodology

5.3.32 The photography and photomontage production for this project was undertaken prior to the publication of the Landscape Institute *Technical Guidance Note 06/19 Visual Representation of Development Proposals (September 2019).*

5.3.33 The viewpoint photography and photomontages for the project were produce in line with the following guidance:

- Landscape Institute Advice Note 01/2011: Photography and photomontage in landscape and visual assessment.
- Guidelines for Landscape and Visual Impact Assessment - 3rd edition (GLVIA3) – Landscape Institute IEMA.
- Scottish Natural Heritage – Visual Representation of Windfarms Version 2, 2014.

Photography

5.3.34 A Canon 5D (mark iv) full frame digital camera with the Canon EF 50mm 1.4 USM lens is used for photography. The camera is mounted in landscape format on a tripod with a panoramic head attached. The lens centre (its nodal point) is set at an eye level of 1.6m. The camera height may be different if features such as fences or hedges obscure the view, however this will be recorded. The levelling plate was adjusted to level the camera in both its pitch and roll axes.

5.3.35 A panoramic head is used to allow the camera to rotate directly around the lens centre (its nodal point) to avoid parallax effects between incremental photos. In landscape orientation the camera was rotated 20° between each photograph

5.3.36 Using a plumb line the camera position can accurately be located on the ground. The physical viewpoint location was marked with either a survey nail or peg hammered in to the ground. Camera location coordinates were taken by the chartered surveyor during the site visit.

5.3.37 Supplementary photos are taken to record the camera setup and survey nail / peg position. These were used by surveyor to locate positions or if additional photography at the viewpoint location is required.

Survey

5.3.38 The site is attended with both the photographer and chartered surveyor. This is to prevent potential viewpoint location inaccuracies if surveyor were to attend separately.

5.3.39 A Total Station is used by the chartered surveyor to accurately record the camera position and also capture an array of selected survey reference points used to camera match and calibrate the photography. All survey points are captured in the British National Grid co-ordinate system recording a X,Y and Z co-ordinate.

5.3.40 An adequate number and spread of survey points is recorded per photo to verify the overall view alignment. Where a viewpoint does not contain sufficient fixed targets suitable for surveying, temporary targets such as ranging poles are set up to allow the survey to be completed at the same time as the photography.

5.3.41 The survey data is post-processed and then supplied in an Excel table for each set of viewpoint photography. Tables contain co-ordinates for the camera and surveyed reference points, which are used to align and verify viewpoint camera alignments.

Model Creation

5.3.42 A full-scale site model is produced in house is positioned in its own 3DS Max file, the model is geo located and sized accurately. Further colour, material and finish detail is added to the model. One x-ref model is used for all viewpoints for consistency and ease of updating viewpoints with site design iterations.

Planting and mitigation designs along with varied stages are also added to this model as required by the client.

Viewpoint Alignment and Verification

5.3.43 Using 3D Studio Max software, the viewpoints are recreated in a digital 3D environment. Each individual viewpoint is setup using verified survey points, camera and a lighting environment.

5.3.44 Surveyed X, Y, Z coordinates of reference points and the camera position are set up in 3DS Max. Survey points are represented by renderable cross hairs. The camera is positioned and assigned again using the survey data and matched with settings taken from the photography EXIF data, such as ISO and exposure.

5.3.45 Using a 'daylight system' in 3DS Max, a lighting environment is also accurately set up using settings related to EXIF material and global positioning; time of photography, date of photography, time zone and site longitude & latitude.

5.3.46 Once the viewpoint model, camera and positioned survey points are located the camera is set to the required field of view and view direction, aligned with the survey data.

Rendering & Post Production

5.3.47 Using 3D studio Max plugin V-ray each viewpoint is rendered.

5.3.48 The rendered image is overlaid and positioned against the viewpoint photo. Once in position any parts are the render that would be obstructed by foreground scene are masked from the render.

5.3.49 Images will be placed on a Sweco layout template, with standard title block, alongside viewpoint description and information.

Approach to the Assessment of Tree and Vegetation Effects

5.3.50 Where the loss of vegetation is permanent, the effect of such loss has been assessed within the operational effects and only the physical activity associated with the removal has been assessed within the construction phase effects.

5.3.51 Details of the reinstatement of private gardens would be determined at detailed design stage and is not included in this assessment. The assessment is based only upon the current outline landscape scheme drawings which assess the construction phase effects for the presented Scheme and erosion protection measures *(**Outline Landscape Proposals drawings 119398/400/350 to 119398/400/360**)*.

5.3.52 For the purposes of assessment, an assumption has been adopted that all trees with root protection zones extending into the anticipated 5m construction working area will be removed. There is the potential that further trees may be

removed during construction, however, this would have to be agreed with Perth & Kinross Council by the appointed Contractor.

5.3.53 Contrarily, a number of trees assessed as likely to be removed, may be retained through careful construction methods and depending upon the exact location of rootzones on site (refer to ***Trees to be Removed and Retained drawings 119398/400/381to 119398/400/391***). These trees include:

- in general trees with less than 10% of their rootzone located within the 5m working areas;
- trees located along the west boundary of Dalginross may be retained through careful construction methods of the proposed flood wall, rootzones will not be present beneath the existing flood wall and ditch therefore construction of the new flood wall may not affect these trees;
- trees located adjacent to the existing flood embankment to the south west of Dalginross as rootzones should not be present on the existing embankment (to be verified by hand digging on site by an arboriculturalist at construction);
- it is likely that rootzones of high-quality category A and B trees within the garden of The Manse would not extend beyond the garden wall due to its foundations (to be verified by hand digging on site by an arboriculturalist at construction), therefore it is likely that these trees would be retained;

5.3.54 The loss of trees is quantified within this assessment. The assessment of effects of the Scheme upon tree cover is considered within the assessment of the effects upon the landscape character of the Scheme Areas.

Assumptions and limitations

5.3.55 The assessment has been based upon the outline design information available to date and is subject to minor change as the outline design progresses into detailed design. The outline design is considered to be representative of the Scheme. Detailed construction methods and information will be provided by the appointed Contractor in consultation with Perth & Kinross Council at the next stage of this development. To enable assessment, reasonable assumptions have been made with regards to likely construction methods, plant and locations for access and compounds as described in **paragraph 5.1.4.**

5.3.56 The site assessment has been limited to publicly accessible areas only.

Study Area

5.3.57 The study area establishes the spatial parameters of the assessment and identifies the maximum likely extent of potential landscape and visual effects. More specifically it provides a boundary to the focus of the landscape assessment, identification of key receptors and the selection of representative viewpoints.

5.3.58 In the first instance a study area of 2km from the Scheme was defined in order to gain an understanding of the landscape planning policy context surrounding the Scheme.

5.3.59 The production of a digital Zone of Theoretical Visibility was not deemed necessary due to the scale and location of the Scheme elements. A visual envelope (areas from which Scheme elements might be visible) was identified in the field taking account of visual barriers including buildings and tree cover. The visual envelope is largely localised, extending on average no more than 600m from the Scheme or construction compound location.

5.3.60 Despite the relatively low height (approximately 3.3m maximum height) of the built elements of the Scheme and its location in close proximity to existing residential boundary treatments, the removal of a large number of trees would potentially be perceptible from a wider area. Comrie and Dalginross are surrounded by areas of high ground. Therefore, a long-range viewpoint has been included at the Melville Monument, which is located on high ground to the northwest of Comrie at a distance of approximately 1.6km to demonstrate the effects of the Scheme from a locally important viewpoint within the National Scenic Area.

5.4 Consultation

5.4.1 Below is a description of consultation carried out in relation to this assessment.

Table 5.3: Consultation undertaken

Consultee & date of consultation	Summary of consultation	Comment	Action taken
19th December 2018 Perth & Kinross Council	Consultation on the location of representative viewpoints	Viewpoints were requested at the following locations • CMRI/14 • CMRI/35 • Lord Melville's Monument. Core path CMRI/53 • if relevant from the Earthquake House (Core Path CMRI/25)	The representative viewpoints assessed within this chapter include all locations requested except for Earthquake House as the Scheme would not be visible from this location.
7th August 2018 Forestry Commission Scotland	Consultation on the requirements for replacement tree planting	Advised that in this situation planting required would equate to approximately 1Ha of land to be replanted. Any new planting to provide ecological or community benefits. Sweco to provide appropriate levels of replacement planting.	The outline landscape proposals include 1.3Ha of replacement tree planting. Ecological benefits have been provided through the joining up of a fragmented belt of woodland along the dismantled railway embankment located to the south of The Ross.
28th August 2018 Perth & Kinross Council Forestry Commission Scotland	Consultation on the landscape proposals for replacement tree planting and trees to be removed and retained proposals.	Perth & Kinross Council and The Forestry Commission Scotland stated they were broadly happy with the planting proposals. Requests were made for Sweco to provide concise method statements and construction methodology for tree protection. Sweco were also requested to incorporate a mixture of species to provide climate change resilience and to include willow within tree mixes as a sacrificial species for beaver. It was suggested that an option for a partnership project of fruit tree planting could be considered at Comrie School	Method Statement and construction methodology for tree protection would be provided at detailed design stage. A range of species have been selected to ensure climate change resilience. Willow has been incorporated into woodland tree mixes. The option for a partnership project of fruit tree planting at Comrie School remains under consideration.

Consultee & date of consultation	Summary of consultation	Comment	Action taken
13th September 2018 **Perth & Kinross Council**	Request for photographs to be used in photomontages to be taken in summer to illustrate the trees in leaf and therefore capture the extent of the impact of tree removal upon canopy cover.	Agreement for Sweco to take photographs for viewpoints and photomontages in summer.	Viewpoint photography and photomontages have been taken in summer.
21St September 2019 **Perth & Kinross Council**	Consultation on the replacement of 2 photomontage locations due to the revised extents of the scheme.	Agreement on revised locations including one photomontage to be located on core path CMRI/35/2 and one photomontage at a new viewpoint location on core path CMRI1/3 south of Tomnagaske.	Photomontages and viewpoints have been updated accordingly
2nd January 2019 **Perth & Kinross Council**	Consultation on the proposed finish of flood walls.	General comment that "*The centre of Comrie is a conservation area which has a particularly high standard of architectural and historic character, along with a high concentration of listed buildings. The river and listed bridges are a significant factor in the special interest of the village, and it is therefore important to ensure that the visual and physical impact of the flood protection will be managed accordingly*." Concern raised regarding the use of engineering brick. Advised that 'Brabant' stone textured cast concrete would appear less formal than brick and could be used as an alternative.	The outline design of the Scheme proposes natural stone within the conservation area and 'Brabant' textured stone on areas outside the conservation area or as a replacement to existing concrete walling.
28th February 2019 **Perth & Kinross Council** **Forestry Commission Scotland**	Consultation on revised landscape proposals	Agreement on landscape proposals with comments including, provenance, protection and management to be addressed at detailed design. Picea omorika requested to be taken out of the woodland mix and used as a specimen tree within the public open space.	Woodland species mixes amended accordingly.
14th March 2019 **Forestry Commission Scotland**	Consultation on revised landscape proposals	Agreement on landscape proposals.	No further action required

Consultee & date of consultation	Summary of consultation	Comment	Action taken
13th June 2019 **Perth & Kinross Council**	Consultation on biodiversity of the scheme	The proposed planting and range of native tree and wildflower species was considered to be appropriate. Native species were considered to be favourable for all ornamental shrub and herbaceous planting. Concern was raised regarding the protection of trees and silt entering the water course. Queries were raised regarding the inclusion of Picea omorika within the Scheme. A query was raised regarding the provision of reasoning behind the felling of specific trees.	Replacement native specimens to be added to the ornamental shrub and herbaceous planting mix. The watercourse is to be protected with silt traps during tree removal and construction. Picea omorika has been included in the planting scheme at the request of Perth & Kinross tree officer. A schedule of trees to be removed and retained is provided in **Appendix 5.1** which includes the reasoning for each removal.
13th June 2019 **Perth & Kinross Council**	Consultation on transport planning	Concerns were raised regarding the provision of visibility splays on the build outs located on Strowan Road.	Visibility splays have been plotted and found not to clash with planting proposals.

5.5 Baseline Assessment

5.5.1 Baseline landscape and visual assessments have been undertaken in parallel and are informed by a combination of desk and field-based techniques.

Baseline Desktop Assessment

5.5.2 Preliminary identification, description and evaluation of the existing landscape and visual context of the Scheme involved a desk-based review and interrogation of the following information sources:

- Responses obtained through the scoping and consultation process
- Ordnance Survey mapping and aerial photography relation to existing landform, vegetation, settlement patterns and promoted viewpoints
- Plans containing information relating to landscape designations and landscape related policies at local and national level
- Engineering data and schematic plans relating to the proposals and their construction
- Published Landscape character descriptions as set out in: Scottish National Heritage (2019) Landscape Character Types. The site falls into LCT372 Lower Upland Glens (refer to **Figure 5.2 Landscape Character Context**)
- Google Earth satellite mapping
- Drone footage of the environment surrounding the Scheme

Baseline Field Assessment

5.5.3 The field survey was undertaken during periods of fine weather in April and July 2018 from public highways, footpaths and other publicly accessible areas, including areas of public open space. Photography occurred in August 2018 when weather conditions allowed.

5.5.4 Site work involved:

- A corroboration of the finding of the desktop review;
- Additional information on landscape elements, character, views and localised screening; and
- Photography from the proposed representative viewpoints.

Landscape Designations

5.5.5 The Scheme is located near the boundaries of a number of statutory designations as illustrated on **Figure 5.1 Planning Policy Context**.

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N

SM1589

SM1558

SM1542

SM1612

SM4949

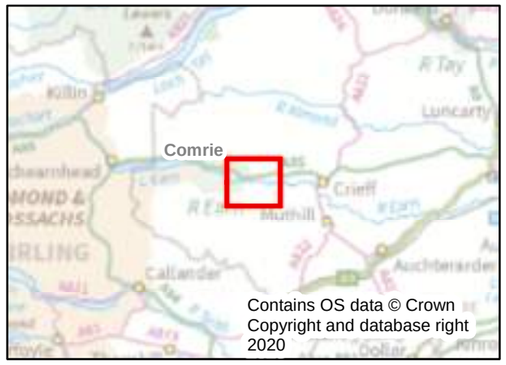
SM1498

Comrie

Legend

- EIA Study Area
- EIA Study Area - 2km Buffer
- Scheme Extents
- River Earn (Comrie to St Fillans) National Scenic Area
- Upper Strathearn Special Landscape Area
- Scheduled Monument
- Comrie Conservation Area (CA585)
- Aberuchill Castle Gardens and Designed Landscapes

0 0.5 1 Km



Rev.	Rev. Date	Drawing Suitability	Drawn	Appr'd
P01.1	04/02/2020	For Information	JB	RMcL

SWECO
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Tel: +44 131 550 6300

Client

Project

Comrie Flood Protection Scheme 2020

Drawing Title

Figure 5.1 - Landscape Policy Context

Scale @ A3	1:22,000
Project No.	119702

N

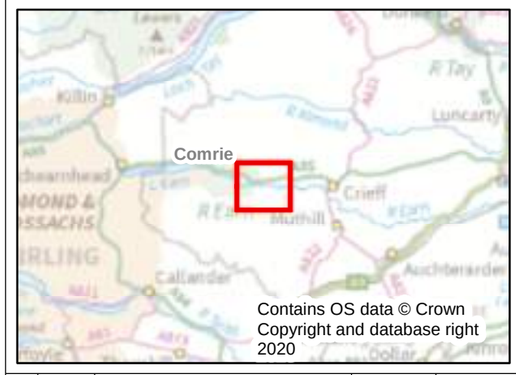
Legend

- EIA Study Area
- EIA Study Area - 2km Buffer
- Scheme Extents

Landscape Character Types (LCTs) SNH 2019

- Lower Upland Glens
- Lowland Hills - Tayside
- Mid Upland Glens
- Summits and Plateaux - Tayside

0 0.5 1 Km



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Comrie Flood Protection Scheme 2020

Drawing Title

Figure 5.2 - Landscape Character Context

Scale @ A3	1:22,000
Project No.	119702

National Scenic Area

5.5.6 The western section of the Scheme at The Field of Refuge Dalginross is located approximately 500m from the boundary of the River Earn (Comrie to St Fillans) National Scenic Area (NSA). Mitigation tree planting is proposed approximately 180m from the NSA boundary along the dismantled railway line located to the south of the Ross.

5.5.7 The relevant special qualities of the NSA are outlined within The Special Qualities of the National Scenic Areas (SNH Commissioned Report No.374. 2010) as follows:

- "A harmonious combination of highland and lowland
- An enclosed and unified strath
- The sinuous river at the heart of the NSA
- Rocky hillocks rising out of the level floodplain
- Diverse tree cover of woods and forests
- A managed, ordered landscape"

Special Landscape Area

5.5.8 The Scheme lies within the Upper Strathearn Special Landscape Area (SLA). Comrie is located at the south-eastern boundary of the SLA on the lowland side of the Highland Boundary Fault. The special qualities of the SLA are defined as follows:

- "The Highland Boundary Fault, the meeting point of upland and lowland, and a dramatic introduction to the Highland landscape;
- strong variety of landform and landcover: open mountains, glens, moorland, wooded slopes and river valley farmland;
- setting of Crieff and Comrie within the valley, backed by steep rugged hills;
- concentration of Neolithic landscape monuments;
- a highly scenic conjunction of landscape elements, with many opportunities to enjoy the view;
- a well-managed landscape with important parkland, policy woodlands and field boundary trees."

Conservation area

5.5.9 The Scheme is located within the Comrie conservation area which comprises the village of Comrie, the west of Dalginross and The Ross.

5.5.10 The Comrie conservation area Appraisal (Perth & Kinross Council 2010) provides useful information on landscape and townscape character and how it is valued. The appraisal acknowledges the importance of tree cover and landscaping to the Comrie townscape*, "Woodlands, tree groups, individual trees*

and boundary treatments all make a positive contribution to the character and appearance of the conservation area and its wider setting."

5.5.11 Effects of the Scheme upon the Comrie conservation area are assessed within **EIAR Chapter 9: Cultural Heritage**.

Landscape Baseline

Topography

5.5.12 Comrie is situated along the Highland Boundary Fault, which forms a distinct change in topography, separating highland from lowland. Comrie and Dalginross lie in a comparatively lowland area of flat topography at an elevation of approximately 60mAOD as illustrated in **Figure 5.3 Visual Context**.

5.5.13 The villages are surrounded by relatively flat lowland immediately to the west and east forming the floodplains of the River Earn and Water of Ruchill.

5.5.14 The topography to the north quickly rises beyond the village forming the wooded fringes of the Grampian Mountain Range.

Water Courses

5.5.15 Comrie is situated at the confluence of the Rivers Earn, Lednock and the Water of Ruchill.

5.5.16 The River Earn separates Comrie village from Dalginross to the south. It is a wide, fast flowing river, which meanders to the east and west of the village with a relatively straight section cutting between the two villages. The river banks of the Earn are steeply sloping and lined with mature and semi-mature trees. Tree cover is slightly reduced within the public open space in the vicinity of Dalginross Bridge. A weir is located to the west of the confluence with the River Lednock.

5.5.17 The River Lednock also forms a tributary to the River Earn and is located to the northeast of the village. The river is much narrower than the Earn with fast flowing waters and scattered rocks and boulders. The water course is heavily tree-lined.

5.5.18 The Water of Ruchill also forms a tributary to the River Earn and is a relatively shallow and heavily meandering river. Large areas of shingle deposit are located at the inside of meanders creating small islands in places. River cliffs form the banks on the outside of the meanders. The river banks are tree lined on both sides.

N

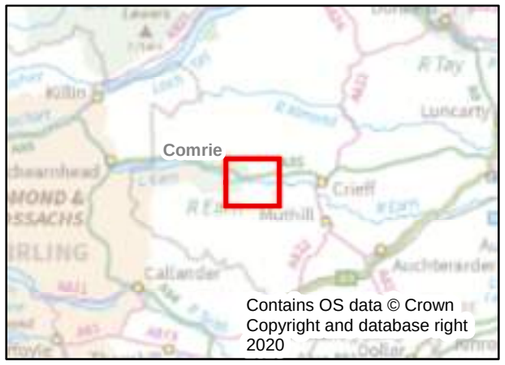
Legend

- EIA Study Area - 2km Buffer
- Visual Envelope
- Scheme Extents

Elevation (m)

- 40 - 80
- 81 - 130
- 131 - 180
- 181 - 230
- 231 - 300

0 0.5 1 Km



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Client

Project

Comrie Flood Protection Scheme 2020

Drawing Title

Figure 5.3 - Visual Context

Scale @ A3	1:22,000
Project No.	119702

Tree Cover

5.5.19 Extensive, mature, broad-leaf tree cover is visible along the three river corridors forming important green arteries within the landscape, contributing to the character of the rivers and the setting of the village.

5.5.20 Tree cover is present within the settlements of both Comrie and Dalginross and makes an important contribution to the character of the townscape. Smaller mature tree groups are evident in various gardens and open spaces; within the conservation area of The Ross; west Dalginross; and north of the River Earn. Fine individual specimens exist throughout the village, softening the higher density, built environment. Significant tree species within and around the edge of the village are oak, beech, lime, maple, alder, willow, ash, rowan, cherry, Scots pine, cypress and larch.

5.5.21 Trees in close proximity to the Scheme have been the subject of an arboricultural survey to British Standard BS5837:2012 *Trees in relation to design, demolition and construction recommendations*. Tree survey information is available in the *Comrie Flood Protection Scheme Arboricultural Report Parts 1 and 2, The Tree Inspector July 2018* and drawings *Tree Survey 119398/400/370 to 119398/400/380* **Appendix 5.1.**

5.5.22 BS5837 provides definitions for trees categorised from A to C and U:

- Category A trees are defined as "*being of high quality with an estimated remaining life expectancy of at least 40 years*". These trees are "*particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups of formal or semi-formal arboricultural features*".
- Category B trees are defined as, "*being of moderate quality with an estimated remaining life expectancy of at least 20 years*". These trees, "*may be included in category A, but are downgraded due to impaired quality such that they are unlikely to be suitable for retention in 20 years; or trees lacking the special quality necessary to merit the category A designation*."
- Category C trees are defined as, "*being of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter of less than 150mm*". These are, "*unremarkable trees of limited merit or impaired condition that they do not qualify in higher categories*".
- Category U trees are, "*those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years*".

5.5.23 Existing trees range in maturity with category B trees being the most commonly found. The tree survey identifies a number of BS5837 category A trees within close proximity to the scheme including: a 23m high copper beach tree at the entrance to Kintail house; a group of 14 mixed native broadleaf and fir trees up to 34m in height at Tomnagaske; a 18m high beech tree within the garden of

The Manse; a 22m high sycamore tree north of St Serf's church; a 22m high sycamore to the south of Comrie Holiday Park.

Built Form and Settlement Development

5.5.24 Comrie divides into four distinct areas: Comrie itself, north of the Earn, formed around the elongated Z-shaped street plan; Dalginross, south of the Earn, a historically linear planned settlement to the west with the addition of piecemeal, self-contained, modern housing developments to the east and south ; and the Ross to the west of Comrie, between the Earn and the Water of Ruchill forming a linear development along the main road.

5.5.25 Buildings include large villas dating from the 1800s mostly located to the west of Dalginross, Dundas Street to the west of Comrie and central Comrie, traditional, single storey weaver's cottages mostly located within the Ross but also scattered throughout the conservation area dating from the 1700s, contemporary detached bungalows within large housing estates mostly located to the east of Dalginross dating to the 1970s; and large, contemporary, two-storey, detached properties located largely to the south-west of Dalginross.

5.5.26 Built form is of relatively high density within the centre of Comrie reducing in density within Dalginross and The Ross.

Published Landscape Character Descriptions

5.5.27 The landscape character context has been established using information published at national and local levels and supported by field observations. Information from the following sources have been reviewed as part of the assessment process:

- SNH National Landscape Character Assessment; Scottish Natural Heritage (2019)
- Landscape Supplementary Guidance; Perth & Kinross Council (2015)
- Comrie Conservation area Appraisal; Perth & Kinross Council (2010)

5.5.28 The site and its immediate surroundings falls into The Lower Upland Glens Landscape Character Type 372, as defined by the SNH Landscape Character Assessment. The key relevant characteristics of this Landscape Character Type are described as follows:

- *"Lower sections of the principal glens north of the Highland Boundary Fault.*
- *Larger scale landscapes than the mid and upper reaches of these glens, which are generally wider with broader floodplains.*
- *Combinations of upland and lowland attributes, with evidence of glaciation, but lacking many of the classic glacial features, such as corries, hanging valleys and misfit rivers, found higher up.*
- *Broad floodplains, often with meandering rivers, interspersed with narrower, gorge-like sections where harder rocks cross the glens.*

- *The most settled parts of the glens, with transport corridors housing main roads and railways, large towns, castles, fortified manor houses, historic estates and estate villages.*
- *Modern expansion of larger settlements, with pockets of smaller housing development out of the main settlements.*
- *Fertile farmland on valley floor and valley slopes with large fields separated by hedgerows with tree lines, woodland belts and post and wire fences.*
- *Substantial and varied woodland cover - broadleaf woodlands clothing steeper slopes, around estate properties and along rivers, with conifer forests on valley sides and associated with estates.*
- *Influence of large estates, castles and Victorian development, with their historic buildings and parkland.*
- *Corridor views along the valley."*

5.5.29 The Landscape Character Type description notes that "At Comrie, which historically comprised two settlements, one each side of the bridge over the River Earn, recent growth has been concentrated on the Dalginross side. More recent development has sometimes comprised low density estates of similar or identical dwellings on the edge of these towns. These usually lack planting, screening or landscaping, while the infrastructure of internal roads, footways, drives etc. can appear overly suburban in this rural area."

5.5.30 The Landscape Character Type description concludes that, 'The combination of woodland and the pattern of large estates, Victorian settlements and productive farmland, gives this landscape type a rich yet dramatic character which contrasts both with the harsher upland areas, and with the more open lowland areas to the south. The high landscape quality, allied to the area's accessibility and the presence of a number of towns, means that tourism and recreation are important activities in the Lower Upland Glens, making important contributions to the area's economy.'

Scheme Areas

5.5.31 The visual envelope of the Scheme comprises a mixture of landscape and townscape areas. For the purposes of this assessment areas of landscape and townscape within the visual envelope are referred to as Scheme Areas. The visual envelope has been divided into 4 Scheme Areas focused on different sections (or 'reaches') of the different rivers to enable the assessment of the effects of the Scheme (Refer to **Figure 5.4 Scheme Areas**). The Scheme Areas have been divided based upon: the relationship of the river to townscape/landscape elements; the relationship of the river to open spaces; townscape grain; the scale, massing and density of buildings; architecture including height and type; heritage assets; enclosure; and vegetation type and pattern.

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Legend

- Visual Envelope
- Scheme Extents

Landscape Scheme Area

- Scheme Area 1 - Water of Ruchill
- Scheme Area 2 - Central Comrie and Dalginross
- Scheme Area 3 - River Lednock
- Scheme Area 4 - East Comrie and Dalginross

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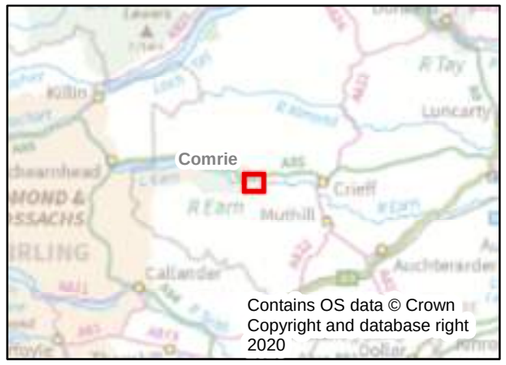
Metres



Rev.	Rev. Date	Drawing Suitability	Drawn	Appr'd
P01.1	04/02/2020	For Information	JB	RMcL

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Comrie Flood Protection Scheme 2020

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Figure 5.4 -
Landscape Scheme Areas

Scale @ A3	1:8,000
Project No.	119702

Scheme Area 1: Water of Ruchill

5.5.32 This Scheme Area is of large scale and follows the course of the Water of Ruchill from its confluence at the River Earn to Ruchilside in the south west of Dalginross. The area extends over flat farmland to the built fringes of The Ross to the northwest and Dalginross to the east. The area is open and expansive across the stretches of farmland, with the river corridor visible as a band of trees. There are high levels of tranquillity due to its location away from roads.

5.5.33 The course of the Water of Ruchill is very broad, shallow and meandering in this area. The riverbanks are high and steep in profile with areas of stone revetments and large expanses of gravel deposition. Tree cover is present along both banks of the river as narrow bands of self-set trees ranging in age and forming areas of woodland at the inner bank of the meanders. The remnants of an old railway line are visible to the north of the area, seen as a slightly raised embankment within farmland with intermittent tree cover.

5.5.34 Areas of rough grassland, pasture and arable farmland are located adjacent to the river corridor. Fields are large and irregular with gappy hedgerows, post and wire fencing and vernacular style rubble stone walling. Dalginross Roman fort, annexe, camp and stone circle scheduled monument, and four tumuli scheduled monuments are present within farmland to the south east of the Scheme Area.

5.5.35 The north western and eastern fringes of this Scheme Area are defined by residential development present along the edge of The Ross and Dalginross. Buildings are largely located within the Comrie conservation area. Development is low density and includes traditional weavers' cottages (seen in the Ross), large Victorian villas set in expansive gardens, and recent infill developments of mostly detached housing. Large, mature broadleaf and evergreen trees are located in residential gardens, softening the appearance of the built environment. An avenue of Category A Lime, Sycamore and Fir trees are located along the driveway and perimeter of Tomnagaske house to the west of Dalginross, forming a distinctive landscape feature. Trees to the rear of Auchenross and Rossdhal residential properties in the Ross include groups of mature broadleaf and evergreen native and non-native species which are characteristic of both the Ross and the west of Dalginross.

5.5.36 A large concrete flood wall and ditch form the boundary to residential properties to the northeast of the area. A flood embankment is present along the edge of Dalginross to the southeast of the area. Both of these features form detracting, engineered elements within the Scheme Area.

5.5.37 This area is located within the Upper Strathearn Special Landscape Area and contains a number of Scheduled monuments. Built development along the fringes of the Ross and Dalginross largely lies within the Comrie conservation area. Despite the high value heritage assets and designations found within this area and its location within the Special Landscape Area the susceptibility of the landscape to the proposed development is considered to be moderate due to:

the common place existing landscape elements; the larger scale of the landscape; and the presence of existing flood protection structures already present within the landscape. This area is therefore considered to be of **medium** sensitivity to the proposed development.

Scheme Area 2: Central Comrie and Dalginross

5.5.38 This Scheme Area is of small scale with a finer grain and has a strong sense of enclosure along the river corridor. The area follows the course of the River Earn from Ruchearn residential property on Dundas Street on the north bank and the Field of Refuge car park on the south bank to the confluence of the River Lednock. The Scheme Area includes residential properties on Strowan Road to the south of the river and properties located within the Comrie conservation area to the north of the river.

5.5.39 This is a relatively broad, straight section of the River Earn. A weir forms a distinctive feature within the watercourse along with rocks and extensive shingle deposits located at the confluence of the Water of Ruchill. The river banks are relatively high with steep profiles. Rocky outcrops are also visible along the base of banks.

5.5.40 The river banks are lined with linear belts of mature and semi-mature self-set trees with a pocket of woodland present at the confluence of the Water of Ruchill. Tree cover is less extensive along the south bank at Strowan Road, consisting of a single row of young, scattered, self-set trees. Tree species are largely native.

5.5.41 Public open spaces are located adjacent to the north and south banks of the river at Dalginross Bridge. These consist of amenity grass, trees, shrubs and ornamental planting along with self-set riverside vegetation. The public space to the north east of the river is semi-private towards its eastern extents with post and rail timber fencing demarcating an ownership boundary. This is the main public green space within the village and is therefore valued by the local community. The green space along the river makes an important contribution to the overall setting of the village and conservation area.

5.5.42 The majority of this area falls within the Comrie conservation area which covers the west of Dalginross on the south bank of the river and Comrie on the north bank of the river. Building styles vary across the area and include large, stone built, Victorian villas; lower level traditional cottages; and modern bungalows seen as infill development to the north of the river and along Strowan Road to the south east. The White Church forms a landmark building within this Scheme Area. Comparatively modern bungalows on the south bank form slightly detracting, suburbanising elements. Boundary treatments include traditional whinstone rubble walling and brick walling within the conservation area. Boundary treatments outside the conservation area include, post and wire fencing and hedges.

5.5.43 The tree lined river and surrounding green space are located within the Comrie conservation area and contribute to the setting of the village and its listed buildings, softening the appearance of built form.

5.5.44 This Scheme Area is considered to be of **high** sensitivity to the proposed Scheme due to the high value of the public space and the relatively small-scale enclosed nature of the Scheme Area, increasing the susceptibility of the river corridor and townscape to the Scheme.

Scheme Area 3: River Lednock

5.5.45 This Scheme Area follows the course of the River Lednock from its confluence at the River Earn in the south to Dundas Bridge in the north and includes the townscape along the fringes of the river corridor. The landscape is small in scale and enclosed along the river corridor.

5.5.46 The course of the River Lednock is straight and relatively shallow as it cuts through Comrie, then meanders sharply to the west at Dundas Bridge. The riverbanks are mostly steep in profile and vary in height. Existing concrete flood walls and gabion baskets are present along the riverbank in the vicinity of St Margaret's Church.

5.5.47 Tree cover is located along both banks as bands of mature and semi-mature mostly self-set, largely broadleaf, native trees. Mature garden trees from the adjacent residential properties and churchyards add to the leafy character of the river corridor, along with the ornamental garden shrubs, amenity grass and area of meadow grassland located to the north of St Serf's Church.

5.5.48 The A85 cuts through the character area across the steel Bridge of Lednock. The road is raised above the river, which along with the shelter created by the surrounding buildings and tree cover lessens its influence upon this Scheme Area. Built development lies adjacent to the river corridor and is largely unified in character with the exception of the south-western fringes of the Comrie Holiday Park. Buildings are small-scale, low-density and comprise residential properties and two churches. Boundary treatments include vernacular whinstone rubble walling, weathered concrete retaining walls around St Margaret's Church, red sandstone on Lednock Bridge, garden hedgerows and timber fencing along the western boundary of the Comrie Holiday Park. This area is mostly located within the Comrie conservation area.

5.5.49 There is a moderate sense of place at St Margaret's church due to the combination of a statue Mary located underneath distinctive category B fir trees adjacent to the river.

5.5.50 This area is considered to be of **medium** sensitivity due to the moderate levels of mature tree cover, the largely unified built environment and its position within the conservation area, modified by the influence of the A85, the south western extents of the Comrie Holiday Park, the generally commonplace landscape features present and its largely concealed position within the village.

Scheme Area 4: East Comrie and Dalginross

5.5.51 This Scheme Area follows the course of the River Earn from the confluence of the River Lednock to the eastern fringes of the settlements of Comrie. The area includes the Comrie Holiday Park, the modern, suburban-style, residential development to the east of Dalginross and the immediately adjacent farmland. The area is open and expansive across the stretches of farmland, with the river corridor visible as a band of trees. There are high levels of tranquillity due to its location away from roads.

5.5.52 This is a relatively broad and straight section of the River Earn which separates the villages of Comrie and Dalginross. The river banks are relatively high with steep profiles.

5.5.53 The river corridor has a well wooded character due to the strong belts of mature and semi-mature tree cover, creating enclosure. Trees groups are present around the scattered farmsteads to the north and south of the river. Tree species are largely native and broadleaf.

5.5.54 Buildings are low-level comprising modern bungalows to the south of the river and the partially screened caravans of Comrie Holiday Park to the north of the river. Boundary treatments to the south of the river include engineering brick walling, timber fencing, post and wire fencing and hedges. Boundary treatments to the north of the river include evergreen hedgerow around the caravan park, post and wire boundary fencing.

5.5.55 Mixed arable and pasture farmland, and rough, wet grassland are located beyond the eastern extents of Comrie and Dalginross with field boundaries including gappy hedgerows, and post and wire fencing. Fields are large scale and irregular in pattern. The disused railway line forms a embankment to the east of Comrie.

5.5.56 Despite its position within the Upper Strathearn Special Landscape Area, this Scheme Area is considered to be of **medium** sensitivity due to the lower quality townscape, moderate scale of the landscape, and common place landscape elements moderated by the high susceptibility of the river corridor to change.

Visual Baseline

5.5.57 Long distance views of the site are generally limited due to the surrounding townscape and high levels of tree cover. Therefore, the majority of the representative viewpoints are located in very close proximity to the Scheme and are taken from publicly accessible locations including public open spaces, core paths, roads and valued views within the village. Viewpoint 1 Melville Monument, located at approximately 1.6km from the Scheme is however the exception, as views of the trees along the whole river corridor are visible from this key panoramic viewpoint which is popular with walkers.

Views from the agreed representative viewpoints are described in **Table 5.4** below (refer to **Figure 5.5** Representative Viewpoint Locations and **Figure 5.6** Representative Viewpoints 1-11).

Table 5.4: Representative Viewpoints

Representative Viewpoint	Receptors & Sensitivity	Scheme Area	Description
Viewpoint 1: Melville Monument	Users of core path CMRI/53/1 and PRoW25/7. This is a recognised local viewpoint within the National Scenic Area. Overall **high** sensitivity.	Long distance viewpoint.	This view is long-range and panoramic. The main direction of the view is southeast towards the valley bottom. The wooded valley slopes of the River Lednock can be seen in the foreground. Beyond this the villages of Comrie and Dalginross and the surrounding low-lying farmland are visible in the middle distance. The villages of Comrie and Dalginross form a focal point in the middle distance of the view. The surrounding highland to the south is seen in long range views. High levels of tree cover are seen on the wooded hillsides and linear belts of riverside and field boundary trees in the low-lying middle distance. The River Earn corridor is visible as a distinct line of trees cutting across the built-up area of Comrie and Dalginross. The meandering river corridor of the Water of Ruchill is visible to the west of the village.
Viewpoint 2: Core Path CMRI 1/5	Users of Core path CMRI 1/5, Tomnagaske residential property, and residential properties located along the western boundary of Dalginross. Overall **high** sensitivity.	Scheme Area 1: Water of Ruchill	This is a direct, medium range, open view across arable farmland towards residential properties on the western boundary of Dalginross. Mature tree cover surrounding the residential property of Tomnagaske encloses views to the north. A band of mature trees largely encloses views to the south. Riverside tree belts enclose views to the west. High levels of tree cover are present within the view forming distinctive landscape elements and softening the appearance of the built environment. An existing flood embankment is visible along the settlement boundary forming an inconspicuous element within view due to its relatively low height. Distant views of the surrounding hills and mountains can be seen above the tree cover to the north and south of the view.

Representative Viewpoint	Receptors & Sensitivity	Scheme Area	Description
Viewpoint 3: Comrie Walk Public Right of Way	Users of Core path CMRI 1/5, Tomnagaske residential property, and residential properties located along the western boundary of Dalginross. Overall **high** sensitivity.	Scheme Area 1: Water of Ruchill	This is a direct, medium range, open view across the intervening rough grassland towards the western boundary of Dalginross. The residential property of Tomnagaske and its tree lined drive and gardens enclose views to the south. Riverside tree belts enclose views to the west. A group of up to approximately 34m high broadleaf and evergreen trees adjacent to Tomnagaske from a strong vertical focal point in the view to the south whilst mature garden trees and the upper storey of St Kessogs forms a focal point to the northwest. The concrete flood wall along the settlement boundary forms an inconspicuous element within view due to its weathered appearance and varied texture. Glimpses of the river and areas of gravel deposit are available between the semi-mature riverside tree belt to the west. Distant views of the surrounding hills and mountains can be seen above the tree cover to the north and south of the view.
Viewpoint 4: Dalginross Bridge	Users of core path 133/2, and Combruith Hotel, located within Comrie conservation area. Overall **high** sensitivity.	Scheme Area 2: Central Comrie and Dalginross	This is a key viewpoint within the village with direct, close range views overlooking the River Earn corridor and the confluence of the Water of Ruchill to the west. The view to the west is particularly sensitive, as the White Church forms a key focal point which combined with the high levels of tree cover that frame the river and distant hills, creates a picturesque scene with a strong sense of place. The tree lined river forms the focal point of the long-range view to the east. The Melville Monument forms a distant focal point on the hillside above Comrie in the framed, axial view along the bridge to the north. Oblique, short range views of the public space, riverside residential properties, and upper sections of buildings on Drummond Street are available to the north. Oblique, short range views of the modern residential properties on Strowan Road are partially screened by young, self-set riverside trees. The hills and mountains surrounding the villages are visible in the distance to the north, south and west. Recent development to the north east of Dalginross slightly detract, from the otherwise unified, harmonious view.

Representative Viewpoint	Receptors & Sensitivity	Scheme Area	Description
Viewpoint 5: Open Space North of the River Earn	Residential properties facing the river including: Earnside, Plum Cottage, Earnmhor, Earnside Cottage, East Riverside, and Newcroft; and users of the public open space. Overall **high** sensitivity.	Scheme Area 2: Central Comrie and Dalginross	This is a slightly sunken, short-range viewpoint located along the north bank of the River Earn overlooking the River Earn which forms the focal point. Partial views of Dalginross Bridge and the White Church spire provide focal points in oblique views to the west. High levels of riverside tree cover enclose views to the east and west. The high river bank to the north and modern residential properties of Strowan Road enclose the view to the south. The riverside public open space is visible in the foreground of the view. Modern residential buildings and boundary treatments have a detracting influence on the character of the view at this location. Riverside trees assist in softening the surrounding buildings reducing their influence on the character of the view which retains rural village qualities seen in the older conservation area buildings.
Viewpoint 6: Strowan Road	Residential properties located on Strowan Road. Overall **high** sensitivity.	Scheme Area 2: Central Comrie and Dalginross	This is a largely contained view overlooking the River Earn to the north, which is filtered by young riverside trees located along its southern bank. The public open space and residential properties located to the north of the river are visible between the intervening riverside trees. The Melville Monument forms a distant focal point within the view, seen above rooftops on a hillside overlooking the village. Low quality post and wire fencing along the riverside and within residential gardens forms a detracting element. The modern properties along Strowan Road have a slightly detracting influence due to their indistinct, suburban architectural style.
Viewpoint 7: Lednock Bridge	Residential properties to the south of the bridge including Inglewood House, Glenbuckie, Riverside and Earnside, residential properties to the north of the bridge including Lednaig and Catonia Cottage, St Margaret's Church, St Serf's Church located within the Comrie conservation area. Overall **high** sensitivity.	Scheme Area 3: River Lednock Corridor	This is a short range, enclosed view over the heavily treed, narrow corridor of the River Lednock. The steel structure of Lednock Bridge and short section of the A85 are visible in views to the north. The bridge structure provides a focal point within the view. Red sandstone ashlar walls associated with the bridge can be seen to the north to extend along the boundary wall of Lednaig and St Serf's Church. Extensive, mature, largely broadleaf, riverside tree cover is visible within most of the view, largely screening all riverside buildings. Glimpses of the roof of Lednaig and upper sections of St Serf's Church can be seen between tree canopies. The upper storey of Glenbuckie residential property is visible behind mature garden shrubs and trees to the south east of the view. Buildings in Comrie village are visible in longer range views along the A85 to the west. The entrance to Comrie Holiday Park can be seen in longer range views along the A85 to the east. Filtered views of the River Lednock are available between the framework of the bridge. Glimpses of whinstone, rubble retaining walls are visible along the boundary of Glenbuckie amongst riverside vegetation.

Representative Viewpoint	Receptors & Sensitivity	Scheme Area	Description
Viewpoint 8: Dundas Bridge	Users of Core Path CMRI43 and the Glen Lednock circular walk. Located within the Comrie conservation area. Overall **high** sensitivity.	Scheme Area 7: River Lednock Corridor	This is a short range, enclosed view overlooking the River Lednock corridor. Continuous belts of mature trees are visible along both banks of the river and enclose the view. The focus of the view is to the south along the straight section of the River Lednock. St Margaret's Church is partially visible through the intervening tree cover. A concrete retaining wall is partially visible along the riverbank at St Margaret's Church. Although of low quality, its dark, weathered colour and the extensive tree cover result in it forming an inconspicuous element in the view. Closer to Dundas Bridge, red sandstone ashlar retaining walls and gabion basket retaining walls are visible in oblique views. Oblique views to the west include the public carpark. Views to the north and north east are enclosed by tree cover.
Viewpoint 9: Core Path CMRI 14/1	Users of core path CMRI 14/1, PRoW25/35 and residential properties located on Strowan Road and Dalginross Gardens. Overall **high** sensitivity.	Scheme Area 4: East Comrie and Dalginross.	Located at the confluence of the River Lednock, this is a direct, short range view overlooking the River Earn and River Lednock corridors, enclosed by the surrounding riverside tree cover. The confluence of the River Lednock forms the focus of the view. The River Earn weir is visible in partially filtered views to the west. Partial views of caravans within Comrie Holiday Park can be seen behind the intervening mature riverside trees to the northeast of the view. The core path, riverside trees and the residential property and its boundary fence can be seen in oblique views to the west. The fire station, its boundary fence and core path can be seen in oblique views to the east. Distant filtered views of the surrounding high land to the north can be seen through the mature riverside tree cover. The Comrie Fire Station, and Comrie Holiday Park, form slightly detracting elements within this otherwise rural view.
Viewpoint 10: East Dalginross	Users of Core Path CMRI4/1 and residential properties located along the western boundary of Dalginross including Tay Avenue, Dochart Place and Earnmuir Road. Overall **high** sensitivity.	Scheme Area 4: East of Comrie and Dalginross	This is a medium to long-range open view towards the western boundary of Dalginross. Modern bungalows are visible across the intervening arable field due to the low- level boundary treatments of timber fencing and hedgerows. The residential properties sit low within the view and are seen against a backdrop of wooded hills and distant mountain peaks, which form the focus of the view. The course of the River Earn is visible in the line of riverside trees, which enclose views to the north.

Representative Viewpoint	Receptors & Sensitivity	Scheme Area	Description
Viewpoint 11: Core Path CMRI126/5	Users of Core Path CMRI126/5 and residential properties including Brynview and Laggan House. Overall **high** sensitivity.	Scheme Area 4: East of Comrie and Dalginross	This is a medium to long-range, open, view across rough grassland and farmland pasture. The core path is visible along the remnants of a former railway embankment in the foreground of the view surrounded by post and wire fencing. Brynview house can be seen in short-range views to the west. The upper sections of Comrie Holiday Park caravans are visible in medium range views. Riverside and field boundary trees enclose the view in the medium distance. The course of the River Earn is visible in the line of riverside trees, which enclose views to the south. A group of prominent, mature broad leaf and evergreen trees is visible in the middle-distance screening Invermilton farm.

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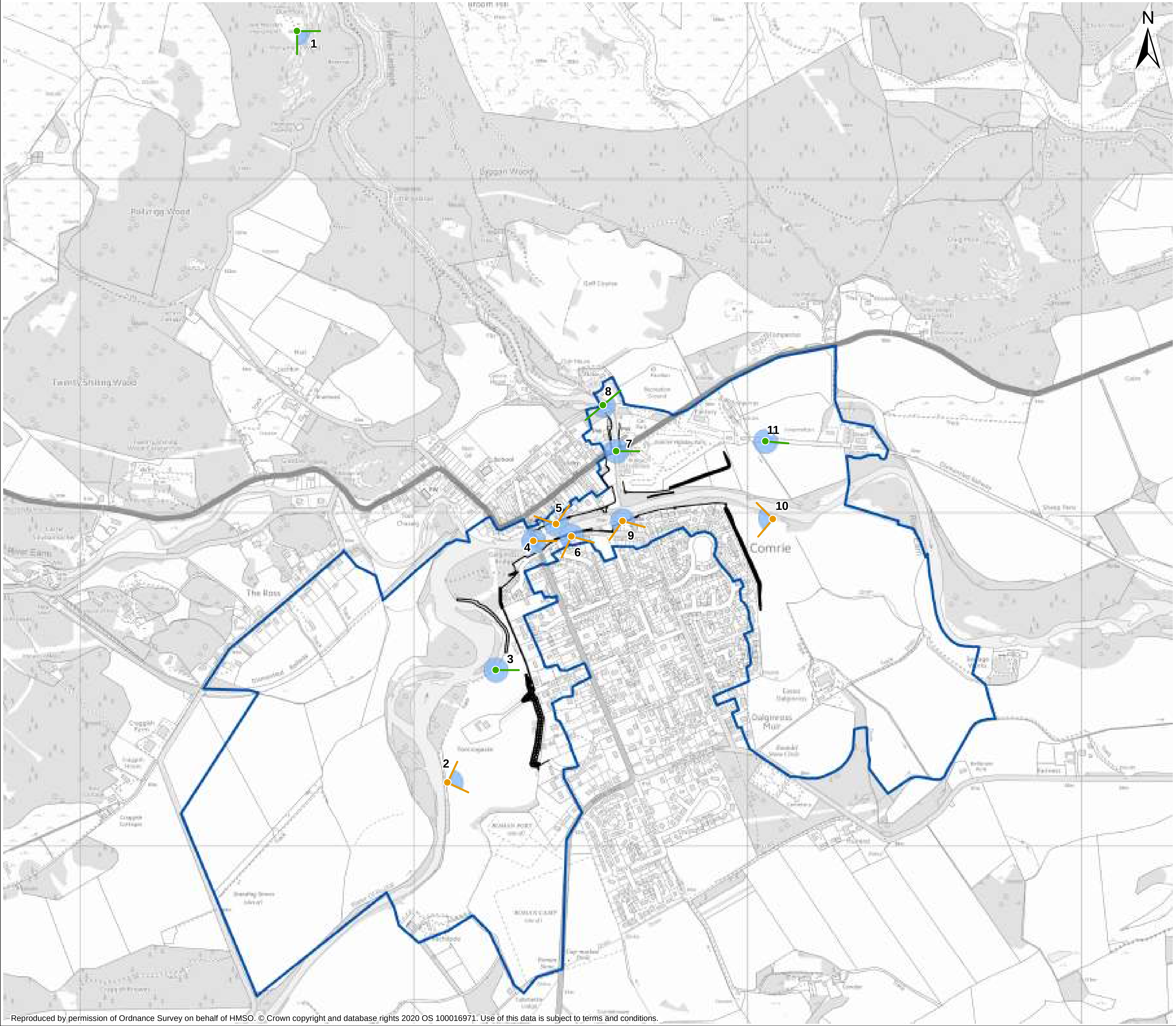


Legend

Visual Envelope

Scheme Extents

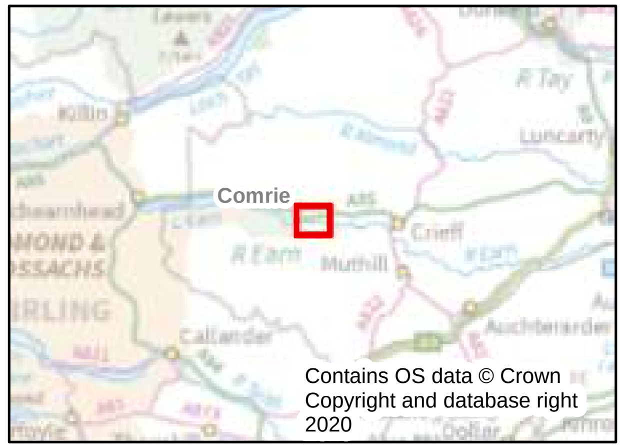
Representative Viewpoints*

Viewpoint

Viewpoint with Photomontage

*Note: Blue arcs show the angle of view of each individual viewpoint

0 200 400 Metres



P01.1	04/02/2020	For Information	JB	RMcL
Rev.	Rev. Date	Drawing Suitability	Drawn	Appr'd

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Client

Project

Comrie Flood Protection Scheme 2020

Drawing Title

Figure 5.5 - Representative Viewpoint Locations

Scale @ A3	1:11,000
Project No.	119702

5.6 Mitigation

5.6.1 Following preliminary assessment of the potential landscape and visual effects of the Scheme and an iterative process of design amendment and re-assessment, the following measures were identified as necessary to avoid, reduce and mitigate potentially adverse effects on the landscape character of Scheme Areas and visual amenity. These measures are embedded within the design proposals as illustrated on the outline Comrie Flood Protection Scheme drawings *119398/400/303 to 119398/400/327*.

5.6.2 Proposed landscape related mitigation measures are described below under the following broad headings. Further details for each Scheme Area are provided in the assessment of construction and operational effects.

Alignment

5.6.3 The alignment of the Scheme has been designed to minimise tree loss as far as possible. This includes:

- re-alignment of the embankment to the west of Dalginross in order to retain trees present in back gardens;
- re-alignment of the flood wall along Strowan Road in the vicinity of the playing field to retain trees along the river bank;
- re-alignment of the flood wall along the west bank of the River Lednock to follow the boundary of Glenbuckie house garden in order to retain riverside trees and access to the river from the garden;
- re-alignment of the embankment to the south of the Comrie Holiday Park to follow the existing field pattern.

Detailed Design of Flood Walls

5.6.4 The proposed flood walls have been designed to minimise adverse effects on landscape character and visual amenity through the careful selection of material finishes. Due to the large number of mature trees lost as a result of the Scheme the proposed walls would be more prominent. Therefore, in the most sensitive areas of the village, natural whinstone rubble cladding with whinstone rubble coping has been specified. The design of these walls would be in the vernacular style, reflecting existing walling present in close proximity to the Scheme.

5.6.5 Proposed walling near St Margaret's and St Serf's churches are specified to be clad in natural stone to reflect the surrounding townscape character.

5.6.6 Where concrete walls are proposed in the less sensitive areas of the Scheme they would be cast in concrete with a natural stone wall texture which would have a high level of variation in pattern. Over time this would weather resulting in a softer appearance and less engineered presence than an otherwise plain concrete finish.

Tree Planting

5.6.7 Replacement woodland planting is proposed within gaps created along the banks of the rivers created by tree removal in order to ensure the retention of continuous green links along the water courses. Replacement tree planting is proposed over and above the required hectare of replacement planting as agreed with the Forestry Commission Scotland and Perth & Kinross Council (meeting of 28th August 2018 refer to table 5.3 Consultation undertaken). Approximately 3370m^2 of replacement native tree planting including specimens ranging in height and including feathered forms are proposed along the banks of the river. The majority of the proposed tree planting would be transplants. However, larger extra heavy and semi-mature trees are proposed where space is available and instant impact is required.

5.6.8 In addition, 2662m^2 of native broadleaf woodland planting is proposed to the south of the Comrie Holiday Park to form an extension to the existing riverside tree belt and assist in screening views of the embankment from the core path to the south of the River Earn integrating it within the surrounding landscape.

5.6.9 Due to the high levels of tree cover lost to enable construction, additional compensatory tree planting has been incorporated within the landscape scheme to provide a continuous green network of tree cover along the embankment of the dismantled railway to the south of The Ross for ecological benefit. Two areas of approximately 3168m^2 and 1819m^2 of young tree planting are proposed to join existing blocks of trees.

5.6.10 For details of mitigation and compensatory planting proposals refer to the ***Outline Landscape Proposals drawings 119398/400/350 to 119398/400/360***.

Reinstatement of Gardens

5.6.11 Private gardens impacted by the construction works would be reinstated subject to agreement with landowners. Details of reinstatement would be determined at detailed design stage and in consultation with Perth & Kinross Council and the affected homeowners. As noted above in paragraph 5.3.40, the assessment is based upon the current landscape Scheme drawings (refer to ***Outline Landscape Proposals drawings 119398/400/392 to 119398/400/402***) and due to the stage of the development, replacement garden vegetation has not been included in this assessment.

Enhancement Proposals

5.6.12 A number of enhancements are proposed near Dalginross Bridge which is the most visually sensitive area of the Scheme. Enhancements include tree and shrub planting on Strowan Road and the introduction of a surfaced path within the green space to the east of Dalginross Bridge. The existing footpath from Dalginross Bridge into the green space to the north west of the bridge would be regraded to ensure accessibility for all.

5.6.13 In addition to this, enhancements are proposed which will be finalised at the detailed design stage of this project. Improvements to the greenspace on the south bank of the River Earn adjacent to the Field of Refuge are proposed and would include the introduction of an accessible path into the space, new seating, and the removal of three trees along the river bank to open up views of the water from this location. In addition to this, improvements are to be made to Legion Park for the future provision of events formerly held at the riverside greenspace and will include: improvements to the entrance; the creation of a flexible area of hardstanding to provide both carparking and an events space; and the introduction of ornamental planting.

5.7 Potential Effects

Construction Effects on Landscape Designations

River Earn (Comrie to St Fillans) National Scenic Area

5.7.1 The Scheme is located outside the National Scenic Area and would not be directly affected. The Scheme is of a small scale therefore there would be a Negligible indirect effect upon views. This would result in a **negligible** and **not significant** construction phase effect.

Upper Strathearn Special Landscape Area

5.7.2 Construction activity including the establishment of compounds, tree removal activity and the construction of the embankments is considered to have a **negligible** magnitude of change due to the small scale and temporary nature of the activity. This would result in a **negligible** and **not significant** residual construction phase effect.

Construction Effects on Tree Cover

5.7.3 Trees removed as a consequence of the proposed approach to construction (including access) as opposed to the physical extents of the Scheme are considered within this section. A working width of 5m either side of the flood walls has been assumed for the purposes of assessment. The outline design of the Scheme provides indicative locations of flood wall foundations to be agreed at detailed design. Therefore, all trees with rootzones falling within the 5m working width are considered under the operational phase effects.

5.7.4 There are however exceptions where the location of foundations are known, and tree loss can be directly attributed to construction activity alone. The locations are provided below:

- The construction of the proposed flood wall located along the western settlement boundary of Dalginross would result in the loss of approximately 7 Category B trees and 2 Category C trees.

- The construction of the proposed embankment along the western settlement boundary of Dalginross would result in the loss of approximately 1 Category A tree, 8 Category B trees and 1 Category C tree.
- The construction of the reconfigured driveway at Tomnagaske would result in the loss of 1no. Category A sycamore tree and 1no. Category A lime tree.
- Tree removal to enable access for the construction of erosion protection along the Water of Ruchill would result in the loss of approximately 4 Category B trees, 7 Category C trees and 2 Category U trees.
- The construction of flood walling along the River Lednock in the vicinity of St Margaret's Church would result in the loss of approximately 6 Category B trees and 6 Category C trees where rootzones would not be directly affected by the Scheme but access would be required to the existing wall.

5.7.5 Good practice in construction would be carried out when working in close proximity to tree root zones in line with BS5837:2012 in order that as many trees noted above and defined as 'possible to retain' would be retained (refer to **drawings *119398/400/381 to 119398/400/391 Trees to be Retained and Removed***).

5.7.6 The loss of tree cover is not individually assessed in this section. It is carried through into the assessment of construction effects on the character of Scheme Areas where it is forms part of the overall assessment of effects on the landscape character of Scheme Areas.

Construction Effects on the Character of Scheme Areas

5.7.7 Many of the likely construction activities would have the potential to cause temporary changes to the structure and pattern of Comrie and Dalginross because of the temporary introduction of new features (e.g. construction compounds, vehicles and plant). The potential landscape effects during the construction phase are considered likely to include:

5.7.8 Effects on the Scheme Areas due to the:

- Establishment of site compounds and fencing;
- Presence of HGVs on site;
- Site clearance including substantial tree removal and topsoil stripping;
- Temporary and permanent loss of on-site trees and vegetation
- Advanced works, including any utility diversions;
- Remediation earthworks at the gasworks site;
- Flood wall construction;
- Flood embankment construction; and
- Installation of bank erosion protection measures.

5.7.9 In relation to most of these temporary effects, no specific mitigation measures have been proposed with respect to the landscape for the construction phase, but 'good construction practices' would be implemented and would include the erection of hoarding around the operational areas of the site to screen the construction works and compound where possible.

5.7.10 It is anticipated that the construction would be phased and would be undertaken over a period of approximately 36 months, with construction anticipated to start in 2020.

5.7.11 Overall the construction activities would form a noticeable introduction of uncharacteristic elements within the landscape character across all Scheme Areas. Visual changes would be medium term in duration. However, the works associated with the construction period would be temporary and reversible. Therefore, overall it is considered that the magnitude of effect resulting from these works would be **minor** adverse and **not significant**.

Operational Effects on Landscape Designations

River Earn (Comrie to St Fillans) National Scenic Area

5.7.12 The Scheme is located outside the National Scenic area therefore it would not be directly affected.

Upper Strathearn Special Landscape Area

5.7.13 The majority of the Scheme is located outside the Special Landscape Area (SLA) as it falls within the settlements of Comrie and Dalginross. However, the flood walling and embankments proposed to the east and west of Dalginross, and the embankment proposed to south of the Comrie Holiday Park fall within the SLA. Proposed mitigation tree planting along the disused railway line also falls within the SLA. The proposed wall and embankments would form a barely perceptible element within the overall SLA due to their low height and alignment which follows the existing settlement and field pattern. The magnitude of change at both the year of opening and twenty years hence is considered to be **negligible**, resulting in a **negligible** and **not significant** residual landscape effect.

Proposed Tree Removal

5.7.14 **Drawings 119398/400/370 to 119398/400/380 Trees Survey with the Scheme**, **drawings 119398/400/381 to 119398/400/391 Trees to be Removed and Retained**, **Appendix 5.1 Schedule of Trees to be Removed and Retained** and **Appendix 5.2 The Tree Inspector Comrie Flood Protection Scheme Arboricultural Report Parts 1 and 2** provide details of trees to be removed as a result of the Scheme.

5.7.15 The assessment differentiates between trees that would be removed as a consequence of the footprint of the proposed flood protection structures (i.e. treated as an Operation Phase effect of the Scheme) as opposed to those additional trees that would also be removed as a specific and additional consequence of the Construction Phase and its proposed activities, selected methodologies and access proposals.

- The principal impact of the Scheme on landscape features would be the removal of existing trees along the river banks and within gardens to accommodate the flood structures and erosion protection. Approximately 530 trees are assumed be removed (510 of which have been surveyed).
- the removal of a group of prominent mature trees including 3 Category A trees along the driveway of Tomnagaske;
- the removal of 1no. Category A tree at the entrance to Kintail.

5.7.16 This figure includes approximately 44 trees that are assumed to be removed for Construction Phase purposes as described above. Efforts would be made to retain trees highlighted on **drawings *119398/400/381 to 119398/400/391 Trees to be Retained and Removed*** as *'possible to retain'* through careful construction methods and where root zones may be found to not extend within the construction area due to existing obstacles such as boundary walls and existing embankments.

5.7.17 Tree removals are relatively evenly distributed along the full extents of the Scheme. Continuous bands of clearance resulting in continuous gaps in tree cover occur along the banks of the Water of Ruchill; along the banks of the River Earn at Strowan Road and south of the Comrie Holiday Park; and along the banks of the River Lednock. Tree loss would have the greatest effect along the River Lednock due to the lower levels of tree cover to be retained.

5.7.18 A number of Category A trees would be lost as a result of the Scheme including:

- A group of 2no. Lime tree and 2no.Sycamore trees of over 20m in height located on the Tomnagaske driveway;
- 1no. Beech tree of 18m in height in the garden of Mansfield (it may be possible to retain this tree depending on the location of its root zone when investigated on site at construction phase);
- 1no. Sycamore tree of 22m in height located to the south of Comrie Holiday Park;
- 1no. Sycamore tree of 22m in height located to the west of St Serf's church;

Operational Effects on Scheme Areas

Scheme Area 1: Water of Ruchill

Mitigation

5.7.19 Replacement tree planting is proposed to reinstate trees felled along the river bank due to the installation of bank protection. This would restore the continuous belt of riverside trees.

5.7.20 A vernacular style whinstone rubble walling finish has been specified for walls at the driveway to Tomnagaske.

5.7.21 Replacement planting would be carried out within private gardens to be agreed with landowners at detailed design stage. NB: Private garden reinstatement is not included in this assessment and will be agreed with the Council and local residents at the next stage of design.

5.7.22 Compensatory tree planting is proposed along two sections of the dismantled railway line to the north west of the Scheme Area as compensation for the large number of trees lost as part of the Scheme. Tree planting includes broadleaf and evergreen native species selected to replicate existing tree cover in the area and to join up areas of existing tree cover along the dismantled railway line to form a continuous green link. This will also provide Biodiversity benefits, as highlighted in **Chapter 8: Ecology and Nature Conservation**.

Magnitude of Change Operation Phase (year 1 in winter)

5.7.23 The introduction of the Scheme would result in the loss of approximately 90 trees including approximately 2 Category A trees and approximately 15 Category B trees (tree loss along the settlement boundary of Dalginross and for access to the Water of Ruchill is taken into account within construction effects). Key areas of tree loss include:

- approximately 150m of tree removal along the riverside to accommodate the rootwad revetments erosion protection;
- the removal of a group of prominent mature trees including 3 Category A trees along the driveway of Tomnagaske;
- the removal of 1no. Category A tree at the entrance to Kintail.

5.7.24 Mitigation tree planting would not have reached a level of maturity to fill the gap created within the riverside tree belt or soften the appearance of residential properties. Overall, tree loss is considered to represent a relatively small-scale change in tree cover within the wider Scheme Area.

5.7.25 The introduction of the extended flood embankment and changes to the driveway at Tomnagaske including embankments would add non-naturalistic earthworks to this largely flat area.

5.7.26 The introduction of the proposed stone wall textured concrete flood wall of up to approximately 3m in height and the extension of the existing embankment of approximately 3.3m in height are considered overall to form small-scale changes consistent with the existing character of the area and characteristic of existing features. The reinstatement of the drainage ditch as a natural rather than concrete ditch would form a minor improvement. Changes are considered to be long term and irreversible due to the loss of mature tree cover.

5.7.27 The introduction of a 150m section of root wad erosion protection is considered to be a sensitive approach to erosion protection due to its naturalistic looking appearance.

5.7.28 Compensatory tree planting is in keeping with the surrounding landscape character.

5.7.29 On balance, the overall magnitude of change is therefore considered to be **low.**

Magnitude of Change Operation Phase (year 20 in summer)

5.7.30 The magnitude of change is considered to be **low**. Replacement tree planting would have begun to mature but would not have reached baseline levels. The proposed flood walling would have weathered, softening its appearance within the landscape. Bank protection would have matured forming a green edge to the river. Changes would be irreversible and long term, due to the loss of mature trees.

Significance of Effect

5.7.31 The significance of the effects of the scheme upon Scheme Area 1: Water of Ruchill is considered to be:

- **Minor adverse (not significant) in year 1** due to the loss of riverside and garden trees and increased prominence of the flood structures.
- **Minor adverse (not significant) in year 20** due to replacement planting not reaching baseline levels in height and the continued increased prominence of the flood embankment compared to baseline.

Scheme Area 2: Central Comrie

Mitigation

5.7.32 The proposed flood walls have been specified to be clad in local whinstone rubble with bull nosed rubble coping to reflect the vernacular walling style. The alignment of the walls has been positioned to limit tree loss by avoiding rootzones where possible, such as in the vicinity of the ramped access to Core Path CMRI 35/2 located along the south bank of the river (refer to **Figure 10.4 Community Facilities Greenspace and Linear Access Facilities**).

5.7.33 Build outs are proposed along Strowan Road to introduce tree and shrub planting which would assist in softening the appearance of the flood wall and buildings on Strowan Road

5.7.34 Replacement tree planting is proposed along the riverside within the gaps created by felling. Semi-mature tree planting is proposed within the public open space to the east of Dalginross Bridge along with areas of ornamental shrub and herbaceous planting to assist in softening the appearance of the proposed walls.

5.7.35 Replacement planting would be carried out within private gardens which is to be agreed with landowners at detailed design stage.

5.7.36 Enhancement of the greenspaces to the north and south of the river is proposed. This includes the regrading of the main footpath into the open space to the north of the river from Dalginross Bridge and the introduction of a formal path to the west of the space. Enhancements to the open space to the south of the river include the introduction of an accessible path into the space and seating. In order to open up views of the water, several low quality trees would be removed from the riverbank. Native ornamental planting would be introduced within both areas in keeping with the naturalistic riverside character.

5.7.37 Enhancements are also proposed at Legion Park through the creation of a multifunctional area of hardstanding to be used as both carparking and an events space. Improvements to the main vehicle entrance are proposed along with the introduction of ornamental planting.

Magnitude of Change Operation (year of opening in winter)

5.7.38 The introduction of flood walling of up to approximately 1.6m in height would result in the loss of approximately 120 trees including approximately 1 Category A tree and approximately 70 Category B trees. The loss of trees would form noticeable breaks in the characteristic riverside tree belts. The considerable tree loss in this area would increase the influence of built form on the landscape character due to the loss of screening and softening of buildings provided by the existing tree cover. The loss of trees along the south river bank at Strowan Road would increase the influence of modern housing upon the landscape character which was previously dominated by the high-quality built features along the southern extents of Comrie conservation area and the River Earn corridor.

5.7.39 The introduction of approximately 120m of proposed bank protection comprising a block stone wall with a re-profiled, naturally vegetated geotextile reinforced slope with toe protection, would form a noticeable engineered feature over a large extent of the Scheme Area (refer to drawings 119398/400/319 and 320).

5.7.40 The introduction of unified vernacular style whinstone rubble clad walling along Strowan Road and along the edge of the open public space would be beneficial as it would replace the existing lower quality mixed boundary treatments.

5.7.41 The proposed build outs incorporating street trees and shrub planting would enhance Strowan Road and provide a minor softening effect to built forms.

5.7.42 On balance, the overall magnitude of change is therefore considered to be **medium**.

Magnitude of Change Operation Phase (year 20 in summer)

5.7.43 The magnitude of change is considered to be **low**. Replacement tree and shrub planting would have begun to mature but would not have reached baseline levels. The proposed flood walling would have weathered, softening its appearance within the landscape. Vegetation would have established along the erosion protection greening the area, providing a more naturalistic appearance, and softening the adjacent flood wall. Changes would be irreversible and permanent, due to the loss of mature trees.

Significance of Effect

5.7.44 The significance of the effects of the scheme upon Scheme Area 2: Central Comrie is considered to be:

- **Moderate adverse (significant) in year 1** due to the loss of mature riverside trees.
- **Minor adverse (not significant) in year 20** as replacement tree planting would not have reached baseline levels.

Scheme Area 3: River Lednock

Mitigation

5.7.45 The proposed walling has been designed to reflect the character of existing walls to the north of Lednock Bridge through the use of natural stone cladding in keeping with the style of the surrounding walling. The stone wall-textured concrete walling to the southeast of the area has a pattern of similar style to the stone retaining walls along the riverside boundary of Glenbuckie.

5.7.46 The proposed walls have been aligned to minimise tree loss as far as possible. To the south of Lednock Bridge, walling has been set back from the river bank and ramp access positioned to retain a small number of trees along the riverside boundary of Glenbuckie. To the north of the bridge walling has been positioned to retain trees along both sides of the riverbank to the north of St Serf's Church and the south of St Margaret's Church.

5.7.47 Replacement tree planting is proposed along both sides of the river and includes semi-mature tree planting within St Margaret's Church grounds.

5.7.48 Replacement planting would be carried out within private gardens which is to be agreed with landowners at detailed design stage.

Magnitude of Change Operation Phase (year 1 in winter)

5.7.49 The introduction of the flood walls ranging in height from 0.3 to 1.6m in height would result in the loss of approximately 155 trees including a Category A and approximately 80 Category B trees. Tree felling would occur along both banks of the river and substantially reduce tree cover within this area. In addition to this a group of approximately 20 unsurveyed trees in the garden of Glenbuckie would be removed. These trees are to be surveyed at detailed design.

5.7.50 Although flood walls and retaining walls are present within this character area the increased extent of walling would be noticeable particularly due to the loss of vegetation. The loss of trees would increase the influence of the surrounding buildings and the A85 upon the character area reducing the naturalistic characteristics and tranquillity of this Scheme Area.

5.7.51 The introduction of high-quality natural stone walling of a unified design to replace the existing low-quality concrete walling is considered to be slightly beneficial in the vicinity of St Margaret's Church.

5.7.52 The changes are extensive within the context of the whole Scheme Area. Young replacement tree planting would not have reached a level to mitigate for the trees lost. Changes are considered to be permanent and irreversible due to the loss of mature tree cover.

5.7.53 On balance, overall the magnitude of change is considered to be **medium**.

Magnitude of Change Operation Phase (year 20 in summer)

5.7.54 The magnitude of change is considered to be **low**. Replacement tree planting would have begun to mature but would not have reached baseline levels. The proposed flood walling would have weathered, softening its appearance within the landscape. Changes would be irreversible and permanent, due to the loss of mature trees.

Significance of Effect

5.7.55 The significance of the effects of the scheme upon Scheme Area 3: River Lednock is considered to be:

- **Moderate adverse (significant) in year 1** due to the loss of mature riverside trees.
- **Minor adverse (significant) in year 20** as replacement planting would not have reached baseline levels.

Scheme Area 4: East Comrie and Dalginross

Mitigation

5.7.56 Flood protection features have been positioned to minimise the loss of trees as far as possible. The flood embankment to the south of Comrie Holiday Park has been positioned to terminate along an existing field boundary at its eastern end. The flood embankment to the east of Dalginross has been positioned away from the edge of the field in order to retain garden vegetation.

5.7.57 Replacement tree planting consisting of young trees is proposed along the riverside within the gaps created by felling. Larger trees have been specified to the south of Comrie Holiday Park to create instant impact. In addition to this an area of woodland planting is proposed to the south of the embankment to form an extension to the existing tree belt and assist in screening the diagonal, western section of the embankment.

5.7.58 Replacement planting would be carried out within private gardens which is to be agreed with landowners at detailed design stage.

Magnitude of Change Operation (year of opening in winter)

5.7.59 The introduction of the proposed structures would result in the loss of approximately 130 trees including a Category A tree and approximately 75 Category B trees.

5.7.60 The loss of trees would form noticeable breaks in the characteristic continuous riverside tree belts. This would open up glimpsed views of the flood walls on the south bank. Tree loss along the north bank would create a large gap in tree cover at the confluence of the Lednock opening up views of the caravans within Comrie Holiday Park, increasing the influence of this detracting element upon the character of the Scheme Area. Mitigation planting would partially filter views of the holiday Park, flood walls and embankments. Changes would be irreversible and permanent, due to the loss of mature trees.

5.7.61 The introduction of: a 0.7 to 1.6m high stone texture concrete flood wall to the south boundary of Comrie Holiday Park; a 1.3 to 1.9m high stone textured concrete flood wall along the south bank of the River Earn; a 0.6m to 2m high and embankment along the south boundary of Comrie Holiday park; and an up to 2.1m high embankment along the eastern settlement boundary of Dalginross would introduce engineered features into the landscape.

5.7.62 The introduction of approximately 80m of coir wall bank erosion protection would form a relatively inconspicuous element due to the pre-planted coir roll at the toe of the wall.

5.7.63 The changes brought about by the Scheme would be of a relatively small scale within the overall Scheme Area.

5.7.64 On balance, the overall the magnitude of change is therefore considered to be **medium**.

Magnitude of Change Operation Phase (year 20 in summer)

5.7.65 The magnitude of change is considered to be **low**. Replacement tree and shrub planting would have begun to mature but would not have reached baseline levels. Despite not having reached baseline levels, the tree planting would have restored the continuous belts of riverside trees. The proposed flood walling would have weathered, softening its appearance within the landscape. Changes would be irreversible and permanent, due to the loss of mature trees.

Significance of Effect

5.7.66 The significance of the effects of the scheme upon Scheme Area 5: Central Comrie is considered to be:

- **Moderate adverse (significant) in year 1** due to the loss of mature riverside trees creating a large break in trees in front of Comrie Holiday Park.
- **Minor adverse (not significant) in year 20** as replacement planting would have increased in size, but not reached baseline levels.

Visual Effects

Viewpoint 1: Melville Monument

Construction Phase

5.7.67 During the three-year construction period, glimpses of tree removal activity and plant associated with the construction work would be visible forming very small features within the wider view. Construction compounds within open farmland to the east and west of Dalginross and to the southeast of Comrie Holiday Park would be visible in long range views. Visual changes would be temporary and reversible.

5.7.68 The overall magnitude of change is therefore considered to be **negligible**.

Mitigation

5.7.69 Replacement tree planting is proposed to replace trees lost along all the river banks felled as a result of the Scheme. Additional compensatory tree planting is proposed to the south of Comrie Holiday Park and to infill gaps within tree cover along the dismantled railway embankment to the south of The Ross.

Operation Phase (year 1 in winter)

5.7.70 The loss of riverside trees and the introduction of replacement and compensatory tree planting would result in a barely discernible changes due to their small extent within the wider, well wooded, panoramic view. Very distant, partial views of compensatory tree planting would be seen along the existing dismantled railway embankment and south of the proposed embankment at Comrie Holiday Park. Proposed replacement and compensatory planting would follow the existing vegetation patterns consistent with the surrounding landscape character. Visual changes would be long term and irreversible due to mature tree loss.

5.7.71 On balance, the overall magnitude of change is therefore considered to be **negligible**.

Operation Phase (year 20 in summer)

5.7.72 The magnitude of change is considered to remain **negligible**. Replacement and compensatory tree planting would have begun to mature. Changes would continue to be reversible and long term.

Significance of Effect

5.7.73 The significance of the effects of the scheme upon this representative viewpoint is considered to be:

- **Negligible (not significant) at construction** phase due to the small extents of the changes viewed at a considerable distance.
- **Negligible (not significant) in year 1** due to the small extents of the changes viewed at a considerable distance.
- **Negligible (not significant) in year 20** due to the small extents of the changes viewed at a considerable distance.

Viewpoint 2: Core Path CMRI 1/5

Construction Phase

5.7.74 During the three-year construction period, a construction compound would likely be established within the arable field. Construction activity associated with some tree removal and the construction of the flood embankment would be visible. This would form a relatively small-scale feature within the wider view but would be visible across the full extents of the view. Visual changes would be temporary and reversible.

5.7.75 The overall magnitude of change is therefore considered to be **low**.

Mitigation

5.7.76 The alignment of the embankment has been positioned to avoid tree loss along the edge of the settlement as far as possible. Replacement tree planting is proposed within gardens affected by tree loss. This is to be agreed with landowners at the detailed design stage.

Operation Phase (year 1 in winter)

5.7.77 The proposed flood embankment would be visible in views to the east along the full extent of the settlement boundary, extending across the majority of the view. The flood embankment would screen the lower sections of residential properties located along the settlement boundary. The embankment would introduce a new element consistent with the existing embankment and despite its more prominent appearance, would not alter the existing character of the view. A small number of trees would be lost along the proposed embankment. However, tree groups would remain largely intact, which would not alter the overall character of the view. Visual changes would be long-term and reversible.

5.7.78 On balance, the overall magnitude of change is therefore considered to be **low**.

Operation Phase (year 20 in summer)

5.7.79 The magnitude of change is considered to be **low** due to the continued presence of the larger scale flood embankment.

Significance of Effect

5.7.80 The significance of the effect of the scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Minor adverse (not significant) in year 1** due to the changes being consistent with the character of the view.
- **Minor adverse (not significant) in year 20** due to the continued presence of the flood embankment.

Viewpoint 3: Comrie Walk Public Right of Way

Construction Phase

5.7.81 During the three-year construction phase, a construction compound would be established within the field. Construction activity associated with tree removal, the installation of root wad revetments and the construction of the flood walling and reconfigured driveway entrance at Tomnagaske would be visible. These elements would form relatively small-scale features within the wider view but would be visible across the full extents of the view. Visual changes would be temporary and reversible.

5.7.82 The overall magnitude of change is therefore considered to be **low** due to the temporary nature of the change.

Mitigation

5.7.83 Replacement tree planting is proposed to reinstate trees felled along the riverbank of the Water of Ruchill.

5.7.84 Replacement tree and shrub planting is also proposed within gardens affected by tree loss. This is to be agreed with landowners at the detailed design stage.

Operation Phase (year 1 in winter)

5.7.85 The proposed flood wall would be visible in views to the east across the majority of the view. The flood wall would introduce a new element consistent with the existing flood wall but slightly larger in scale. Mature trees and hedgerow would be removed along the boundaries of residential properties. This would increase the prominence of built form, within the view. The loss of a group of prominent mature trees along the driveway to Tomnagaske in combination with the loss of mature garden trees would form a noticeable change to the view.

5.7.86 The loss of largely semi-mature tree cover along the riverbank would open up views of the river to the northwest and to southwest as new planting would not yet have matured. Glimpsed views of the root wad revetments would be seen in combination with the tree loss. This would result in a slight change to the character of the view.

5.7.87 On balance, the overall the magnitude of change is therefore considered to be **low**. Visual changes would be irreversible and permanent due to the loss of mature trees.

Operation Phase (year 20 in summer)

5.7.88 The magnitude of change is considered to be **low** as replacement tree planting would have begun to mature and the flood walling would have weathered, softening its appearance within the view. Visual changes would continue to be irreversible and permanent due to the loss of mature trees.

Significance of Effect

5.7.89 The significance of the effects of the scheme upon this viewpoint is considered to be:

- Minor adverse (not significant) during construction
- Minor adverse (not significant) in year 1 due to the loss of tree cover.
- Minor adverse (not significant) in year 20 due to replacement tree planting not reaching baseline levels.

Viewpoint 4: Dalginross Bridge

Construction Phase

5.7.90 During the three-year construction phase, construction activity associated with: tree removal; utilities diversions; the construction of the flood walling and erosion protection; and the green space enhancements would be visible at close range across the full extent of the view to the east and in the majority of the view to the west. Visual changes would be temporary and reversible.

5.7.91 The overall magnitude of change is therefore considered to be **low**.

Mitigation

5.7.92 The alignment of the walling has been selected to reduce tree loss as far as possible. The proposed wall cladding of whinstone rubble in the vernacular style has been specified to soften the visual appearance of the structures.

5.7.93 Semi-mature tree planting and ornamental planting would be introduced within the public open spaces to soften the appearance of the walls and mitigate the loss of existing ornamental planting. A formal path would also be introduced to this area along with the regrading of the existing path from Dalginross Bridge to ensure accessibility and to enhance the public space. Native riverside wildflowers and grasses would be introduced within the bank protection along south bank of the river. A new path and seating would be introduced into the public space to the south of the river.

5.7.94 Tree and shrub planting is proposed within carriage way build outs along Strowan Road to soften the appearance of previously screened residential properties.

Operation Phase (year 1 in winter)

5.7.95 The view to the west towards the White Church and distant hills would remain almost unchanged due to: minimal tree removal seen around the edge of the Field of refuge car park, minor tree removal to the southern riverbank allowing glimpses of the enhanced greenspace; and minor enhancements to the greenspace on the northern bank including the removal of a large mature category U tree and minor changes to the footpath alignment.

5.7.96 The proposed whinstone rubble clad flood walls on both sides of the river would be visible across the majority of the view to the east. The flood wall would introduce a new element consistent with the character of existing vernacular style walling present within the view.

5.7.97 The introduction of the flood wall in the public space seen in the view to the north east would create a unified boundary to the residential properties in the vernacular style. Proposed semi-mature trees and ornamental planting would also be visible. These elements would combine to have a beneficial effect upon the view.

5.7.98 Tree loss along Strowan Road to the south of the river and a reduction in tree cover along the north of the river would be noticeable in the view to the southeast. Tree loss along Strowan Road would open up views of the north of Dalginross, which combined with the proposed erosion protection and flood wall would create a hard edge to the river increasing the built character in the foreground of the view. Proposed tree planting on Strowan Road would slightly soften the appearance of buildings.

5.7.99 There would be a small increase in road signage within the view due to the introduction of traffic calming measures on Strowan Road.

5.7.100 The proposed bank erosion protection along the southern bank of the river would form a noticeable engineered element in the view.

5.7.101 On balance, the overall magnitude of change is therefore considered to be **medium** as despite the loss of a large number of trees, tree cover would remain along both banks of the river and the proposed flood walls would be of high quality and in keeping with the vernacular character.

Operation Phase (year 20 in summer)

5.7.102 The magnitude of change is considered to remain **low**, as replacement tree planting would have begun to mature, but not reached baseline levels. Vegetation would have established on the river banks providing a naturalistic appearance. The flood walling would have weathered, softening its appearance within the view. However, the flood walling and absence of trees along Strowan Road would continue to be perceptible.

Significance of Effect

5.7.103 The significance of the effects of the scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Moderate adverse (significant) in year 1** due to the loss of tree cover along Strowan Road increasing the influence of built form and the loss of tree cover along the wider river corridor.
- **Minor adverse (not-significant) in year 20** due to the loss of tree cover along Strowan Road increasing the influence of built form.

Viewpoint 5: Open Space North of the River Earn

Construction Phase

5.7.104 During the three-year construction phase, construction activity associated with: tree removal; utilities diversions; the construction of the flood walling; erosion protection; and the installation of new planting would be visible at close range across the full extents of the view. Visual changes would be temporary and reversible.

5.7.105 The overall magnitude of change is therefore considered to be **low**.

Mitigation

5.7.106 The alignment of the walling has been selected to reduce tree loss as far as possible. The proposed wall cladding of whinstone rubble in the vernacular style has been specified to soften the visual appearance of the structures.

5.7.107 Semi-mature tree planting and ornamental shrub and herbaceous planting would be introduced within the public open space to the east of the bridge to soften the appearance of the proposed walls and mitigate the loss of ornamental planting. A formal path would also be introduced to this area to enhance the public space. Native riverside wildflowers and grasses would be introduced along the top of the stone block wall and managed to encourage natural succession to low level scrub.

5.7.108 Tree planting is proposed within carriage way build outs along Strowan Road to soften the appearance of previously screened residential properties.

Operation Phase (year 1 in winter)

5.7.109 The proposed flood walling would be visible in views in all directions. The flood wall would introduce a new element consistent with the character of existing vernacular style walling present within the view. However, this combined with the stone block and reinforced river bank erosion protection would result in the view taking on a less naturalistic character.

5.7.110 Tree loss along Strowan Road would be noticeable in views to the south, weakening the naturalistic character of the view as buildings located to the north of Dalginross would be visible albeit the lower levels would be screened by the proposed flood wall. The proposed bank erosion protection along the southern bank of the river would form a noticeable engineered element in the view.

5.7.111 The existing timber fencing would be removed to create an open amenity space. The introduction of a unified high-quality boundary wall to the public open space along with an ornamental planting scheme and semi-mature trees would have a beneficial effect upon the view.

5.7.112 On balance, the overall magnitude of change is considered to be **medium** due to the loss of riverside trees along Strowan Road impacting upon the naturalistic character of the riverside within the view and opening up views of residential properties combined with the bank protection. The proposed flood walls would however be of high quality and in keeping with the vernacular character. Visual changes would extend across the majority of the view and would be permanent and irreversible due to the nature of the Scheme.

Operation Phase (year 20 in summer)

5.7.113 The magnitude of change is considered to remain **low**, as the flood walling and erosion protection would continue to form perceptible elements in the view. The appearance of the wall would have softened due to weathering and the development of vegetation along the area of river bank erosion protection. The canopies of proposed trees along Strowan Road would have developed, slightly softening the appearance of the residential properties on Strowan Road. Changes would continue to extend across the majority of the view and would be permanent and reversible as tree cover lost is semi-mature.

Significance of Effect

5.7.114 The significance of the effects of the scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Moderate adverse (significant) in year 1** due to the increase in built form within the view
- **Minor adverse (not significant) in year 20** due to the increase in built form within the view

Viewpoint 6: Strowan Road

Construction Phase

5.7.115 During the three-year construction phase, construction activity associated with tree removal, utilities diversions, the construction of flood walling and erosion protection, and the installation of new planting would be visible at close range across the full extents of the view. Visual changes would be temporary and reversible.

5.7.116 The overall magnitude of change is therefore considered to be **low** due to the temporary nature of the change.

Mitigation

5.7.117 The alignment of the walling has been selected to reduce tree loss as far as possible. The proposed wall cladding of whinstone rubble in the vernacular style has been specified to soften the visual appearance of the structures.

5.7.118 Semi-mature tree planting and ornamental shrub and herbaceous planting would be introduced within the public open space to the east of the bridge to soften the appearance of the walls and mitigate the loss of ornamental planting. A formal path would also be introduced to this area to enhance the public space.

5.7.119 Tree planting is proposed within carriage way build outs along Strowan Road to soften the appearance of previously screened residential properties.

Operation Phase (year 1 in winter)

5.7.120 The proposed flood walling would be visible in the foreground of the view, screening previously glimpsed views of the river.

5.7.121 Tree loss along Strowan Road would form a noticeable change in the view. Tree removal would open up previously filtered views across the river towards the public open space, conservation area and the distant surrounding highland changing the character and focus of the view.

5.7.122 New tree and shrub planting along Strowan Road would provide some softening of the proposed flood wall.

5.7.123 On balance, the overall magnitude of change is considered to be **medium** due to the noticeable introduction of flood walling and noticeable opening up of views through the loss of semi-mature and young riverside trees. The proposed flood walls are of high quality and in keeping with the vernacular character. Visual changes would be seen across the full extents of the view. Visual changes would be permanent and reversible as tree cover lost is semi-mature.

Operation Phase (year 20 in summer)

5.7.124 The magnitude of change is considered to remain **medium**, as views of the wider village and landscape would continue to be available. Visual changes would be seen across the full extents of the view. Visual changes would be permanent and reversible.

Significance of Effect

5.7.125 The significance of the effects of the Scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Minor beneficial(significant) in year 1** due to the opening up of views and improved public realm
- **Minor beneficial (significant) in year 20** due to the continued opening up of views and improved public realm

Viewpoint 7: The Bridge of Lednock

Construction Phase

5.7.126 During the three-year construction phase, construction activity associated with tree removal, utilities diversions, the construction of the flood walling, and the installation of new planting would be visible at close range across the full extents of the view. Visual changes would be temporary and reversible.

5.7.127 The overall magnitude of change is therefore considered to be **low**.

Mitigation

5.7.128 The proposed flood wall along the boundary with Glenbuckie has been realigned to the west to retain riverside trees.

5.7.129 The proposed surface treatment of the walling is high quality natural stone with natural stone coping to reflect the character of vernacular style walling.

5.7.130 Replacement tree planting is proposed in spaces created by tree loss to the north and south of the Bridge of Lednock. Semi-mature tree planting is proposed within St Margaret's churchyard. A mixture of tree sizes has been proposed along the riverbank to create a naturalistic appearance.

Operation Phase (year 1 in winter)

5.7.131 The loss of mature tree cover would form a noticeable change in the view altering the leafy, naturalistic character of the river corridor in the view to both the north and south and increasing the visual prominence of the surrounding buildings. The proposed flood walls would be glimpsed through the bridge structure. However, the appearance of these walls would be characteristic of walling in the vernacular style. Visual changes would be experienced across the full extents of the view. Visual changes would be permanent and irreversible due to the loss of mature tree cover.

5.7.132 On balance, the overall the magnitude of change is considered to be **medium** due to the noticeable loss of mature tree cover and increased influence of the surrounding buildings upon the view.

Operation Phase (year 20 in summer)

5.7.133 The magnitude of change is considered to be **low** as replacement tree planting would have matured but not have reached baseline levels. Visual changes would continue to be seen across the full extents of the view. Visual changes would be permanent and irreversible due to the loss of mature trees.

Significance of Effect

5.7.134 The significance of the effects of the Scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Moderate adverse (significant) in year 1** due to the loss of mature tree cover resulting in the increase of built form present in the view
- **Minor adverse (not-significant) in year 20** due to the loss of mature tree cover

Viewpoint 8: Dundas Bridge

Construction Phase

5.7.135 During the three-year construction phase, construction activity associated with tree removal, utilities diversions, the construction of the flood walling and the installation of new planting would be visible at close range across the full extents of the view. Visual changes would be temporary and reversible.

5.7.136 The overall magnitude of change is therefore considered to be **low**.

Mitigation

5.7.137 High quality natural stone cladding and coping has been proposed for all walls present within the view, along with riverside tree planting near St Serf's Church to mitigate for trees felled to enable the scheme.

Operation Phase (year 1 in winter)

5.7.138 The loss of tree cover would form a noticeable change in the view. Young and semi-mature tree loss would be visible along the west bank of the river from the bridge up to St Margaret's Church opening clear views of the church. The loss of a small number of mature trees along the east bank of the river in the vicinity of St Serf's church would also be visible, opening glimpsed views of St Serf's Church. All proposed flood walling would be characteristic of the vernacular style. Flood walling located along the east bank would be glimpsed between riverside trees. Open views would be available of the flood wall located on the west bank of the river. The proposed wall would introduce a unified edge to the riverside. The loss of trees and increased influence of built form would result in a change to the naturalistic character of the view. Visual changes would be permanent and irreversible due to the loss of mature trees. On balance the magnitude of change is considered to be **medium** due to the loss of tree cover.

Operation Phase (year 20 in summer)

5.7.139 The magnitude of change is considered to remain **low** as replacement tree planting would have matured but not reached baseline levels. The flood walling would have weathered and would continue to form a perceptible element with the view. Visual changes would continue to be seen across the full extents of the view. Visual changes would be permanent and irreversible due to the loss of mature trees.

Significance of Effect

5.7.140 The significance of the effects of the scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Moderate adverse (significant) in year 1** due to tree loss

- **Minor adverse (not significant) in year 20** due to tree loss

Viewpoint 9: Core Path CMRI 14/1

Construction Phase

5.7.141 During the three-year construction phase, construction activity associated with tree removal, the remediation of the former gas works site, utilities diversions, the construction of the flood walling and the installation of new planting would be visible at close range across the full extents of the view. Visual changes would be temporary and reversible.

5.7.142 The overall magnitude of change is therefore considered to be **low**.

Mitigation

5.7.143 Replacement tree planting is proposed to the south of Comrie Holiday Park to replace trees lost during the construction of the embankment. The proposed planting includes extra-heavy species to create instant impact. Pre-established coir rolls at the base of the coir roll wall would soften the appearance of the structure.

Operation Phase (year 1 in winter)

5.7.144 Tree loss in front of the Comrie Holiday Park, along the south bank of the Earn and along the River Lednock would form a perceptible change in the view.

5.7.145 The proposed stone-textured concrete flood wall to the south of the holiday park would introduce an engineered feature, which would provide a unified boundary treatment to the holiday park and assist in screening the lower sections of the caravans from view. The appearance of the wall would be softened by mitigation planting.

5.7.146 The proposed stone-textured, concrete flood wall to the south of the river would be visible at close range. The proposed flood wall would introduce an engineered feature into the view. Tree loss along the boundary of 1 Strowan Road would open up views of the property and the townscape of Dalginross beyond.

5.7.147 Visual changes would be seen across the full extent of the view. Visual changes would be permanent and irreversible due to the loss of mature trees.

5.7.148 Despite changes to the boundary of 1 Strowan Road, with a focus on the visual amenity of the river corridor, the overall magnitude of change is considered to be **low**. This is due to the perceptible tree loss and the introduction of flood walling. Visual changes would be permanent and irreversible due to the loss of mature trees.

Operation Phase (year 20 in summer)

5.7.149 The magnitude of change is considered to remain **low,** with a focus on the visual amenity if the river corridor, as replacement tree planting and riverside planting would have begun to mature but not achieved the maturity of baseline levels. Proposed planting to the south of the holiday park would create some screening of the caravans. The flood walling would have weathered, softening its appearance within the view. Visual changes would continue to be seen across the full extents of the view. Visual changes would be permanent and irreversible due to the loss of mature trees.

Significance of Effect

5.7.150 The significance of the effects of the scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Minor adverse (not significant) in year 1** due to the loss of mature trees, introduction of flood walls and bank erosion protection to the river banks
- **Minor adverse (not significant) in year 20** due to the continued presence of the flood walls and loss of mature tree canopies, vegetation along the river banks would have developed to form a more naturalistic character and would create some screening of the caravans

Viewpoint 10: East Dalginross

Construction Phase

5.7.151 During the three-year construction period a construction compound would be established within the arable field. Construction activity associated with tree removal and the construction of the flood embankment would be visible forming a relatively small-scale feature within the wider view but visible across the full extents of the view. Visual changes would be temporary and reversible.

5.7.152 The overall magnitude of change is therefore considered to be **low**.

Mitigation

5.7.153 The proposed embankment has been offset from the boundary of properties which assists in the retention of garden vegetation.

Operation Phase (year 1 in winter)

5.7.154 The introduction of the embankment with a short tie in section of up to 2m high flood wall and adjacent 1.6m high timber fence would form a perceptible engineered feature within the landscape and would screen views of the lower sections of residential properties. The embankment would form a small-scale change to this overall wide-open view creating a unified settlement boundary

treatment. Tree loss within the riverside tree belt would be barely perceptible in distant views without altering the overall character of the view. Visual changes would be reversible and permanent.

5.7.155 On balance, the overall magnitude of change is considered to be **low** due to the small-scale change in the context of the wider view.

Operation Phase (year 20 in summer)

5.7.156 The magnitude of change is considered to remain **low**. Visual changes would be permanent and reversible.

Significance of Effect

5.7.157 The significance of the effects of the scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Minor adverse (not significant) in year 1**
- **Minor adverse (not significant) in year 20**

Viewpoint 11: Core Path CMRI126/5

5.7.158 During the three-year construction period, a construction compound could be established within the grassland field to the southeast of Comrie Holiday Park. Construction activity associated with tree removal, the construction of the flood embankment and the installation of new planting would be visible forming a relatively small-scale feature within the wider view. Visual changes would be seen to the south west of the view. Visual changes would be temporary and reversible.

5.7.159 The overall magnitude of change is therefore considered to be **low.**

Mitigation

5.7.160 The alignment of the proposed embankment has been adjusted to follow the existing field pattern. The introduction of woodland planting would assist in grounding the embankment into its surroundings within the view.

Operation Phase (year 1 in winter)

5.7.161 The introduction of the embankment would form a perceptible engineered feature, forming a low-level, small-scale change within the wider context of the view without altering its overall character. Tree loss within the riverside tree belt would be barely perceptible in distant views. Visual changes would be reversible and permanent. Visual changes would occupy a small extent of the overall view.

5.7.162 On balance, the overall magnitude of change is considered to be **low**.

Operation Phase (year 20 in summer)

5.7.163 Compensatory tree planting would have matured creating a more extensive area of tree cover along the riverside but not altering the overall character of the view and would better integrate the embankment into its surroundings. The magnitude of change is considered to remain **low**. Visual changes would be permanent and reversible.

Significance of Effect

5.7.164 The significance of the effects of the scheme upon this viewpoint is considered to be:

- **Minor adverse (not significant) during construction**
- **Minor adverse (not significant) in year 1**
- **Minor adverse (not significant) in year 20**

5.8 Visual effects on residential properties

5.8.1 Effects on residential visual receptors have largely been identified through the representative viewpoints. The construction and operational phases of the Scheme and the associated loss of tree cover would be perceptible from the majority of properties located in close proximity to the Scheme. However, due to: the temporary nature of construction work; the generally low height of the majority of the proposed structures; and the retention of a substantial number of riverside trees so as not to alter the overall character of the view, visual changes are considered to be generally not significant at construction, year 1 and year 20 of operation.

5.8.2 There are nevertheless, a small number of cases where residential visual receptors would experience a higher magnitude of visual change resulting in a **major or moderate (significant) adverse effect** upon views during operation. Visual effects upon these specific properties are highlighted below.

5.8.3 The introduction of the proposed flood wall along the left bank of the River Lednock and through the garden of Glenbuckie would result in the removal of a substantial number of trees and mature garden vegetation at Glenbuckie and Earnbank. This would result in a noticeable change to the full extent of views from these properties leading to **Medium magnitude of change and a moderate (significant) adverse visual effect** at year 1 of operation. This would **reduce to a low magnitude of change in** view at year 20 due to replacement planting reaching maturity. Baseline levels of vegetation would not be reached by year 20 due to the loss of mature tree cover. Therefore, this would result in a minor (not significant) adverse residual effect.

5.8.4 The introduction of an approximately 0.6m to 2m high textured concrete flood wall and associated tree loss would result in a noticeable change in view from holiday caravans located along the southern boundary of Comrie Holiday Park. At year 1 of operation the **magnitude of change in view is considered to be**

medium due to the loss of mature vegetation and the introduction of the proposed flood wall and new tree planting resulting in a **moderate (significant) adverse visual effect.** As vegetation matures filtering of views towards the river would occur as the canopies of new tree planting mature over time. The magnitude of change would reduce to low resulting in a **minor (not significant) adverse residual visual** effect at year 20.

5.8.5 The introduction of the proposed flood embankment along the eastern settlement boundary of Dalginross would impact upon views from the adjacent properties to varying degrees. Currently many of these properties have open medium to long range views across the surrounding farmland. The view from No. 5 Garry Place would be partially screened by the proposed embankment resulting in a **moderate magnitude of change** and **moderate (significant) adverse** visual effects and both year 1 and year 20. The proposed embankment would be perceptible in views from Nos. 3 to 7 Dochart Place and Nos. 39 and 41 Tay Avenue. However, the more elevated position of these properties and the presence of existing mature garden vegetation to be retained would result in a **low magnitude of change and minor (not significant) adverse** effect upon views at year 1 and year 20.

5.8.6 The proposed flood embankment located along the western boundary of Dalginross would impact upon views from the adjacent properties, screening views from Kintail and Dunmore Lodge. This would result in a high magnitude of change in view and a **major (significant) adverse** visual effect at year 1 and year 20 for Kintail and Dunmore Lodge. Inverearn, The Coach House and No.4 Aros Field East are located at a slightly higher elevation therefore the embankment would constitute a smaller change in the view. There is however the potential for tree loss during construction which is not considered to significantly affect views from these three properties.

5.9 Cumulative

5.9.1 A study of the proposed planning applications within the visual envelope has identified no potential cumulative effects of the Scheme upon landscape and visual receptors, please refer to **Chapter 11: Cumulative Environmental Assessment** for further information.

5.10 Glossary

CMLI – Chartered Member of the Landscape Institute

EIA – Environmental Impact Assessment

Enhancement - proposals that seek to improve the landscape resource and the visual amenity of the Scheme and its wider setting over and above baseline conditions

EIAR – Environmental Impact Assessment Report

Iterative design process – The process by which project design is amended and improved by successive stages of refinement which respond to growing understanding of the environmental issues

GLVIA – Guidelines for Landscape and Visual Impact Assessment

LVIA – Landscape and Visual Impact Assessment

Visual envelope – areas of land within which a development is visible

SNH – Scottish National Heritage

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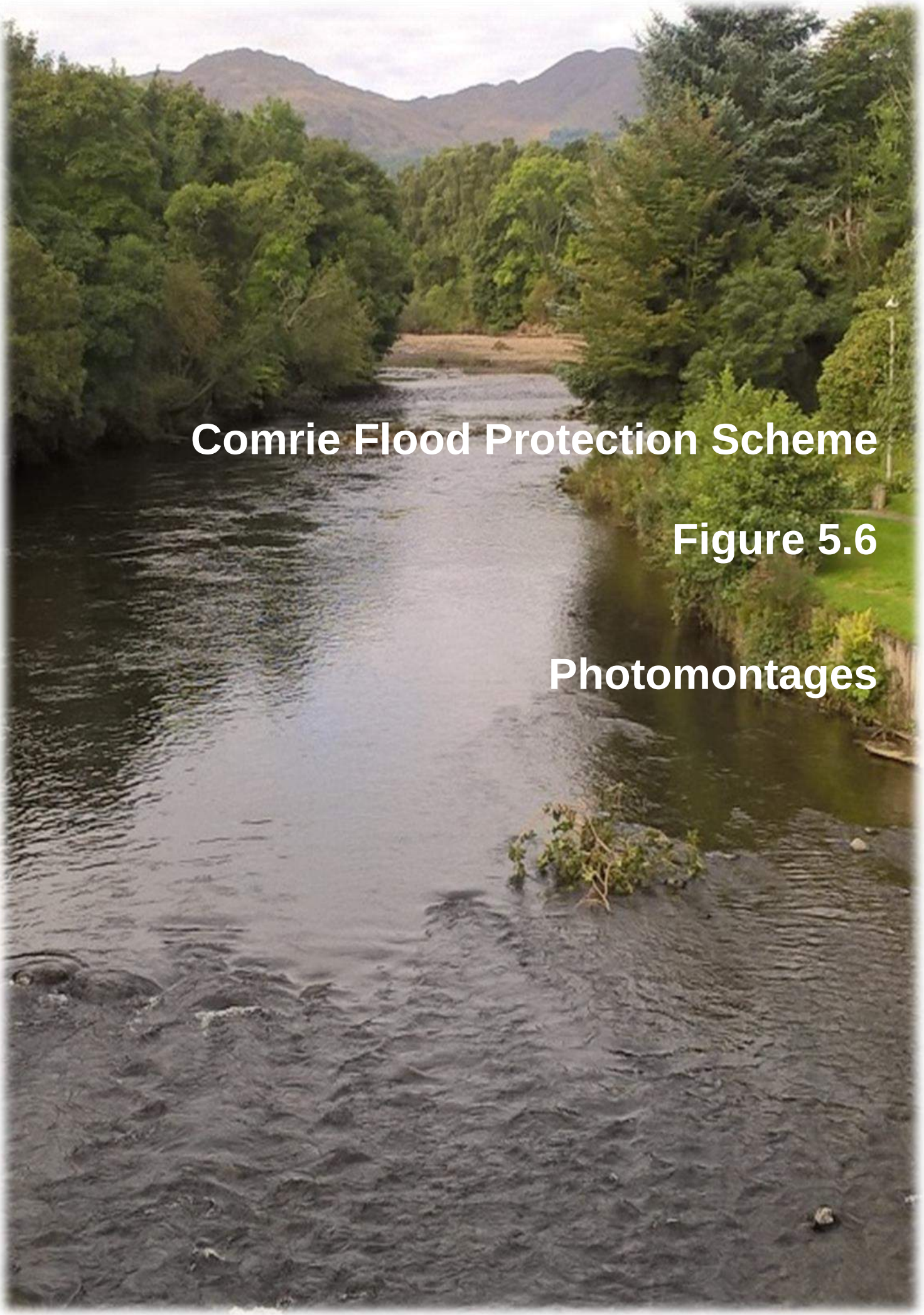

Comrie Flood Protection Scheme

Figure 5.6

Photomontages

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.1.1 **- Viewpoint 1:** Melville Monument

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	276650, 723444	Camera:	Canon EOS 5D- Mk iv
Elevation:	228m	Lens:	50mm (Canon EF 50mm f/1.4)
Direction of view:	135°	Camera height:	1.6 m AGL
Horizontal field of view:	90°(cylindrical projection)	Date and time:	25/09/2018 15:53
Paper size:	841 x 297 mm (half A1)	Correct printed image size:	820 x 250 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.2.1 **- Viewpoint 2:** Core Path CMRI 1/5

Existing View

OS reference:	277101, 721191
Elevation:	62.36m
Direction of view:	77°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 15:53
Correct printed image size:	820 x 250 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.2.2 **- Viewpoint 2:** Core Path CMRI 1/5

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277101, 721191
Elevation:	62.36m
Direction of view:	77°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 15:53
Correct printed image size:	820 x 250 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.2.3 **- Viewpoint 2:** Core Path CMRI 1/5

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277101, 721191
Elevation:	62.36m
Direction of view:	77°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 15:53
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.3.1 **- Viewpoint 3:** Comrie Walk Public Right of Way

Existing View

OS reference:	277246, 721528
Elevation:	60m
Direction of view:	0°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 14:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.3.2 **- Viewpoint 3:** Comrie Walk Public Right of Way

Existing View

OS reference:	277246, 721528
Elevation:	60m
Direction of view:	90°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 14:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint

Figure 5.6.3.3 **- Viewpoint 3:** Comrie Walk Public Right of Way

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277246, 721528
Elevation:	60m
Direction of view:	180°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 14:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.3.4 **- Viewpoint 3:** Comrie Walk Public Right of Way

Existing View

OS reference:	277246, 721528
Elevation:	60m
Direction of view:	270°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 14:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.1.1 **- Viewpoint 4:** Dalginross Bridge

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	299°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.1.2 **- Viewpoint 4:** Dalginross Bridge

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	299°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.1.3 **- Viewpoint 4:** Dalginross Bridge

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	299°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.2.1 **- Viewpoint 4:** Dalginross Bridge

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	29°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.2.2 **- Viewpoint 4:** Dalginross Bridge

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	29°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.2.3 **- Viewpoint 4:** Dalginross Bridge

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	29°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.3.1 **- Viewpoint 4:** Dalginross Bridge

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	119°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.3.2 **- Viewpoint 4:** Dalginross Bridge

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	119°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.4.3.3 **- Viewpoint 4:** Dalginross Bridge

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277368, 721919
Elevation:	61.53m
Direction of view:	119°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 13:39
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages

Figure 5.6.5.1.1 - Viewpoint 5: Open Space North of the River Earn

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	77°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages

Figure 5.6.5.1.2 - Viewpoint 5: Open Space North of the River Earn

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	77°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages

Figure 5.6.5.1.3 - Viewpoint 5: Open Space North of the River Earn

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	77°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages

Figure 5.6.5.2.1 - Viewpoint 5: Open Space North of the River Earn

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	167°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages

Figure 5.6.5.2.2 - Viewpoint 5: Open Space North of the River Earn

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	167°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages

Figure 5.6.5.2.3 - Viewpoint 5: Open Space North of the River Earn

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	167°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages

Figure 5.6.5.3.1 - Viewpoint 5: Open Space North of the River Earn

Existing View

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	257°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages

Figure 5.6.5.3.2 - Viewpoint 5: Open Space North of the River Earn

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	257°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.5.3.3 - Viewpoint 5: Open Space North of the River Earn

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277426, 721969
Elevation:	58.18m
Direction of view:	257°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 14:29
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.7.1**- Viewpoint 7:** Lednock Bridge

Existing View

OS reference:	277473, 722184
Elevation:	60m
Direction of view:	180°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 08:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.7.2**- Viewpoint 7:** Lednock Bridge

Existing View

OS reference:	277473, 722184
Elevation:	60m
Direction of view:	90°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 08:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.7.3**- Viewpoint 7:** Lednock Bridge

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277473, 722184
Elevation:	60m
Direction of view:	00°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 08:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.7.4**- Viewpoint 7:** Lednock Bridge

Existing View

SWECO

OS reference:	277473, 722184
Elevation:	60m
Direction of view:	270°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2018 08:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.8.1**- Viewpoint 8:** Dundas Bridge

Existing View

OS reference:	277567, 722322
Elevation:	64m
Direction of view:	135°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 13:58
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.8.2**- Viewpoint 8:** Dundas Bridge

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277567, 722322
Elevation:	64m
Direction of view:	225°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 13:58
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.1.1 **- Viewpoint 9:** Core Path CMRI 14/1

Existing View

SWECO

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	68°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.1.2 **- Viewpoint 9:** Core Path CMRI 14/1

Summer - Year 1

SWECO

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	68°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.1.3 **- Viewpoint 9:** Core Path CMRI 14/1

Summer - Year 20

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	68°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.2.1 **- Viewpoint 9:** Core Path CMRI 14/1

Existing View

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	338°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.2.2 **- Viewpoint 9:** Core Path CMRI 14/1

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	338°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.2.3 **- Viewpoint 9:** Core Path CMRI 14/1

Summer - Year 20

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	338°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.3.1 **- Viewpoint 9:** Core Path CMRI 14/1

Existing View

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	248°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.3.2 **- Viewpoint 9:** Core Path CMRI 14/1

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	248°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.9.3.3 **- Viewpoint 9:** Core Path CMRI 14/1

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	277626, 721975
Elevation:	58.27m
Direction of view:	248°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 11:40
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.10.1 **- Viewpoint 10:** East Dalginross

Existing View

OS reference:	278076, 278076
Elevation:	56.7m
Direction of view:	246°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 10:45
Correct printed image size:	820 x 250 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.6.10.2 **- Viewpoint 10:** East Dalginross

Summer - Year 1

SWECO

PERTH & KINROSS COUNCIL

OS reference:	278076, 278076
Elevation:	56.7m
Direction of view:	246°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 10:45
Correct printed image size:	820 x 250 mm

Comrie Flood Protection Scheme - Photomontages
Figure 5.**6.10.3 - Viewpoint 10:** East Dalginross

Summer - Year 20

SWECO

PERTH & KINROSS COUNCIL

OS reference:	278076, 278076
Elevation:	56.7m
Direction of view:	246°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	25/09/2019 10:45
Correct printed image size:	820 x 250 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5**.6.11.1- Viewpoint 11:** Core Path CMRI126/5

Existing View

SWECO

OS reference:	278054, 722214
Elevation:	64m
Direction of view:	270°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 12:12
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.**6.11.2- Viewpoint 11:** Core Path CMRI126/5

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	278054, 722214
Elevation:	64m
Direction of view:	0°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 12:12
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5**.6.11.3- Viewpoint 11:** Core Path CMRI126/5

Existing View

SWECO

PERTH & KINROSS COUNCIL

OS reference:	278054, 722214
Elevation:	64m
Direction of view:	90°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 12:12
Correct printed image size:	820 x 240 mm

Comrie Flood Protection Scheme - Viewpoint
Figure 5.6.11.4**- Viewpoint 11:** Core Path CMRI126/5

Existing View

OS reference:	278054, 722214
Elevation:	64m
Direction of view:	180°
Horizontal field of view:	90°(cylindrical projection)
Paper size:	841 x 297 mm (half A1)

Camera:	Canon EOS 5D- Mk iv
Lens:	50mm (Canon EF 50mm f/1.4)
Camera height:	1.6 m AGL
Date and time:	24/09/2018 12:12
Correct printed image size:	820 x 240 mm