PERTH & KINROSS COUNCIL

Strategic Environmental Assessment - Environment Report
Perth and Kinross Draft Waste Management Plan

Part 1

To: SEA.gateway@scotland.gsi.gov.uk
SEA Gateway
Scottish Government
Area 1 H (Bridge)
Victoria Quay
Edinburgh
EH6 6QQ

Part 2

An Environment Report is attached for:
Perth and Kinross Waste Management Plan

The Responsible Authority is:
Perth & Kinross Council

Part 3

Contact name	Erin Scott
Job Title	Waste Awareness Co-ordinator
Contact address	Pullar House 35 Kinnoull Street Perth PH1 5GD
Contact tel no	01738 475243
Contact email	EScott@pkc.gov.uk

Part 4

Signature (electronic signature is acceptable)	
Date	

Abbreviations and Acronyms

CA	Consultation Authorities
DERL	Dundee Energy Recycling Limited
GHG	Greenhouse Gases
HS	Historic Scotland
LCA	Life Cycle Analysis
PKC	Perth & Kinross Council
PPS	Plan, Programme or Strategy
SEPA	Scottish Environment Protection Agency
SG	Scottish Government
SOC	Strategic Outline Case
SOA	Single Outcome Agreement
SoE	Perth & Kinross Council State of the Environment Report
SNH	Scottish Natural Heritage
WIP	Perth and Kinross Waste Implementation Plan
WMP	Waste Management Plan
SOC	Strategic Outline Case
SWMR	Strategic Waste Management Review
PAS 100/110	Publicly Available Standards (for compost/digestate quality)

Contents of the Environment Report

Section 1: Introduction

As part of the preparation of the Perth and Kinross Waste Management Plan (WMP) Perth & Kinross Council carried out a Strategic Environmental Assessment (SEA). SEA is a systematic method for considering the likely environmental effects of certain Plans, Policies and Strategies (PPS). SEA aims to:

- integrate environmental factors into PPS preparation and decision-making;
- improve PPS and enhance environmental protection;
- increase public participation in decision making;

and

- facilitate openness and transparency of decision-making.

SEA is required by the Environmental Assessment (Scotland) Act 2005.

The key SEA stages are:

1. Screening	determining whether the PPS is likely to have significant environmental effects and whether an SEA is required
2. Scoping	deciding on the scope and level of detail of the Environmental Report and the consultation period for the report – this is done in consultation with Scottish Natural Heritage, The Scottish Ministers (Historic Scotland) and the Scottish Environment Protection Agency
3. Environmental Report	publishing an Environmental Report on the PPS and its effects, and consulting on that report
4. Adoption	providing information on the adopted PPS; how consultation comments have been taken into account; and methods for monitoring the significant environmental effects of the implementation of the PPS
5. Monitoring	monitoring significant environmental effects in such a manner so as to also enable the Responsible Authority to identify any unforeseen adverse effects at an early stage and undertake appropriate remedial action.

The purpose of this Environmental Report is to:

- provide information on the Perth and Kinross Waste Management Plan
- identify, describe and evaluate the likely significant environmental effects of the Plan and its reasonable alternatives;
- provide an early and effective opportunity for the Consultation Authorities and the public to offer views on any aspect of this Environmental Report.

1.1 Key Facts

Table 1. Key facts relating to Perth and Kinross Waste Management Plan

Responsible Authority	Perth & Kinross Council
Title of PPS	Perth and Kinross Waste Management Plan
Purpose of PPS	To promote and implement sustainable municipal solid waste (MSW) management policies for Perth and Kinross while minimising the overall environmental impact of waste by managing it in the most environmentally acceptable and economically efficient way through the provision and co-ordination of appropriate wastes management facilities and services.
What prompted the PPS?	- Previous Strategies and plans out of date - New funding arrangements - New National recycling and composting targets – Vision for a Zero Waste Scotland - Legislative changes
Subject	Waste
Summary of nature/content of PPS	Future planning for Waste Management in Perth and Kinross to 2025/26
Period Covered by PPS	2010 - 2025
Frequency of Updates	2013
Area covered by PPS (km^2)	5285.81
Contact Point	Erin Scott. Waste Awareness Co-ordinator Perth & Kinross Council 01738 475243. EScott@pkc.gov.uk

Table 2 summarises the SEA activities to date in relation to the Perth and Kinross WMP.

Table 2. SEA activities to date

SEA Action/Activity	When carried out
Screening to determine whether the PPS is likely to have significant environmental effects	May 2009
Scoping, the consultation periods and the level of detail to be included in the Environment Report	June 2009
Outline and objectives of the PPS	As per the Screening Report
Relationship with other PPS and environmental objectives	As per the Scoping Report
Environmental baseline established	As per the Scoping Report
Environmental problems identified	As per the Scoping Report
Assessment of future of area without the PPS	As per the Scoping Report
Alternatives considered	Originally 2 alternatives were considered at the Scoping Report stage. Prior to the Environmental Assessment for the Environment Report, an additional alternative was included.
Environmental assessment methods established	As per the Scoping Report. Further assessment methods identified August 2009
Selection of PPS alternatives to be included in the environmental assessment	As per all 3 stages of the SEA
Identification of environmental problems that may persist after implementation and measures envisaged to prevent, reduce and offset any significant adverse effects	Scoping and Environment Report stages
Monitoring methods proposed	As per the Scoping Report
Consultation timescales • Timescale for Consultation Authorities • Timescale for public	Consultation period for the Waste Management Plan and this accompanying Environment Report will run between 1st December 2009 and 19th January 2010
Notification/publicity action	Local media public notices were placed for - Statutory Notice was placed for the Screening Determination - the consultation for the Scoping Report was advertised on www.pkc.gov.uk

Section 2: The Perth and Kinross Waste Management Plan Context

Background
Perth & Kinross Council recognises that the area's unique environment contributes significantly to the quality of life for its residents and visitors. Local social and economical wellbeing is supported through the provision of, for example health benefits, employment, recreation facilities and access opportunities for everyone.

The current Perth and Kinross Waste Implementation Plan (WIP) was approved at the Executive Sub Committee of the Environment Committee on 23 April 2003. The Implementation Plan detailed how Perth & Kinross Council intended to meet the actions and targets set out in the Tayside and National Waste Plans.

The Implementation Plan was an essential step towards developing a range of integrated actions for dealing with the area's waste in accordance with the Best Practicable Environmental Option (BPEO) set out in the Tayside Area Waste Plan. The Plan also formed a key element of the Council's partially successful bid in 2004 to the (then) Scottish Executive Strategic Waste Fund.

The original proposal in the WIP was for Perth & Kinross Council to share the DERL Energy from Waste facility with Dundee City and Angus Councils. However it was subsequently found that due to the reduced operational capacity of the DERL plant and the long term contractual arrangements between DERL, Dundee City and Angus Councils, there was not sufficient capacity available at DERL for Perth & Kinross Council.

The subsequent Strategic Outline Case funding bid submitted by the three Tayside Councils, to the then Scottish Executive in 2005 revised the WIP proposals, with a recommendation that PKC should procure residual waste treatment (energy from waste facility), with an estimated requirement, based on 60,000 tonnes per annum. This approach was approved by the Environment Committee on 18 January 2006 (report number: 06/24(p)).

Subsequent Developments
Since the WIP in 2003 and the SOC in 2005, several significant developments occurred which have created the current circumstances, and will influence the Councils future strategic waste proposals. These developments include

- In January 2008, the Scottish Cabinet Secretary for the Environment announced a new policy approach to Scotland's waste, based on a concept of "zero waste".
- Review of the National Waste Plan, currently underway
- Review of Landfill Allowance Scheme (LAS) – as part of its new approach, the Scottish Government announced a review of the Landfill Allowance Scheme. Pending the outcome of the review, the LAS scheme has been suspended.
- Abolition of the 'ring-fenced' Strategic Waste Fund (SWF)
- Waste Framework Directive - The revised Waste Framework Directive was adopted by the EU in October 2008, and has to be transposed into UK legislation within the next two years.
- Climate Change Bill – in December 2008 the Scottish Government introduced the Climate Change Bill for consideration. It is now the Scottish Climate Change Act 2009.

These changes have led Perth & Kinross Council to develop a new Perth and Kinross Waste Management Plan that maps out a way forward for Perth & Kinross Council in terms of:

- Achieving the national recycling and composting rates
- Achieving landfill allowance scheme targets (if re-instated)
- Initiatives to control waste arisings and waste growth
- Look at potential partnership agreements

- Recommendations on the way forward for the procurement of residual waste treatment
- Determine a future budget strategy for waste management in Perth and Kinross

For further information please see a copy of the related committee report that went to Perth & Kinross Council Environment Committee in early 2009 at
http://www.pkc.gov.uk/Council+and+government/Councillors+elections+and+democracy/Minutes+agendas+and+reports/Environment+Committee/Environment+Committee+-+25+March+2009.htm

2.1 Other relevant Plans, Policies and Strategies

The management of waste is governed by a plethora of regulations and legislative controls, licensing requirements and environmental regulation bodies (for example SEPA). In realistic terms, there are several hundred plans, policies, strategies, as well as pieces of legislation that to a greater or lesser extent may impact on the Perth and Kinross WMP, or may in turn be impacted upon by the completed WMP. However, it is unrealistic to include all of these other PPS in this document. In Table 3 below, PPS that have been deemed the most relevant are highlighted. A more comprehensive list of other PPS can be found in Appendix 2.

Table 3. Relevant plans, programmes and strategies (PPS) and relationship with the Perth and Kinross WMP

SEA Topic	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
Air		
International	Thematic Strategy on Air Pollution (COM(2005) 446) Air Quality Framework Directive (96/62/EC)	The Thematic Strategy on air pollution is to present a coherent and integrated policy on air pollution which: (1) sets out priorities for future action; (2) reviews existing ambient air quality legislation and the National Emission Ceilings Directive with a view to reaching long-term environmental objectives; and (3) develops better systems for gathering information, modelling and forecasting air pollution.
Local	• PKC Air Quality Report • Air Quality Action Plan (AQAP) & AQAP SEA	These documents have identified actions to help control air emissions, specifically in Perth city centre. The AQAP includes actions that can be acted upon by the waste management fleet such as 'Eco driving', optimising routes and green procurement towards new vehicles in terms of greener fuels. PKC are also developing staff travel plans, with an plan already in place for staff at PKC's main operational base at Friarton depot
Climatic Factors		
National	Climate Change (Scotland) Act 2009	The aim of this Act is to establish a framework to drive greater efforts at reducing greenhouse gas emissions in Scotland. The Act creates mandatory climate change targets to reduce Scotland's greenhouse gas emissions. Potentially allows for local authorities to have greater powers with regards to waste and recycling collections.
National	Scottish Planning Policy 7 (PP7) –Planning and Flooding 2006 (also relevant under Soils, Climatic Factors and Material Assets)	This policy highlights that new development should not take place if it would be at significant risk of flooding from any source or would increase the probability of flooding elsewhere. The Policy recognises whilst it is preferable for open spaces to flood rather than buildings it may not always be acceptable.

SEA Topic	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
Local	Environment Strategy - Perth & Kinross Council, Community Planning Environment Partnership	Sets out outcomes and plans that the Community Planning Partnership wishes to achieve. Currently under review. Please note, individual targets within this plan would be superceded by the Scottish Governments new Zero Waste targets and those set out in the Climate Change (Scotland) Act 2009.
Materials Assets (Waste)		
International	EU Waste Framework Directive 2008/98/EC	The WFD 2006 required Member States of the EU to • establish a network of disposal facilities and competent authorities with responsibility for issuing waste management authorisations and licenses. • introduce regulations which specify which waste recovery operations and businesses are exempt from the licensing regimes and the conditions for those exemptions. ensure the recovery of waste or its disposal without endangering human health and the environment. • emphasise prevention, reduction, re-use and recycling of waste.
International	The Landfill Directive (Directive 1999/31/EC on the landfill of waste) Implemented in Scotland through the Landfill (Scotland) Regulations 2003	The Landfill Directive (1999/31/EC) aims to reduce, as far as possible. • the negative effects of landfilling waste. • sets targets and timescales for reducing the amount of biodegradable municipal waste (BMW) sent to landfill The Landfill (Scotland) Regulations 2003 brought landfill sites within the administrative umbrella of the Pollution Prevention and Control (Scotland) Regulations 2000.
National	The Environmental Protect Act 1990	Defines within England, Scotland and Wales the legal framework for duty of care for waste, contaminated land and statutory nuisance.
National	Landfill Allowance Scheme (Scotland) Regulations 2005	To ensure that Scotland does not exceed its part of the UK's target, the Scottish Government allocated annual BMW landfill allowances to each Scottish local authority until the 2009/2010 financial year. These allowances are set out in Annex B of the Landfill Allowance Scheme (Scotland) Regulations 2005 - Scottish Executive Guidance: March 2007. This scheme is currently on hold.
National	Pollution Prevention and Control (Scotland) Regulations 2000.	Introduced a more integrated approach to controlling pollution from industrial sources. Its main aim is to achieve - "a high level of protection of the environment taken as a whole...", by measures designed to prevent or, where that is not practicable, reduce emissions to air, water and land.
National	Draft 'Scotland's Zero Waste Plan' 2009	This plan is still in its draft form. It closed for consultation on 13th November 2009, with the final draft due early 2010. This plan provides a strategic overall view of waste management within Scotland and has set targets for specific years to be achieved in terms of recycling & composting, waste to landfill, use of energy recovery and waste growth.

SEA Topic	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
Local	Tayside Area Waste Plan (2003)	Under Scotland's National Waste Strategy, Scotland has been divided into 11 waste areas, each of which has its own Area Waste Plan.The best option focuses on waste prevention initiatives, recycling and composting, other waste treatment and finally disposal to landfill. The Area Waste Plan sets out challenging targets, including for recycling and composting. After Reducing, Reusing and Recycling as much as we can, we need to look at other ways to recover value from the waste, for example the generation of energy. The Area Waste Plans are still a material consideration as part of the planning process.

Section 3: Perth and Kinross Environmental Baseline

The Macaulay Research Consultancy Services produced a State of the Environment Report (SoE) for Perth & Kinross Council in October 2007 (http://www.pkc.gov.uk/Planning+and+the+environment/Planning/State+of+the+Environment+Report.htm). This document, and its ongoing update, provides an accurate account of the current state of the environment for the Perth and Kinross area. The majority of the information below is extracted from the SoE report with updates as required. The full list of sources can be found in the SoE report.

Summary (SoE p9)
Overall the state of the environment in Perth and Kinross is good. Landscape, biodiversity and the aquatic environment are generally in good and improving condition. The main areas of concern are emissions to the atmosphere, greenhouse gases in relation to climate change and particulates and nitrogen dioxide in relation to air quality in specific areas of Perth itself.

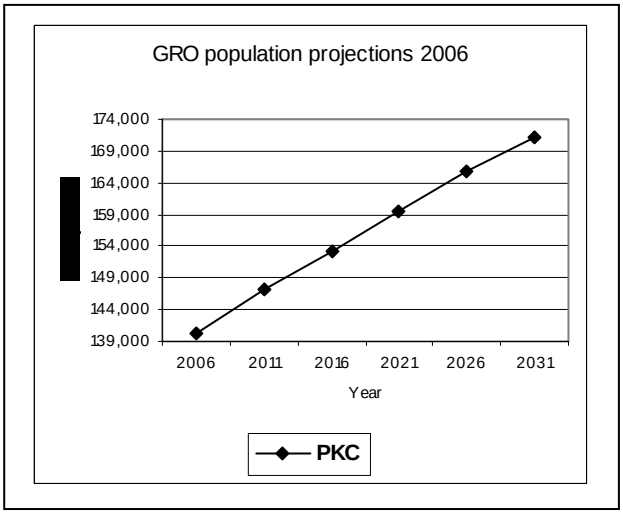
Biodiversity, flora and fauna. (SoE pp55-61)
The diverse wildlife and habitats of Perth and Kinross are highly valued local and international resources. Tourism based on the area's unique wildlife contributes greatly to the local economy.

Strategic level challenges to biodiversity include pollution, acid rain, waste production, climate change, land claim and development and the EU Common Agricultural Policy. Climate change also may have a profound effect on many of our habitats, with mountain habitats highlighted as being particularly at risk and could virtually disappear if temperatures increase significantly.

In response to the need to protect and improve the biodiversity of the area, increases in the designation of protected area and the development and implementation of the Tayside Local Biodiversity Action Plan (LBAP) has been undertaken. National legislation has also been developed, including the Nature Conservation (Scotland) Act 2004, which made additional provisions related to existing wildlife law and the Sites of Special Scientific Interest (SSSI) system, and placed on all public bodies a duty to further the conservation of biodiversity.

Population and human health (Single Outcome Agreement pp8-9)
Perth and Kinross is a large area of approximately 5,286 km^2 and has a population of 142,140 (2007 estimate)**.** It is ranked 5th in Scotland in terms of area and 14th in Scotland in terms of population (see Figure 1). Overall, the area has experienced one of the highest population growths in Scotland, placing increasing demands on services and infrastructure. It is a diverse area comprising many discrete communities, each with its own distinct challenges and opportunities. Approximately one-third of people live in Perth which faces many of the issues of other cities. At the other extreme, remote communities pose many challenges in terms of access to, and delivery of, essential services. The collection of waste is an important service provided by the Council and requires systems in place to meet the needs of residents. (Perth & Kinross Council Single Outcome Agreement, June 2008 http://www.pkc.gov.uk/NR/rdonlyres/53B6D08D-8C51-4A30-8F78-7C178D0A07EA/0/SingleOutcomeAgreement.pdf).

There is a wide variety of properties in Perth and Kinross, from large detached properties with substantial land to multi-occupancy properties, mainly found in the town centres of Perth, Blairgowrie, Kinross, Piltochry and Crieff. This range of properties creates issues as to the types of waste collected and what services can be offered.



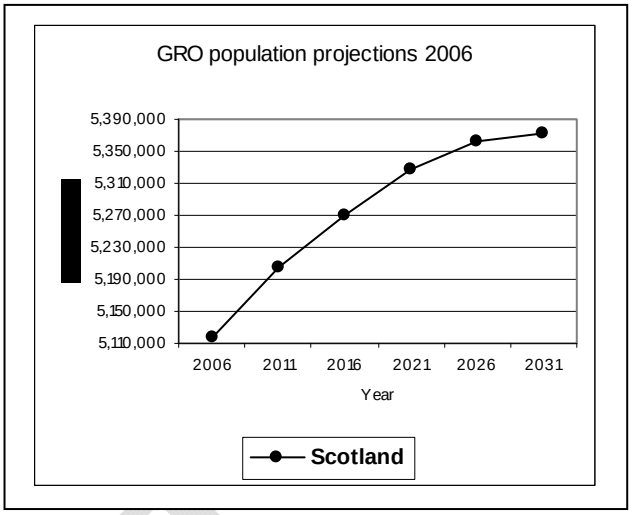


Figure 1 Comparison of projected population changes for Perth & Kinross Council and Scotland. (General Register of Scotland GROS)

Population Growth - Overview
Local communities are changing rapidly and becoming increasingly diverse. In recent years, the pace of demographic change has accelerated. Between 2001 and 2006 the General Registrar Office for Scotland (GROS) mid year estimates suggest that the population of Perth and Kinross grew by 3.88%.

The latest GROS projections (for 2006 to 2025) indicate that Perth and Kinross has the highest projected growth rate in Scotland at 17.35% (24,324 persons) although the GROS recognise that this may be an underestimate and their higher end projection is 21% (29,987 persons). These projections reflect the rate of growth that Perth and Kinross has been experiencing over recent years. This growth is driven by net in-migration which reached 1,873 per annum in 2005/6. The new projections anticipate net migration to continue at or around 1,850 per annum before declining to around 1,250 beyond 2012.

The growing population will present challenges for all community plan partners - council, health, police, fire and rescue, enterprise, college and voluntary services – both in terms of infrastructure and simply in increased demand for services including waste disposal and recycling.

Soil (SoE pp 41-53)
Currently, there is little detailed available information on the state of soils in Perth and Kinross. With the introduction of the EU Soils Thematic Strategy and the development of a Scottish Soils Strategy however the following has been established.

Pressures on soils (Scottish Soil Framework 2009 http://www.scotland.gov.uk/Publications/2009/05/20145602/13)
Due largely to the sustainable management employed by land managers over a prolonged period, Scotland's soils are generally in good health. However, compared with air or water, for which national, long-term datasets exists, for soils there is a lack of national trend data from which evidence of change or damage to soils might be determined.

According to recently published research, climate change and loss of organic matter are the most significant threats to Scottish soils. Both affect most soil functions with national impacts, which are difficult to reverse. In the case of greenhouse gas emissions, the impacts are global.

Construction leading to sealing, loss of biodiversity and deposition of acidifying and eutrophying air pollutants also represent significant threats to soils in Scotland.
Threats most commonly associated with cultivation (erosion, loss of structure, compaction) do not pose high risks at the national scale.

In Perth and Kinross, it is recognised that soil in the area contributes significantly to the economy through its role providing

- the basis of agricultural and forestry industries
- underpinning nationally and internationally rare habitats
- protecting water from the effects of many pollutants
- storing carbon
- contributing to biodiversity

The distribution of soils in Perth and Kinross closely follows the areas topography. In the northern upland areas, soils are mostly high organic matter, poorly draining peats or peaty soil (SoE). The southern lowlands however are mostly nutrient and organic matter rich brown soils.

Historically, waste disposal, along with industrial processes and former garages has caused the majority of land contamination. However in comparison with many other areas in Scotland, Perth and Kinross has remained relatively unaffected by such contamination sources.

Water (Strategic Environmental Assessment (SEA) for Perth and Kinross Air Quality Management Plan pp 37-38)
In Scotland as a whole, water quality is generally good. The water environment is managed under the Water Framework Directive (WFD) through a number of River Basin Districts (RBD). Scotland is covered by one large RBD – the Scotland RBD – with smaller parts included in the cross border river basin districts of Solway Tweed and Northumbria.

SEPA have indentified several areas in Perth and Kinross that are at risk of flooding. Visit http://sepa.org.uk/flooding.aspx for more details.

Within Scotland, there are a number of River Basin Districts, one of which is the Tay River Basin District. (see http://www.sepa.org.uk/water/river_basin_planning/early_basin_planning_work.aspx) for more detailed information. SEPA are currently working on Draft River Basin Management Plans, including the Tay Draft River Management Plan. This plan states that 170 of the water bodies in the Tay area are of good status or better. This accounts for almost 50% of the water bodies in the Tay area.

SEPA have identified that waste management activities do not currently have an impact on the quality of the water bodies in Perth and Kinross. The main problems observed in water bodies in the Tay area are;

• nutrient enrichment in our rivers and lochs and high levels of nitrates in our groundwaters
• changes to the physical habitat of our rivers and barriers to fish migration; and
• changes to the water flow and water levels in our rivers and groundwaters

The most likely causes of high levels of phosphorus and nitrogen in our rivers, lochs, estuaries and groundwaters are:
• Diffuse pollution from agriculture
• Point source pollution from sewage treatment

The most likely causes of changes to the physical habitat of our rivers and barriers to fish migration are multiple pressures that include agricultural activities, historical engineering activities and flood defence, as well as hydropower and drinking water supply.

The most likely causes of changes to the water flow and water levels in our rivers and groundwaters are from the abstraction of water or the damming of rivers.
(SEPA – 'Have your say on improving the quality of our water environment' - Tay Draft Area Management Plan 2009–2015 http://sepa.org.uk/water/river_basin_planning/early_basin_planning_work.aspx)

Surface Water
The Tay is one of the three Premier Fishing Rivers in Scotland, with salmon and brown trout the most common fish. At 193km long with a catchment area of more than 5000km^2, the Tay River is one of the longest rivers in Scotland and is the largest volume river in Great Britain, with a typical flow of 100 cubic metres per second (cumecs)
(www.sac.ac.uk/learning/geography/physical/rivers/rivertay (23/02/07)).

At Perth the Tay becomes tidal, influenced by water from the Firth of Tay. The Tay has been designated a SAC due to the species it supports, like salmon, lamprey and otters. The large ecological variety of the Tay supports a number of species while the bi-annual runs of Atlantic salmon are an important tourist attraction. It also plays an important role in other recreational activities like bird watching and canoeing.

Groundwater
Perth's groundwater vulnerability is classed as 'High' or 'Very High' which means precautions need to be taken during and post construction to ensure groundwater is protected.

Scottish Water announced plans to upgrade the infrastructure of Perth and Kinross' water infrastructure. The works will include replacement of pipes and upgrading or replacement of treatment plants. The aim of the work is to improve the water quality of the supply whilst providing extra protection to the environment.

In compliance with the Urban Waste Water Treatment Directive, Scottish Water will be upgrading the Waste Water Treatment Plant at Aberfeldy which will help improve the water quality of the Tay River while also increasing the capacity to cope with the projected growth of the town to 2014.

Perth City's treatment plant received numerous upgrades in 2005 which allows it to treat the waste water to European standards. This investment will continue through 2007-2010.

Air (SoE pp 19 -- 21)
Along with several other factors, air quality also impacts on the human health category as good air quality is critical in the health and wellbeing of residents and visitors to the area and is therefore an important topic to consider.

The Scottish Government has set targets for testing air quality against indicators on the basis of scientific and medical evidence on the health effects of specific pollutants, in Perth and Kinross these pollutants have been identified as nitrogen dioxide and particulate matter.

Currently, all tests undertaken in Perth indicate the local air quality is very good. Apart from two traffic hotspots in Perth city centre, the whole of Perth and Kinross meets the Scottish Governments targets.

The two areas that surpassed the legislative limits are Atholl Street and the High Street. Limited data availability means it is not possible to comment on trends at Atholl Street at present. Results for the High Street in Perth are relatively stable, although continued higher results for particulate matter may indicate a negative trend.

Airborne particles can cause serious health problems and particulate air pollution episodes are believed to be responsible for causing excess deaths among those with pre-existing lung and heart disease.

Scientists have correlated exposure to airborne particles with increased hospitalisations for asthma attacks, worsening of lung disease, chronic bronchitis, and heart damage (US Environmental Protection Agency (2007) *Particulate Matter* www.epa.gov/ARD-R5/naaqs/pm.htm)

In addition to these human health effects, particulate matter is the main cause of haze which decreases visibility. Particulates eventually settle on land or water and may lead to the acidification of lakes, the depletion of nutrients in soil, and the damage of sensitive forests and crops. (US Environmental Protection Agency (2007) *Particulate Matter* www.epa.gov/ARD-R5/naaqs/pm.htm).

Effective from 5 May 2007, the Council has declared the whole of Perth and Kinross an Air Quality Management Area (AQMA) because air quality targets in central Perth have been exceeded in areas where there is relevant public exposure.

Perth & Kinross Council has developed an Air Quality Action Plan for the alleviation of elevated air pollution in the areas of exceedence. The Action Plan considers and assesses the sustainability of all options available to the Council. Periodic assessments of the outcomes of the Action Plan will be carried out and the Council will also continue to monitor and assess air quality for all of the pollutants for which the Government has set targets.

Climatic factors (SoE pp13 – 17)

The temperatures for the years 2003 to 2005 were the highest for Scotland since records began in 1914. It is predicted that by the end of the century, the temperature in Scotland will rise on average by up to 3.5^{o}C during the summer and up to 2.5 ^{o}C in the winter months. (Bennet, C; Hossell, J; Perry, M; Procter, C and Hughes, G. (2006)*A handbook of climate trends across Scotland.*SNIFFER project CC03, SNIFFER)

The UK Meteorological Office regularly updates an all Scotland Series of monthly figures for mean temperature, rainfall and sunshine. The former two series originate in 1914, the latter in 1929. Trends in all monthly temperatures have indicated warming, but only the month of August has shown a significant trend. Changes in rainfall and sunshine have been less clear (Source Sparks, T H; Collinson, N; Crick, H; Croxton, P; Edwards, M; Huber, K; Jenkins, D; Johns, D; Last, F; Maberly, S; Marquiss, M; Pickup, J; Roy, D; Sims, D; Shaw, D; Turner, A; Watson, A; Woiwod, I and Woodbridge, K. (2006). Natural Heritage Trendsof Scotland: phenological indicators of climate change.*Scottish Natural Heritage Commissioned Report No 167* (ROAME No F01NB01).

The gases that contribute most to the greenhouse effect are carbon dioxide, methane, nitrous oxide and fluorine compounds. In Perth and Kinross, carbon dioxide, from transport, industry and domestic sources, is the main greenhouse gas emitted (see Table 4 below).

Table 4. Perth and Kinross Estimated Carbon Emissions (kilo tonnes CO2) 2004

	Carbon Dioxide Emissions ($kt\ CO_2$)	
	Perth & Kinross	**Scotland**
Industrial and Commercial	516	23.296
Domestic	435	14,389
Road Transport	751	12,388
Total (not including land use, land use change and forestry)	1,702	50,073
Land use, land use and forestry	-325	-4,865
Total including land use, land use and forestry	1,378	45,209
Population (thousands, 2004) Data from Defra Environment Statistics and Indicators Division,published 2006 www.defra.gov.uk/environment/statistics/globatmos/index.htm	136	5,057
Domestic per capita Carbon Dioxide (tonnes)	3.2	2.8

There is no information available at a local authority level on annual carbon emissions trends however in 2006 the (then) Scottish Executive published the following figures (Scottish Executive (2006) Changing our Ways: Scotland's Climate Change Programme. A Summary http://www.scotland.gov.uk/Publications/2006/03/30091039/28).

- Emissions of GHG fell by 10% between 1990 and 2003
- Carbon dioxide emissions over the same period fell by 8% (more than any other UK country)
- Scotland's soils and trees removed 20% more carbon dioxide from the atmosphere in 2003 than in 1990.
- Including the carbon sink, Scotland's 2003 greenhouse gas emissions were 14% lower than in 1990.

The Climate Change Programme prompted the Scottish Government (Executive at the time) to set targets to cut greenhouse gas emissions by 20% below 1990 levels by 2010 and 80% by 2050. A Scottish Share and Target was also set of an annual reduction in 2010 of 2.7 million tonnes of carbon. These targets are to be achieved by:

- encouraging efficient use of energy in association with increases in 'greener' renewable sources of electricity and heat.
- promotion of new and cleaner vehicle technology and fuel and encouraging the public to consider alternatives to driving cars.
- increase carbon sequestration by increasing forest cover and using more wood as fuel.
- waste recycling initiatives.
- participation in the development of a UK-wide policy framework on preparing for climate change (Scottish Executive (2006) Changing our Ways: Scotland's Climate Change Programme. A Summary www.scotland.gov.uk/Resources/Doc/100926/0024397.pdf).

Perth & Kinross Council signed up to Scotland's Climate Change Declaration in January 2007, committing to recognise the challenge climate change poses; acknowledging the work already being done to address this and to produce a plan to improve and report on its performance on climate change.

Waste management contributes 2.5% of Scottish GHG emissions and highlights the direct relationship between how waste is managed and the Governments commitment to reducing greenhouse gas emissions [Climate Change (Scotland) Bill: Waste Provisions –Briefing January 2009].

The Climate Change (Scotland) Act 2009 came into force in August 2009. Chapter 5 of the Act contains provisions which enable Scottish Ministers to make regulations relating to the acquisition of accurate information about waste and the promotion of waste reduction and recycling by different methods.

Chapter 5 includes the following sections:

Section 78 – Waste Prevention and Management Plans.
Section 79 – Information on waste.
Section 80 – Recyclable waste – facilities for deposit etc.
Section 81 – Recyclable waste: facilities for deposit at events etc.
Section 82 – Procurement of recyclate.
Section 83 – Targets for reduction of packaging, etc.
Section 84 – Deposit and return Schemes.
Section 85, 86, & 87 – Administration of deposit and return schemes.
Section 88 – Charges for supply of carrier bags.

Transport (SoE pp 90 – 96)
Transport has become an increasingly important element of day to day life within Perth and Kinross. The type of transport used by Perth and Kinross residents and visitors influences the built and natural environment, human health and climate change.

Traffic exhaust emissions are the primary source of air pollutants in Perth and Kinross and transport is the principle source of carbon dioxide. Transport also directly endangers human health and fauna due to road accidents.

Increases in population and the desire or need to travel are exerting greater pressure on existing transport networks. Insufficient public transport, increases in car ownership, and the desire for independence and convenience by residents and visitors in Perth and Kinross mean that the majority of this pressure is directed at road networks and manifested as an increase in traffic volume.

As would be expected, the greatest volumes of traffic are observed within Perth and on the roads south of Perth leading to Edinburgh and Stirling. According to the regional transport strategy, traffic on the road networks in Tayside and central Scotland has been increasing by an average of approximately 1.6% per annum over the last 10 years. Local trend data was not available at the time of the writing of this Environment Report.

Key government objectives, implemented via the Tactran Regional Transport Strategy and Local Plans, are to reduce dependence on cars and travel. The government aims to accomplish these by encouraging people to walk, cycle or use public transport more and to reduce the need for travel through better land use planning.

As the population in Perth and Kinross increases there will be greater pressure on the waste management vehicle fleet to provide the necessary service to all householders in terms of waste collections whilst trying to minimise the number of vehicles and journeys required to do so. The recent and continuing roll out of the new kerbside recycling service has included the optimisation of collection routes and this work will continue.

Waste

The volume of waste produced and its subsequent treatment is a growing social, economic and environmental issue. The type of waste we produce, all forms of waste management, and the transport of waste have impacts on the environment. Good waste management is essential to protect human health, long-term well being of the community and the environment that sustains it.

The volume of waste produced in Perth and Kinross and its subsequent treatment (see Table 5) is central to reducing the local and global environmental impact of consumption and production. Since 2003/04 total municipal waste arisings have increased from 95,977 tonnes to 105,610 tonnes in 2007/08. However following extensive waste reduction initiatives and the economic downturn, this led to waste arisings of 98,374 tonnes for 2008/2009. (Single Outcome Agreement, 2009-2011 http://www.pkc.gov.uk/NR/rdonlyres/C56F2E0C-6BFE-4A68-AF9C-862C9A487D21/0/SOAsigned200911.pdf)

The Council expects to meet the Scottish Government's recycling and composting target of 40% by 2010 through the further roll out of the kerbside recycling service to a total of 62,000 households. The kerbside recycling services are complemented through proactive education and awareness campaigns and support for community led waste and recycling initiatives. (Single Outcome Agreement, 2009-2011 http://www.pkc.gov.uk/NR/rdonlyres/C56F2E0C-6BFE-4A68-AF9C-862C9A487D21/0/SOAsigned200911.pdf)

(Municipal waste is any waste collected by LA's or contractors on their behalf. Non-municipal waste covers a broad range of waste types generated by individual producers including sole traders and small businesses to large scale industry).

Municipal and non-municipal waste is monitored by SEPA. This is achieved through the Waste Data Digest for municipal waste and the Tayside Strategic Waste Management Review (SWMR) which records both municipal and non-municipal waste. The SWMR is a comprehensive study of waste management and infrastructure in Tayside which was undertaken in 2006 by SEPA.

The Tayside SWMR reports the following information

- Key facts about waste management infrastructure and waste data
- Background information, for example, population and number of households
- Numbers and types of operational waste management facilities and their capacity for handling waste
- Types and quantities of waste handled

(http://www.sepa.org.uk/waste/waste_data/waste_data_reports/waste_management_reviews.aspx)

Currently in Perth and Kinross the following services are offered to householders and businesses.

- Household Kerbside Collections:

Perth & Kinross Council operates a 3 bin household kerbside collection system. The 3 bin kerbside collection system is being amended as a new recycling service is being phased in across the Council. This involves more materials being accepted in recycling bins, and the introduction of a fortnightly residual waste collection (alternate weekly with recycling collection). The new kerbside collection system has been rolled out to approximately 45,000 households and is projected to be rolled out in full to approximately 62,000 households during 2010.

- Recycling Centres & Points:

The Council operates 8 manned Recycling Centres throughout Perth & Kinross. All Recycling Centres are to be (or have been) re-developed and expanded to accept a wider range of materials for recycling. It is proposed that an additional Recycling Centre for North Perth and its surrounding area will also be developed.

There are now 82 Recycling Points available throughout the Perth and Kinross area. The points offer facilities for collection of cans, colour segregated glass, paper, cardboard and many also have textile banks. The Council aims to establish a total of 100 Recycling Points by 2013 and 120 by 2020.

- Commercial Waste Collections:

The Council currently provides waste services to approximately 1400 businesses in Perth & Kinross. In addition to general waste uplifts, the Council offers businesses in Perth & Kinross recycling collections for cardboard, paper, green waste, polythene wrapping, colour segregated and mixed glass. The Council's commercial waste team provides free advice to businesses on reducing, reusing and recycling their waste.

- Waste Awareness & Prevention Campaigns:

The Council co-ordinates a number of waste awareness and waste prevention campaigns and activities in the area e.g. home composting, real nappies. These are being undertaken in partnership with the Scottish Waste Awareness Group (SWAG), Waste and Resources Action Programme (WRAP) and community groups.

- Waste Processing Contracts*:*

The Council is currently procuring contracts for waste and recycling processing for the waste streams below.

- Mixed garden and food waste
- Co-mingled dry mixed recyclates
- Garden waste

Table 5. 2007/08 and 2008/09 figures for municipal waste collection in Perth and Kinross

Perth and Kinross	MSW[1] Arisings (tonnes)	MSW Landfilled (Tonnes)[2]	MSW Incinerated (tonnes)[3]	MSW Other treatment (tonnes)	MSW Recycled/ Composted (tonnes)[4]	% MSW Recycled/ Composted
2007/08	105,910	67,292	577	0	38,045	35.9
2008/09	98,374	60,625	712	0	37,037	37.6

1 MSW = Municipal Solid Waste
2 Includes materials disposed of instead of being recycled and residues from incineration that are landfilled
3 MSW Incinerated, excludes the residue from incineration that is either landfilled or recycled
4 MSW Recycled/Composted, includes residue from the incinerator that is recycled.

3.1 Data gaps

No data gaps beyond those identified in the Scoping Report were subsequently identified. The data gaps noted are as follows:

- A lack of data and consistent reporting on biodiversity, particularly wildlife, in the area
- Air quality information is not monitored on a regular basis with the exception of identified problem areas
- Lack of available data on soils
- Lack of reliable data on agricultural, commercial and industrial waste
- Local level data on climate change.

3.2 Identified Potential Environmental Problems

As part of the scoping report, the following environmental problems were identified as likely to have an impact on the Perth and Kinross Waste Management Plan. These environmental problems were identified by evaluating the baseline data.

Table 6. Environmental problems relevant to Perth and Kinross WMP

Potential Problem	Supporting Data (where available)	Implications for the PPS
Rising population and subsequently rising waste arisings	Single Outcome Agreement SEPA Waste Data Digest	The volume of waste produced in Perth and Kinross and its subsequent treatment is central to reducing the local and global environmental impact of consumption and production. As the area's population increases, waste arisings follow the same trend. Since 2003/04 the total municipal waste arisings has increased from 95,977 tonnes to 105,910 tonnes in 2007/08 (Waste Data Digest http://www.sepa.org.uk/waste/waste_data_1/waste_data_digest.aspx) The WMP should provide flexibility to deal with population growth and changes
Air quality, Perth city centre	Air Quality Management Plan Draft	Currently, there are high emissions from road traffic and levels of air pollution in two hot spots in Perth. This plan needs to recognise this current state and work within the Perth & Kinross Council Air Quality Report Draft and final report when it is in place. Need to recognise potential trans-boundary effects should the WMP see waste being moved out of Perth and Kinross.

Changing composition of waste	National and PKC waste analysis results. Tayside Strategic Waste Management Review (SEPA)	It is imperative that when collecting and processing waste that not only is the quantity understood but the composition is also identified. As consumption patterns change this has an impact on the composition of waste that households and businesses produce. In order to keep abreast of these changing patterns the Council undertakes regular waste analysis of general waste and recycling streams. Changes in the composition of waste impact the plan as it therefore needs to be able to provide flexibility to deal with changes in waste composition
Contaminated land and soil	Scottish Soil Framework PPC Waste Management Licensing	Contaminated land is land which appears to the enforcing authority to be in such a condition that there is a significant risk of harm to human health or the wider environment. The main objective of the Contaminated Land Regime is to provide an improved system for the identification and remediation of land where contamination is causing, or is likely to cause, such risks, assessed in the context of the current use and circumstances of the land. In this way the regime plays an important role in cleaning up historically contaminated soils, but it is not designed to prevent new contamination. There are a range of other measures specifically aimed at achieving this, most significantly Pollution Prevention and Control (PPC) and Waste Management Licensing, which are regulated by SEPA (http://www.scotland.gov.uk/Publications/2009/05/20145602/10) The use of land for agriculture in Perth and Kinross is still prevalent. The impacts of waste management activities, if not controlled correctly may impact upon the quality of soils. It is noted that peat rich soils are also at risk of being adversely impacted by waste management activities. While this WMP is not site specific, it is proposed that any future developments will address the risks to soils.

Section 4: State of the Environment without the Waste Management Plan

The Perth and Kinross WMP will provide a clear and strategic direction for municipal waste management that will address potential detrimental effects on the environment .

Without the Perth and Kinross Waste Management Plan being implemented, there will be detrimental effects on the environment, mainly resulting from –

- an increasing population would lead to a rise in waste production in Perth and Kinross, even taking into account zero waste growth per household.
- a considerable proportion of non-recycled residual waste will still be disposed of to landfill.
- majority of waste will still be disposed of to landfill creating GHG gases, while methane capture is undertaken at current landfill, a proportion will escape to the environment.
- without the implementation of further residual and recyclable waste treatment, which the WMP investigates, any potential carbon and virgin material savings would not be realised.

Section 5: Selecting the Preferred Option

The SEA Directive does not specifically require the identification of objectives but they are accepted as being a good way of considering the environmental implications of the WMP and in comparing the effects of different alternatives. In this sense the SEA objectives serve a different purpose to the WMP objectives.
The table below sets out the SEA objectives which have been identified as relevant to the WMP.

Table 7. SEA Objectives and criteria

SEA Topic	Objective	Criteria used in environmental assessment:
Biodiversity, flora & fauna	To protect and where possible, enhance biodiversity, flora and fauna from the impact of waste management activities	1. Is the option likely to cause unavoidable impacts on biodiversity? 2. Is the option likely to offer opportunities for habitat creation or species development? 3. Does the option impact upon local Habitat Action Plans?
Human health	To protect the living conditions, amenities and health of residents from detrimental effects of waste management activities e.g. noise, traffic, dust, littering, odour and particulates. To protect community and employee safety and wellbeing from waste related anti-social behaviour – littering and fly-tipping.	4. Will the option impact on odour, noise, traffic, dust, littering, odour and particulates? 5. Will the option adversely impact on vehicle mileage travelled, traffic levels, congestion and risk of accidents? 6. Will the option, when added to other potential health factors, cumulatively impact on human health?
Soil	To ensure soil protection is taken into account with regard to waste management activities and as far as is practicable, prevent contamination of land.	7. Will the option lead to land contamination? 8. Will the option lead to remediation of contaminated land? 9. Will the option aid enhancement of soils? 10. Will the option irreversibly damage soils?
Water	To protect water courses from, and reduce adverse effects of, waste management activities To improve the quality of water and wastewater discharges resulting from waste management activities.	11. Will the option impact on levels of contamination of surface water and/or groundwater? 12. Does the option take account of flood risk and mitigation measures?
Air	To minimise adverse impacts of waste management activities on the air quality and public health.	13. Will the option impact on levels of emissions of pollutants to air from waste management activities? 14. Will waste management activities exacerbate particular air quality problems in the local area?
Climatic factors	To reduce GHG emissions from waste production and disposal.	15. Will the option have an impact of fossil fuel consumption? 16. Will the option have an impact on the emissions of GHG?
Material assets and resource efficiency	To maximise waste prevention, reuse, recycling and recovery rates by viewing waste as a resource. To collect and/or treat waste at the nearest and appropriate stations	17. Will the option reduce GHG emissions from use of primary raw materials through reuse or recycling? 18. Will the option result in a change in the quantity of non-renewable resources used through reuse, recycling or recovery?

		19. Will the option encourage reduction, reuse and recycling of materials in the area? 20. Does the option encourage energy recovery from residual waste? 21. Will the option encourage the efficient use of existing waste management facilities? 22. Does the option require access to additional waste management infrastructure?

5.1 Options/Alternatives for Perth & Kinross Council Waste Management Plan

The scoping report prior to this environment report originally outlined that Perth & Kinross Council would look at two options for the Perth and Kinross Waste Management Plan, namely;

Option 1: Status quo (continue landfilling residual waste up to 2025/26)
Perth & Kinross Council to complete implementation of waste initiatives/projects currently programmed up to end of 20010/11. This will include roll-out of new kerbside recycling scheme, redevelopment of Recycling Centres and expansion of Recycling Points. Perth & Kinross Council to continue monitoring and maintenance of recycling facilities and household and commercial recycling schemes up to and beyond 2025/26.

Residual waste collected by the Council to continue to be sent landfill. This will require the Council to secure long term arrangements for access to licensed landfill sites up to and beyond 2025/26.

Option 2: In addition to status quo, seek alternative options for residual waste treatment
Perth & Kinross Council to complete implementation of waste initiatives/projects currently programmed up to end of 20010/11, and continue monitoring and maintenance of recycling facilities and household and commercial recycling schemes up to and beyond 2025/26.

Residual waste collected by the Council to be sent for alternative (to landfill) residual waste treatment. This will require the Council to assess the range of available residual waste treatment technologies capable of enabling Perth & Kinross Council to deal with their post-collected waste obligations up to and beyond 2025.'

However, the decision was made prior to undertaking the environmental assessment matrix that the following third option be assessed - In addition to option 1, seek alternative options for residual waste treatment that ensure the Council meets it's landfill allowance targets for biodegradable waste and moves towards successfully meeting the Scottish Government's Zero Waste targets' should also be considered.

The wording of the original two options were also changed to allow for ease of clarification.

Final Options/Alternatives for Perth & Kinross Council Waste Management Plan

The following three strategic options for the Plan were assessed:

Option 1: **Complete implementation of programmed schemes/projects for increasing recycling and composting rates, but continue to send residual waste to landfill.**
Perth & Kinross Council to complete implementation of waste initiatives/projects currently programmed up to end of 20010/11. This will include roll-out of new kerbside recycling scheme, redevelopment of Recycling Centres and expansion of Recycling Points. Perth &

Kinross Council to continue monitoring and maintenance of recycling facilities and household and commercial recycling schemes up to and beyond 2025/26.

Residual waste collected by the Council to continue to be sent landfill. This will require the Council to secure long term arrangements for access to licensed landfill sites up to and beyond 2025/26.

Option 2: **In addition to Option 1, secure alternative treatment/disposal of residual waste (to landfill) that will ensure Council does not exceed the landfill allowance for biodegradable waste.**
Perth & Kinross Council to complete implementation of waste initiatives/projects currently programmed up to end of 2010/11 and continue the monitoring and maintenance of recycling facilities and household and commercial recycling schemes up to and beyond 2025/26.

Residual waste collected by the Council to be sent for alternative (to landfill) residual waste treatment that will ensure the Council does not exceed the landfill allowance for biodegradable waste.

Option 3: **In addition to Option 1, secure alternative treatment/disposal of residual waste (to landfill) that will ensure Council does not exceed the landfill allowance for biodegradable waste and will assist the Council in achieving the Scottish Government's zero waste targets.**
Perth & Kinross Council to complete implementation of waste initiatives/projects currently programmed up to end of 2010/11, and continue the monitoring and maintenance of recycling facilities and household and commercial recycling schemes up to and beyond 2025/26.

Residual waste collected by the Council to be sent for alternative (to landfill) residual waste treatment. This will require the Council to assess the range of available residual waste treatment technologies capable of enabling Perth & Kinross Council to deal with their post-collected waste obligations up to and beyond 2025 and meet recycling, waste to landfill and the 25% energy recover cap of 25% by 2025.

<u>Technical Evaluation</u>
Perth & Kinross Council with environment consultant, Halcrow, undertook a technical feasibility options appraisal of residual waste treatment facilities as part of the new WMP. The technical evaluation looked at a range of residual waste treatment technologies and considered whether they would be suitable in terms of the composition of the waste stream in Perth & Kinross, their ability to meet diversion and recycling targets and their proven ability to date. That report will be used to help the Council to procure residual waste treatment technologies for Perth and Kinross.

It is not possible for this report to provide further assessment of these options as a procurement process will determine the best option for the treatment of residual waste produced in Perth and Kinross. The technologies assessed were:

- Anaerobic Digestion
- Gasification
- Plasma Systems
- Energy from Waste (EfW)
- EfW with Combined Heat and Power
- Dirty Materials Recycling Facility
- Mechanical Biological Treatment
- Mechanical Heat Treatment

5.2 Assessment of the options

The Environment Impact Matrix was undertaken and completed by a team from Perth & Kinross Council's Environment Service. The SEA objectives and criteria laid out in Table 7 were used.

A summary of the main points are presented in the table below (Table 9).
The full assessment matrix can be found in Appendix 3.

Table 10 describes the synergistic and cumulative impacts that may occur.

Symbol Key

++ Major Positive	O No effect	-- Major negative	ST Short Term
+ Positive	? Unknown	- Negative	MT Medium term
			LT Long term

Table 9 Environment Assessment Matrix

SEA Objective Perth and Kinross Waste Management Plan	Option 1	Comments	Option 2	Comments	Option 3	Comments
Biodiversity						
To protect and where possible, enhance biodiversity, flora and fauna from the impact of waste management activities.	+/-- LT	• Landfill restoration could improve biodiversity on old sites. • Continued use of landfill as main disposal option and may require new land take with negative impacts on biodiversity.	+/- LT	• Landfill restoration could improve biodiversity on old sites. • Vast reduction in the need and use of landfill in Perth and Kinross. • Emissions from residual waste treatment facilities could negatively impact on biodiversity.	+/- LT	• Landfill restoration could improve biodiversity on old sites. • Vast reduction in the need and use of landfill in Perth and Kinross. Emissions from residual waste treatment facilities could negatively impact on biodiversity.
Human Health						
To protect the living conditions, amenities and health of residents from detrimental effects of waste management activities e.g. noise, traffic, dust, littering, odour and particulates.	O	• This option is not expected to have any significant positive or negative impacts on human health.	+/- MT	• While there is no conclusive evidence of negative impacts between human health and waste treatment facilities PKC are aware that there is much public concern on this subject.	+/- MT	• While there is no conclusive evidence of negative impacts between human health and waste treatment facilities PKC are aware that there is much public concern on this subject.

To protect community and employee safety and wellbeing from waste activities and related anti-social behaviour – littering and fly-tipping.	+/- LT	• With increased awareness of waste and littering issues, PKC will continue to maintain and improve the cleanliness of the area.	+/- LT	• With increased awareness of waste and littering issues, continue to improve the cleanliness of the area. • Increasing waste collections and facilities could potentially lead to an increase in occupational health risk.	+/- LT	• With increased awareness of waste and littering issues, PKC will continue to improve the cleanliness of the area. • Increasing waste collections and facilities could potentially lead to an increase in occupational health risk.
Soil						
To ensure soil protection is taken into account with regard to waste management activities and as far as is practicable, prevent contamination of land.	+/- LT	• Recovery of organic waste through composting – PAS 100/110 output applied to soils. • Council owned closed landfill sites remediated and restored. • May require additional landfill capacity and therefore land take.	+/- LT	• Recovery of organic waste through composting – PAS 100/110 output applied to soils. • Council owned closed landfill sites remediated and restored. • While residual treatment facilities would require land take, would be a much smaller footprint. • Residual treatment will still produce small volume of residues that may need to be landfilled.	+/- LT	• Recovery of organic waste through composting – PAS 100/110 output applied to soils. • Council owned closed landfill sites remediated and restored. • While residual treatment facilities would require land take would be a much smaller footprint. • Residual treatment will still produce small volume of residues that may need to be landfilled.
Water						
To protect water courses from, and reduce adverse effects of, waste management activities.	O	• No significant positive or negative impacts have been identified.	O	• No significant positive or negative impacts have been identified.	O	• No significant positive or negative impacts have been identified.
To improve the quality of water and wastewater discharges resulting from waste management activities.	+/- LT	• PKC waste management sites utilise SUDS and grey water reuse, this could be rolled out to further sites where applicable.	+/- LT	• PKC waste management sites utilise SUDS and grey water reuse, this could be rolled out to further sites where applicable.	+/- LT	• PKC waste management sites utilise SUDS and grey water reuse, this could be rolled out to further sites where applicable.
Air						
To minimise adverse impacts of waste management activities on the air quality and public health.	?	• No significant positive or negative impacts have been identified however there are a number of unknowns such as facility locations and type if facilities.	?	• No significant positive or negative impacts have been identified however there are a number of unknowns such as facility locations and type if facilities.	?	No significant positive or negative impacts have been identified however there are a number of unknowns such as facility locations and type if facilities.

Climatic Factors						
To reduce GHG emissions from waste production and disposal.	+/- **LT**	• By increasing the volume of waste collected for recycling, there will be a small reduction in waste disposed of to landfill. • Half of the waste collected will still be disposed of to landfill creating GHG gases, while methane capture is undertaken at current landfill, a proportion will escape to the environment.	+ **LT**	• Would achieve significant reduction in waste to landfill therefore significant reduction in GHG production. • Residual waste treatment facilities may result in the production of energy and heat without using fossil fuels.	++ **LT**	• Would achieve significant reduction in waste to landfill therefore significant reduction in GHG production. • Residual waste treatment facilities may result in the production of energy and heat without using fossil fuels. • This option benefits from the increased recovery of recyclates.
Material assets and resource efficiency						
To maximise waste prevention, reuse, recycling and recovery rates by viewing waste as a resource.	+/- **LT**	• Makes a commitment to increase recycling and composting rates. • Identifies waste prevention and the need to move up the waste hierarchy. • Continues to use landfill as the main waste disposal option.	+ **LT**	• Makes a commitment to increase recycling and composting rates. • Identifies waste prevention and the need to move up the waste hierarchy. • Reduces waste to landfill. • May recover extra materials for recycling and composting.	++ **LT**	• Makes a commitment to increase recycling and composting rates. • Identifies waste prevention and the need to move up the waste hierarchy. • Reduces waste to landfill. • Would recover extra materials for recycling and composting via residual waste treatment.
To collect and/or treat waste at the nearest and appropriate stations.	**?**	• Allows for the collection of materials at the kerbside or local recycling centres and points with the use of localised bulking facilities. • However it is not possible to identify locations of future waste treatment facilities.	**?**	• Allows for the collection of materials at the kerbside or local recycling centres and points with the use of localised bulking facilities. • However it is not possible to identify locations of future waste treatment facilities.	**?**	• Allows for the collection of materials at the kerbside or local recycling centres and points with the use of localised bulking facilities. • However it is not possible to identify locations of future waste treatment facilities.

5.3 Summary of the likely significant effects of the Waste Management Plan

The WMP options were assessed using the framework as above which shows a summary of the assessment. The full findings are shown in Appendix 3.

Waste management, with the exception of avoiding waste in the first place, be it the treatment of waste into a product or its eventual disposal, will always have some form of impact, however these impacts have to be taken into context. Local Authorities through their waste plan cannot directly control waste arisings. The decision as to how the waste will be dealt with is dependant on many factors in addition to environmental impacts including:

- Waste types
- Tonnages
- Available funding
- Collection methods
- Technology available
- Costs
- Longevity of infrastructure
- Targets, both legal obligations and aspirational

The purpose of the SEA is to show the environmental impacts of the options. The main environmental impacts identified, based on the SEA objectives, are summarised below.

1. **To protect and where possible, enhance biodiversity, flora and fauna from the impact of waste management activities**

All three options have a mixture of potential positive and negative effects. All options will have a positive impact in the form of landfill restoration of PKC owned landfills. Through careful remediation, conditions to enhance biodiversity, flora and fauna will occur. Options 2 and 3 vastly reduce the need to landfill residual waste in Perth and Kinross.

Option 1 has negative impacts with regards to most of the waste from Perth and Kinross still being disposed of to landfill. Consequently, this will lead to Perth & Kinross Council requiring access to another existing, or the procurement of, a new landfill, even with the increases predicted in composting and recycling.

Options 2 and 3 have negative impacts mainly with regards to the negative public perception of residual waste treatment facilities that could negatively impact on biodiversity. While any new treatment facilities would require land take, the requirements would be to a much smaller footprint in comparison to a landfill site.

2. **To protect the living conditions, amenities and health of residents from detrimental effects of waste management activities e.g. noise, traffic, dust, littering, odour and particulates.**

Option 1 is not expected to have any significant impacts.

There are both positive and negative impacts for Options 2 and 3. With reduced waste being sent to landfill, localised issues with odour and traffic movements will be reduced. However, there is much public concern with regards to emissions from residual waste treatment facilities. While all studies to date have been unable to find any proven links between human health and waste facilities it has to be noted that these concerns may negatively impact human health by causing anxiety and concern amongst local residents. It should be noted that the Environment Report for 'Consultation on Scotland's Zero Waste Plan' states "the likelihood of health issues is not considered to be significant" in relation to waste facilities.

3. **To protect community and employee safety and wellbeing from waste related anti-social behaviour – littering and fly-tipping**

Options 1 is expected to have positive effects. With increases in public awareness with regards to waste and related issues such as littering and fly-tipping, Perth and Kinross as an area will maintain and improve its cleanliness standards and record. Options 2 and 3 are also expected to result in maintained and improved cleanliness standards.

Options 2 and 3 could lead to additional waste treatment facilities where potentially, negative effects with regards to increased risk in occupational health of workers may occur. PKC currently follow strict health and safety practices where individual tasks are risk assessed to ensure the health and safety of workers undertaking those tasks. This practice would be carried forward to any new facility. If the facility(ies) were not directly under PKC control, the health and safety of facility staff would be assessed as part of the procurement process.

4. **To ensure soil protection is taken into account with regard to waste management activities and as far as is practicable, prevent contamination of land**

All three options are expected to have both positive and negative effects. All options will benefit from the recovery of organic waste through composting and, if the resulting product meets PAS 100/110 standards, it can be applied to land. Council owned closed landfill sites will be remediated and restored which will include improving soil conditions.

Option 1 will have negative impacts in that it will require Perth & Kinross Council to find access to another existing, or the procurement of, a new landfill site, even with the increases predicted in composting and recycling. This would involve large landtake.

Options 2 and 3 are potentially negative in that any new treatment facilities would require landtake, however the requirements would be to a much smaller footprint in comparison to a landfill site.

5. **To protect water courses and reduce adverse effects of waste management activities**

It is not expected that there will be any positive or negative impacts as we currently have robust measures in place to protect water courses where necessary.

6. **To improve the quality of water and wastewater discharges resulting from waste management activities**

All three options are expected to have positive effects. All options will allow for the further development of sustainable urban drainage systems and grey water reuse.

7. **To minimise adverse impacts of waste management activities on the air quality and public health**

It is not anticipated there will be any impact from additional traffic movements. However, there are a number of unknowns, therefore we are unable at this stage to gauge whether there will be any positive or negative effects.

8. **To reduce GHG emissions from waste production and disposal.**

Option 1 is expected to have both positive and negative effects on climate factors through the generation of greenhouse gases.

Landfilling of waste is a significant source of greenhouse gases, producing methane which is a particularly potent GHG. While a large proportion of the methane produced by landfill sites is currently captured and used for energy and heat generation there is

still a proportion which escapes to the atmosphere.

Options 2 and 3 are expected to have positive and very positive effects respectively. Both would achieve a reduction in the use of landfill and associated emissions from landfill. Use of residual waste treatment facilities may result in the production of heat and energy without utilising fossil fuels. Option 3 would recover greater amount of material for recycling, therefore displacing virgin materials (and achieves associated energy savings)

9. To maximise waste prevention, reuse, recycling and recovery rates by viewing waste as a resource.

Option 1 has both positive and negative impacts. Options 2 and 3 have positive and very positive impacts respectively.

All three options make a commitment to increase recycling and composting rates by rolling out schemes to capture a greater range and amount of these materials, identify waste prevention and the need to move up the waste hierarchy. Options 2 and 3 would substantially reduce waste to landfill and option 3 would recover a greater amount of materials for recycling and composting in comparison to options 1 and 2.

Option 1 however will have a negative as it would continue to dispose of waste to landfill.

10. To collect and/or treat waste at the nearest and appropriate stations

It is not possible at this stage to determine if any of the three options will impact on this objective. All of the options allow for the collection of materials at either the kerbside or local recycling centres and points with the use of localised bulking facilities but it is not possible to identify locations of future waste treatment facilities.

5.4 Selecting the preferred option

Through the assessment process, both positive and negative environmental impacts were identified for all three options.

Option 1, which would entail all residual waste produced in Perth and Kinross still being disposed of to landfill, and consequently producing the highest volume of landfill gases, proved to have the highest negative impact on the environment, specifically under SEA topics 'Biodiversity', 'Climatic Factors' and 'Material Assets'.

Options 2 and 3 were very similar throughout all of the assessment, with Option 3 shown to have more positive environmental impacts only under SEA topics 'Climatic Factors' and 'Material Assets'.

From a strategic environmental impacts position, both Options 2 and 3 could be considered by decision makers, with the final decision taken in conjunction with all other relevant factors. However, due to Option 3 having all of the same positive impacts as Option 2, as well as an increased positive impact for Climatic Factors and Material Assets, Option 3 is considered the preferred option.

5.5 Difficulties encountered in the Assessment Process

Procurement
Perth & Kinross Council, like all other local authorities, has to follow an open and transparent procurement process. The Council, in partnership with Dundee and Angus Council's have a joint Tayside Procurement Strategy and the key objectives of this strategy are to:

a. Ensure our procurement practice reflects our vision values and aims

b. Secure commitment to excellent procurement from all members and officers throughout the Councils
c. Provide a point of reference and focus for procurement matters
d. Plan the way forward on improving our procurement function
e. Deliver savings as part of an authority wide efficiency strategy which will respond positively to the Scottish Government's agenda on efficient government and public service reform

Contracts that are valued above a certain price are subject to EU Procurement rules
The EU procurement rules are intended to promote fair and open competition within the European market and they apply to public sector procurement

The Rules are comprised of:
- The Treaty of Amsterdam (the Treaty of Rome as amended)
- The EC Procurement Directives
- Case-law of the European Court of Justice (ECJ) and the national courts

Through the PKC WMP an evaluation of technologies was undertaken. These broad technology headings have been assessed against a range of criteria, such as:

- Anaerobic Digestion
- Gasification
- Plasma Systems
- Energy from Waste (EfW)
- EfW with Combined Heat and Power
- Dirty Materials Recycling Facility
- Mechanical Biological Treatment
- Mechanical Heat Treatment

As specific reference technologies were not used for all technologies it has not been possible to directly SEA specific technologies, instead the Environment Report has looked at impacts on a more generalised basis. However the SEA objectives will be utilised when developing assessment criteria for the residual waste treatment procurement exercise.

Non-site specific nature of the Perth and Kinross Waste Management Plan
As the WMP is not site specific, it has not been possible to include the SEA topics of Landscape and Cultural Heritage, however we recognise that potential impacts may occur and this would be further assessed as required. For many of the other topics, only generalised comments are applicable.

5.6 Assessment of options - cumulative and synergistic effects

As the Perth and Kinross Waste Management Plan is not a site specific plan, cumulative and synergistic effects can only be addressed in general terms. At this stage in the plan, Perth & Kinross Council is open to waste management facilities located both within and out with the Perth and Kinross area.

While the WMP looks at all waste activities that will be undertaken by PKC to divert waste from landfill, promote waste reduction and reuse, increase composting and recycling and the treatment residual waste, the assumption would be that the highest likelihood of cumulative impacts would most likely arise from co-locating waste treatment facilities in close proximity.

Effects would be in terms of:

- Noise – general working noise from operational sites
- Traffic – should additional traffic result from locating sites close together. However, this may be positive as fewer vehicles may be required in totality.
- Dust and odour – this would be dependant on the type of facility (landfill or open windrow composting compared to enclosed residual waste treatment facilities)

- Emissions – should there be multiple facilities located close together; their joint emissions would be higher compared to a single facility.

In Scotland, the locating of any waste treatment facilities is influenced by a number of factors including Strategic and Local Area Development Plans. These plans are developed in consultation with many stakeholders including SEPA, SNH and HS and should identify within each area land suitable for the development of waste management infrastructure. It is possible that these development plans may advise the co-location of waste infrastructure with other, appropriate land uses.

The use of brownfield sites for 'industrial uses' may also be promoted through development plans. This may lead to relatively 'constrained' areas for such usages. The desire to avoid locating waste infrastructure within, or close to designated areas may constrain planners into choosing sites closer to populated areas e.g. industrial estates.

These issues would require planning and licensing authorities to identify potential cumulative effects, and set out mitigation measures to counteract those effects.

There are opportunities for the promotion of positive synergistic effects when planning for waste management activities. The co-location of facilities could reduce the need for overall land take, reduce transport movements (particularly if located close to the main areas of waste production) and allow for localised use of energy/heat production from treatment facilities by nearby infrastructure. This would also mean that any environmental impacts would occur at fewer locations and, with the introduction of mitigation measures, those impacts could be managed.

However, it is out with the scope of this report to identify specific locations and therefore specific cumulative or synergistic effects that may occur on a site specific basis.

Table 10 below identifies the potential effects of the WMP while Table 11 identifies possible mitigation and enhancement measures to both combat any negative effects and help promote positive effects.

Table 10. Potential cumulative and synergistic effects by SEA topic

SEA Topic	Potential effects
Biodiversity, flora and fauna	It is not expected that the WMP will have significant cumulative effects on biodiversity, flora and fauna. While there would be risks of impacts from the build of new infrastructure this would be addressed via the planning process and through Environmental Impact Assessments (EIA) at the early stages of the planning phase.
Human health	The Scottish Government's Environment Report for the Zero Waste Scotland Consultation identified that Scotland wide, cumulative effects are most likely with regards to impacts on local communities within the vicinity of new infrastructure in terms of dust, odour, noise and increased traffic. However, as the Perth and Kinross WMP is not site specific this report can only comment at the larger scale and cannot propose any cumulative effects for the local area as it is unknown where, if at all, new waste facilities will be located. As per the assessment matrix, we acknowledge that impacts on local communities may arise out of anxiety and lack of knowledge with regards to the management of waste. In agreement with the Government's report, should new facilities be proposed, detailed assessments at a local level would be required, together with local stakeholder engagement and awareness-raising. This is included in the planning and EIA process as standard.

Soil	It is not expected that there will be significant cumulative effects on soil.
Water	It is not expected that there will be significant negative cumulative effects on water. Synergistic positive impacts include the greater reuse of grey water an sustainable urban drainage systems.
Air	It is not expected there will be significant cumulative effects of air however; this topic would be revisited again should site specificity become available. Air as an environmental topic would be assessed with an EIA as standard.
Climatic factors	As per the SG's Environment Report for the Zero Waste Scotland consultation, it is expected that cumulatively, through the reduction of waste to landfill the volume of greenhouses gases associated with waste management will also reduce. While other treatment options will also produce greenhouse gases, the quantities of the gases are vastly reduced and overall the benefits gained from treating residual waste as opposed to disposal to landfill outweigh emissions released from these treatment facilities. (Scottish Government Environment Report Consultation for Scotland's Zero Waste Plan http://www.scotland.gov.uk/Publications/2009/08/19155137/0)
Material assets and resource efficiency	The benefits of waste prevention, reuse and recycling, alongside the treatment of residual waste to allow for resource recovery and the reduction in waste disposed of to landfill allows for positive cumulative and synergistic effects, both locally and at national levels, regardless of where any new infrastructure is located.

Table 11. Mitigation and enhancement measures

Biodiversity - To protect and where possible, enhance biodiversity, flora and fauna from the impact of waste management activities we will …
• Ensure any facilities used by Perth & Kinross Council are run by competent operators and meet all regulatory standards.
Human Health - To protect the living conditions, amenities and health of residents from detrimental effects of waste management activities e.g. noise, traffic, dust, littering, odour and particulates and to protect employee, community safety and wellbeing from waste activities and related anti-social behaviour – littering and fly-tipping we will…
• Provide education and awareness to reassure residents about impacts of any waste management facilities that may be used in the future by PKC. By providing up-to-date, relevant and researched information to residents will allow them to make informed opinions. • Take account of Health and Safety standards. • As an enhancement measure, maintain Perth and Kinross's national reputation as a clean and litter free area.
Soil - To ensure soil protection is taken into account with regard to waste management activities and as far as is practicable, prevent contamination of land we will…
• Ensure that any residues produced via residual waste treatment were further treated and recovered or disposed of to the correct landfill facility. Our enhancement measures for soil include: • By continuing to compost as much organic waste as possible, and producing good quality PAS 100/110 compost/digestate, allow for that compost to be applied to, and consequently improve soils in Perth and Kinross.
Water - To protect water courses from, reduce adverse effects of waste management activities and to improve the quality of water and wastewater discharges resulting from waste management activities

we will utilise the following enhancement measures –
• Further roll out of sustainable urban drainage systems to additional sites. • Reuse of rainwater for vehicle cleaning.
Air - To minimise adverse impacts of waste management activities on the air quality and public health we will…
• Streamline vehicle movements and/or using more efficient engines and fuels. Further develop travel staff plans. • Ensure any facilities employed to treat waste from Perth and Kinross are run by competent operators who are able to undertake these duties and comply with all regulatory standards.
Climatic Factors - To reduce GHG emissions from waste production and disposal we will…
• Continue to support and provide opportunities to households and businesses in Perth and Kinross to reduce their waste, thereby lessening the volume of waste going to landfill. Ensure landfill operators used by Perth and Kinross are competent and meet all regulatory standards. • The procurement process and service delivery plans will be developed to allow them to be flexible enough to take account of climate adaptation. Monitoring of waste operations will be carried out to identify whether extreme weather events are causing operational difficulties.
Material Assets -To maximise waste prevention, reuse, recycling and recovery rates by viewing waste as a resource and to collect and/or treat waste at the nearest and appropriate stations we will…
• Continue to support and promote waste prevention and reuse activities such as Real Nappies, bicycle repair and re-sell through the Bike Station, WRAP home composting initiatives and local furniture reuse projects.

Main Themes

The main themes which will be incorporated into the draft waste management plan are -

- Promoting the SEA objectives by utilising the objectives when developing assessment criteria for the residual waste treatment procurement exercise.
- Assumed mitigation through meeting modern regulatory standards and ensuring operator competency.
- Provide education and awareness to reassure residents about impacts of any waste management facilities that may be used in the future by PKC. By providing up-to-date, relevant and researched information to residents would allow them to make informed opinions.
- In terms of enhancement, Perth & Kinross Council will strive to continue to improve on existing good practice such as keeping Perth and Kinross litter free and utilising Sustainable Urban Drainage Systems and re-using rainwater.

5.7 Monitoring

Section 19 of the Environmental Assessment (Scotland) Act 2005 requires the Responsible Authority to monitor significant environmental effects of the implementation of the PPS. This needs to be done in such a way as to also enable them to identify any unforeseen adverse effects at an early stage and to enable them to take appropriate remedial action.

The following activities (Table 12) will be undertaken to establish a monitoring approach to the Perth and Kinross WMP.

Table 12. Proposed SEA monitoring programme

What is being monitored	Proposed Indicator	Timescale and responsibility
Biodiversity, Flora and Fauna	- Tayside Local Biodiversity Action Plan Priority Species and Habitat - Condition of biological and mixed SSSIs	Annually LBAP PKC
Human Health	Population figures from - Census data General Registrar Office for Scotland (GROS) - Housing figures from Housing & Community Care. - Cleanliness Grades in Perth and Kinross. (LEAMS) - SEPA flytipping statistics	Annually where applicable. Census data as required. PKC Audit Scotland SEPA
Water	- Surface Water Quality –SEPA - Groundwater Quality -SEPA	As per SEPA monitoring schedule.
Soil	- Condition of Geological SSSI - Area of contaminated land	Annually PKC Environmental Health Section
Air	- Carbon Emissions for the PKC area - Mean Annual level of air pollutants - Number of poor air days - Number of localised extreme weather events and impacts on waste management activities.	As per air quality monitoring program – PKC As per weather events, PKC
Climatic Factors		
Material Assets (Resource efficiency)	- Waste arisings - Location and number of related waste management infrastructure - Energy consumption (PKC) - Fuel usage/costs (PKC) - Electricity costs (PKC)	Quarterly waste arisings. PKC and SEPA Annually for remainder, PKC

Section 6. Next Steps

Table13 lists future milestones in the development of the PPS and its SEA, and the dates when these are expected to be completed.

Table 13. Anticipated PPS-making and SEA milestones

Expected date	Milestone
15th December 2009	Publication of the Environmental Report. Consultation commences
29th January 2010	Consultation ends
Spring 2010	Publication of the Waste Management Plan
2010/2011	Adoption of the final Waste Management Plan Publication of Post-Adoption SEA Statement, which will: • Highlight how the SEA and consultation responses have influenced the development of the Waste Management Plan. • State the framework for monitoring the environmental effects of the Waste Management Plan to (a) identify any unforeseen adverse effects at an early stage; and (b) undertake appropriate remedial action

Further information
Further information on the SEA can be found at: www.pkc.gov.uk/wasteplan

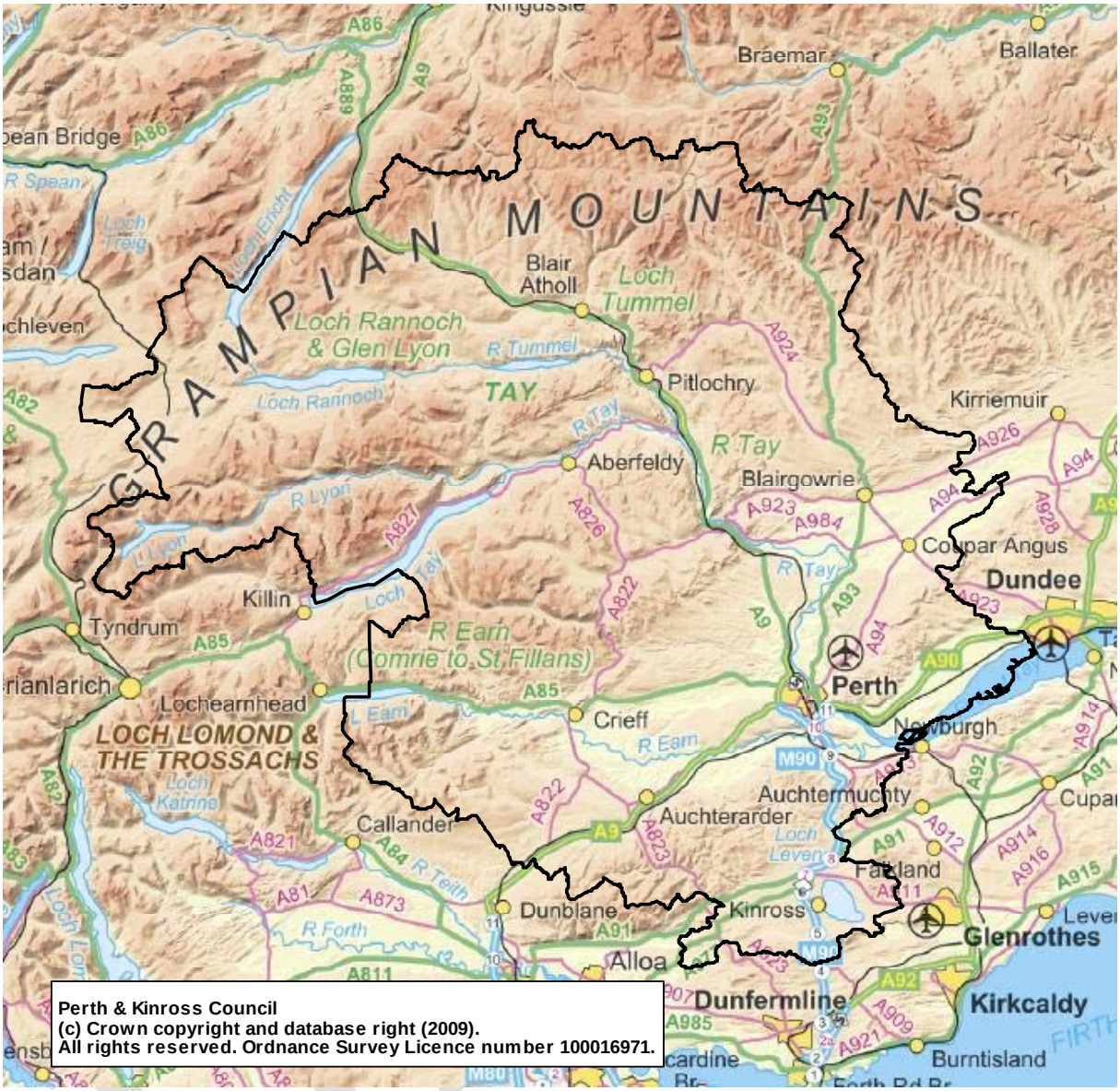
All comments on the Environmental Report and the Waste Management Plan should be sent to:

Erin Scott, Waste Awareness Co-ordinator, The Environment Service, Pullar House, 35 Kinnoull Street, Perth, PH1 5GD.
Tel: 01738 476476
Email: EScott@pkc.gov.uk

Appendices

Appendix 1

Map of Perth and Kinross area.



Appendix 2

Relevant Plans, Policies and Strategies

	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
Biodiversity, flora and fauna		
International	• Birds Directive 79/409/EEC • European Union Biodiversity Strategy • Habitats Directive 92/43/EEC	May impact in future should sites need to be utilised for new infrastructure builds. Feeds into the Tayside Biodiversity Action Plan
National	• "Scotland's Biodiversity: it's in your hands" - a strategy for the conservation and enhancement of biodiversity in Scotland. • Natural Heritage Futures: Eastern Lowlands (under revision) • PAN 71 Conservation Area Management • Strategy for Implementing Actions under the UK Biodiversity Action Plan (SEPA Policy No.21)	May impact in future should sites need to be utilised for new infrastructure builds. Feeds into the Tayside Biodiversity Action Plan
Local	The Tayside Biodiversity Action Plan	Used as indicator document for the WMP.
Human health		
International	EU Waste Incineration Directive 2000 (also impacts on Air, Water and Soil SEA topics).	The main aim of WID is to prevent and limit negative environmental effects by emissions into air, soil, surface and ground-water, and the resulting risks to human health, from the incineration and co-incineration of waste.
International	Learning for our Future: Action Plan for the UN Decade of Education for Sustainable Development	The aim of the strategy is that by 2014 people in Scotland will have developed the knowledge, understanding, skills and values to live more sustainable lives. This document would support the increase on public awareness and participation in waste reduction and recycling.
National	Review of Environmental and Health Effects of Waste Management: Municipal Solid Waste and Similar Wastes. DEFRA May 2004	This report provided Government with a critical assessment of the available peer-reviewed scientific literature on the health and environmental effects of options for managing municipal solid waste. Covers, for the large part, the known effects of energy from waste technologies and landfill.

	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
National	The Health Protection Agency Position Statement -The Impact on Health of Emissions to Air from Municipal Waste Incinerators. September 2009	The Health Protection Agency reviewed research undertaken to examine the suggested links between emissions from municipal waste incinerators and effects on health. The Committee on Carcinogenicity of Chemicals in Food, Consumer Products and the Environment reviewed recent data and has concluded that there is no need to change its previous advice, namely that any potential risk of cancer due to residency near to municipal waste incinerators is exceedingly low. SEPA requested this review to support its work in improving the regulation of thermal treatment of waste facilities. Part of this is about ensuring that both the health and environmental impacts of incineration are examined and addressed in line with our regulatory responsibilities. SEPA have also reviewed the thermal treatment guidelines published in 2004, and have replaced the 2004 version with the Thermal Treatment of Waste Guidelines 2009. SEPA was content with the recommendation that the current precautionary regulatory approach is continued. Present controls are designed to protect human health and they are precautionary due to a level of uncertainty; therefore there is little rationale for an even more precautionary approach. SEPA will continue to apply the precautionary approach when regulating new and existing thermal treatment plants, and will take any new evidence into account.
National	Incineration of Waste and Reported Human Health Effects, Health Protection Scotland 2009.	The aim of this document is to provide summarised information on the evidence of association between exposure to the emissions from waste incineration plants and adverse effects on human health. The main audience for this briefing note is intended to be Health Protection staff working in NHS Boards, Local Authorities and other agencies in Scotland. The material may also be of interest to others including Government Agencies, Planning Authorities, local interest groups and members of the public. The note provides summary material intended to assist in responding to local concerns regarding incineration and health, relating to either existing incinerators or newly proposed facilities.
National and Local	Town and Country Planning (Development Planning) (Scotland) Regulations 2008	Under the new planning system, local authorities will be better placed to identify areas for development, including the development of waste management infrastructure. The new system will consist of 2 tiers as follows. The final judgments are still to be made as to what level – Strategic or Local – such land planning decisions will be made. - A **Strategic Development Plan** ('TAYplan') jointly prepared by Perth and Kinross, Dundee, Angus and Fife Councils. Work has started on the Plan and the Strategic Development Plan Scheme has been published. - A single **Local Development Plan** to cover all of Perth and Kinross. The process is explained in the 'Local Development Plan Scheme' which includes the Council's participation statement and timetable.

	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
Local	Antisocial Behaviour Strategy for Perth and Kinross 2006	Strategy indicates that there will be use of environmental fixed penalties where there is deliberate dropping of litter, fly-tipping and dog fouling in public spaces.
Local	Community Plan 2006-2020	This document sets out the Community Planning Partnership's shared vision for Perth and Kinross and makes reference to improving the safety and environment of Perth and Kinross.
Soil		
International	EU Thematic Strategy for Soil Protection (2006-2007)	This Strategy lays out the overall objectives in protecting soil in Europe – 1) Preventing further soil degradation and preserving its functions: 2) Restoring degraded soils to a level of functionality consistent at least with current and intended use, thus also considering the cost implications of the restoration of soil. This is fed into the Scottish Soil Framework 2009 document and is more applicable to the P+K WMP.
National	Scottish Soil Framework: 2009	The principal aim of the Scottish Soil Framework is to: 'Promote the sustainable management and protection of soils consistent with the economic, social and environmental needs of Scotland.'
Water		
International	EC Water Framework Directive (2000) (translated into Scottish legislation via The Water Environment and Water Service Act (Scotland)2003.	The WFD required the completion of management plans for all river basins (including estuarine and coastal waters and groundwater). Among the objectives of these management plans is the protection and improvement of water quality. This is relevant to the P+K WMP with regards to preventing contamination of water sources/bodies through waste management activities.
National/ Local	River Basin Management Plan for Scotland – local draft Area Plan in particular. Scottish Planning Policy (SPP) 7 Planning and Flooding.	Identifies specific areas with the Tay Area Draft Basin Management Plan considered most significant, namely - • nutrient enrichment in our rivers and lochs and high levels of nitrates in our groundwaters; • changes to the physical habitat of our rivers and barriers to fish migration; and • changes to the water flow and water levels in our rivers and groundwaters. These would need to be taken into account with regards to any new and existing waste management activities that could impact on water bodies.
Air		
International	Thematic Strategy on Air Pollution (COM(2005) 446) Air Quality Framework Directive (96/62/EC)	The Thematic Strategy on air pollution is to present a coherent and integrated policy on air pollution which: (1) sets out priorities for future action; (2) reviews existing ambient air quality legislation and the National Emission Ceilings Directive with a view to reaching long-term environmental objectives; and (3) develops better systems for gathering information, modelling and forecasting air pollution.

	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
National	SEPA Thermal Treatment Guidelines 2009 http://sepa.org.uk/waste/waste_regulation/energy_from_waste.aspx	The guidelines describe what is expected from developers and other key stakeholders in order to comply with SEPA's planning objectives and the Scottish Government's policies on waste. They also provide advice on the types of information SEPA requires when determining environmental licences for such facilities in relation to energy recovery. Applies to all thermal treatment plants that recover energy from municipal waste and/or commercial and industrial Waste.
Local	• PKC Air Quality Report • Air Quality Action Plan & AQAP SEA	These documents have identified actions to help control air emissions, specifically in Perth city centre. The AQAP includes actions that can be acted upon by the waste management fleet such as 'Eco driving', optimising routes and green procurement towards new vehicles in terms of greener fuels. PKC are also developing staff travel plans, with an plan already in place for staff at PKC's main operational base at Friarton depot.
Climatic Factors		
National	Climate Change (Scotland) Act 2009	The aim of the Climate Change (Scotland) Act is to establish a framework to drive greater efforts at reducing Kyoto Protocol greenhouse gas emissions in Scotland. The Act creates mandatory climate change targets to reduce Scotland's greenhouse gas emissions. Many of the policy measures required to meet these targets will not require legislation to implement, but certain climate change mitigation and adaptation policies have been identified which do require legislation and this Act contains provisions in Part 5 to allow these to be taken forward. Potentially allows for local authorities to have greater powers with regards to waste and recycling collections. It is hoped in turn that this will reduce the environmental impact of waste management. The P+K WMP will take cognisance of these new arrangements
National	Scottish Planning Policy 7 (PP7) – Planning and Flooding 2006 (also relevant under Soils, Climatic Factors and Material Assets)	This policy highlights that new development should not take place if it would be at significant risk of flooding from any source or would increase the probability of flooding elsewhere. Suggests that water resistant materials and forms of construction may be required. Flood prevention and alleviation measures should respect the wider environmental concerns and appropriate engineering solutions recognise the context provided by the development plan. Recognises whilst it is preferable for open spaces to flood rather than buildings it may not always be acceptable.

	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
National	New Flood Risk Management (Scotland) Act 2009	The Act introduced a more sustainable and modern approach to flood risk management, suited to the needs of the 21st century and to the impact of climate change and a more joined up and coordinated process to manage flood risk at a national and local level. Specific measures within the Flood Risk Management (Scotland) Act 2009 include: - A framework for coordination and cooperation between all organisations involved in flood risk management. - Assessment of flood risk and preparation of flood risk management plans - New responsibilities for SEPA, Scottish Water and local authorities in relation to flood risk management - A revised, streamlined process for flood protection schemes - New methods to enable stakeholders and the public to contribute to managing flood risk, and; - A single enforcement authority for the safe operation of Scotland's reservoirs.
Local	Environment Strategy - Perth & Kinross Council, Community Planning Environment Partnership	Sets out outcomes and plans that the Community Planning Partnership wishes to achieve. Currently under review. Please note, individual targets within this plan would be superceded by the Scottish Governments new Zero Waste targets and those set out in the Climate Change (Scotland) Act 2009.
Materials Assets (Waste)		
International	EU Waste Framework Directive 2008/98/EC	The WFD 2006 required Member States of the EU to establish a network of disposal facilities and competent authorities with responsibility for issuing waste management authorisations and licenses. Member States also introduced regulations which specify which waste recovery operations and businesses are exempt from the licensing regimes and the conditions for those exemptions. An important objective of the WFD is to ensure the recovery of waste or its disposal without endangering human health and the environment. Emphasis is also placed on the prevention, reduction, re-use and recycling of waste. In December 2008, the revised WFD (Directive 2008/98/EC) came into force, amending some articles of the current WFD. Member States have until December 2010 for implementing the revised WFD; at that time, Directive 2006/12/EC (and others) will be repealed. Amongst others, changes that will come into place include: - the setting of recycling and composting targets (50% by 2020) - the setting of recycling targets for non-hazardous construction and demolition waste (70% by 2020) - a provision which would enable the European Commission to adopt EU-wide end-of-waste criteria for specified wastes. A waste specified in this way would cease to be waste when it has undergone a recovery operation and complies with the criteria set by the Commission. - the obligation for Member States to set up waste prevention plans within five years from the adoption of the Directive.

	Title of legislation and main requirements of PPS / Environmental protection objective	Impacts in relation to the Perth and Kinross Waste Management Plan
National	The Landfill Directive (Directive 1999/31/EC on the landfill of waste) Implemented in Scotland through the Landfill (Scotland) Regulations 2003	The Landfill Directive (1999/31/EC) aims to reduce, as far as possible, the negative effects of landfilling waste. It sets targets and timescales for reducing the amount of biodegradable municipal waste (BMW) sent to landfill and from this the UK government has identified the maximum amount of BMW that the UK can landfill for certain target years up to 2020. A proportion of these targets have been allocated to Scotland and subsequently to each local authority area. The Landfill (Scotland) Regulations 2003 brought landfill sites within the administrative umbrella of the pollution prevention and control regime implemented in Scotland through the Pollution Prevention and Control (Scotland) Regulations 2000.
National	Pollution Prevention and Control (Scotland) Regulations 2000.	The IPPC regime introduces a more integrated approach to controlling pollution from industrial sources. Its main aim is to achieve - "a high level of protection of the environment taken as a whole...", by measures designed to prevent or, where that is not practicable, reduce emissions to air, water and land. For the purposes of the P+K WMP we would ensure that any facility/services procured would meet all regulatory standards including a relevant PPC permit.
National	Landfill Allowance Scheme (Scotland) Regulations 2005	To ensure that Scotland does not exceed its part of the UK's target, the Scottish Government allocated annual BMW landfill allowances to each Scottish local authority until the 2009/2010 financial year. These allowances are set out in Annex B of the Landfill Allowance Scheme (Scotland) Regulations 2005 - Scottish Government Guidance: March 2007. This scheme is currently on hold.
National	Landfill Tax (Amendment) Regulations 2009	Places a tax cost to each tonne of waste disposed of to landfill. There are currently 2 rates for landfill tax 1. Inert waste - £2.50/tonne 2. Active waste - £40/tonne (£8/tonne annual escalator until it reaches £72/tonne)
National	National Waste Plan 2003	The National Waste Plan brings together Area Waste Plans for the 11 different Waste Strategy Areas in Scotland.

Assessment Matrix Table

SEA Objective Perth and Kinross Waste Management Plan		Option 1: Status quo. Continue to roll out intiatives currently planned but continue to landfill residual waste		Option 2: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill.		Option 3: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill and work towards the achievement of Scottish Government Zero Waste Targets.
Biodiversity						
1. To protect and where possible, enhance biodiversity, flora and fauna from the impact of waste management activities.	+/-, LT	While we currently undertake this process, if we continue to rely on this option it will have significant negative effects. May need to source new/alternate landfill. Landfill restoration may improve biodiversity.	+/-, LT	Potential positive impacts by reducing BMW to landfill. Potential negative impacts by emissions from treatment technologies. However all such facilties have to meet regulatory standards.	+/-, LT	Potential positive impacts by reducing BMW and residual waste to landfill. Potential negative impacts by emissions from treatment technologies. However all such facilties have to meet regulatory standards.
Mitigation		Continue to support and provide opportunities to households and businesses in Perth and Kinross to reduce their waste, thereby lessening the volume of waste going to landfill. Ensure landfill operators used by Perth and Kinross are competent and meet all regulatory standards.		Ensure any facilities used by PKC are competent and meet all regulatory standards. Provide information to members of the public with regards to any concerns over any technologies used.		Ensure any facilities used by PKC are competent and meet all regulatory standards. Provide information to members of the public with regards to any concerns over any technologies used.
Enhancement		Landfill restoration could provide opportunities to protect and improve biodiversity, flora and fauna on closed sites.				
Human Health						
2. To protect the living conditions, amenities and health of residents from detrimental effects of waste management activities e.g. noise, traffic, dust, littering, odour and particulates.	O	It is not expected this option would have any significant positive or negative effects on human health. We are aware that some activities create localised issues with regards to noise, dust and odour. However, studies to date have shown that there is no proven link of waste management facilities negatively impacting on human health. PKC will continue to monitor ongoing research and studies on this subject.	+/-, MT	Studies to date have shown that there is no proven link of waste management facilities negatively impacting on human health. PKC will continue to monitor ongoing research and studies on this subject. Other potential impacts on local population and communities include anxiety about new waste facilities. There is widespread concern about the health impacts of living close to waste facilities amongst the public, but there is no conclusive evidence of negative impacts between human health and waste treatment facilities.	+/-, MT	Studies to date have shown that there is no proven link of waste management facilities negatively impacting on human health. PKC will continue to monitor ongoing research and studies on this subject. Other potential impacts on local population and communities include anxiety about new waste facilities. There is widespread concern about the health impacts of living close to waste facilities amongst the public, but there is no conclusive evidence of negative impacts between human health and waste treatment facilities.
3. To protect employee and community safety and wellbeing from waste activities and related anti-social behaviour – littering and fly-tipping	+, LT	PKC already has high standards of street cleanliness as highlighted through the local environmental audit and management scheme (which is an Audit Scotland SPI)	+, LT	PKC already has high standards of street cleanliness as highlighted through the local environmental audit and management scheme (which is an Audit Scotland SPI) An increase in the number of waste facilities and increased waste collections could also have the adverse effects of leading to an increase in occupational health risk, with more instances of personal injury or death.	+, LT	PKC already has high standards of street cleanliness as highlighted through the local environmental audit and management scheme (which is an Audit Scotland SPI) An increase in the number of waste facilities and increased waste collections could also have the adverse effects of leading to an increase in occupational health risk, with more instances of personal injury or death.

SEA Objective Perth and Kinross Waste Management Plan		Option 1: Status quo. Continue to roll out intiatives currently planned but continue to landfill residual waste		Option 2: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill.		Option 3: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill and work towards the achievement of Scottish Government Zero Waste Targets.
Mitigation				Education and awareness would be paramount to assuring residents with regards to impacts of any waste management facilities that may be used in the future by PKC. By providing up-to-date, relevant and researched information to residents would allow them to make informed opinions. H&S standards would be included in any procurement assessments, occupational health will be considered as per WRAP's 'Scoping study of potential health effects of fortnightly residual waste collection and related changes to domestic waste systems.		Education and awareness would be paramount to assuring residents with regards to impacts of any waste management facilities that may be used in the future by PKC. By providing up-to-date, relevant and researched information to residents would allow them to make informed opinions. H&S standards would be included in any procurement assessments, occupational health will be considered as per WRAP's 'Scoping study of potential health effects of fortnightly residual waste collection and related changes to domestic waste systems.
Enhancement		Maintain Perth and Kinross's national reputation as a clean and litter free area.		Maintain Perth and Kinross's national reputation as a clean and litter free area.		Maintain Perth and Kinross's national reputation as a clean and litter free area.
Soil						
4. To ensure soil protection is taken into account with regard to waste management activities and as far as is practicable, prevent contamination of land.	+/-, LT	Positive effects from organic waste being recovered through source separation of waste and subsequently processed to produce compost (compliant to PAS 100 or PAS110). Previous Council owned landfill sites continue to be remediated and restored. Potential negative effects may occur through the need for additional landfill capacity and therefore landtake.	+/-, LT	Positive effects from organic waste being recovered through source separation of waste and subsequently processed to produce compost (compliant to PAS 100 or PAS110). Previous Council owned landfill sites continue to be remediated and restored. Waste treatment facilities would require utilisation of land but would have smaller footprint than landfill. Waste treatment facilities may produce residues that require further treatment or disposal to landfill. Waste treatment facilities may produce compost like material which if attaining PAS110 standard may be beneficial to soils.		Positive effects from organic waste being recovered through source separation of waste and subsequently processed to produce compost (compliant to PAS 100 or PAS110). Previous Council owned landfill sites continue to be remediated and restored. Waste treatment facilities would require utilisation of land but would have smaller footprint than landfill. Waste treatment facilities may produce residues that require further treatment or disposal to landfill. Waste treatment facilities may produce compost like material which if attaining PAS110 standard may be beneficial to soils.
Mitigation		Continue to support and provide opportunities to households and businesses in Perth and Kinross to reduce their waste, thereby lessening the volume of waste going to landfill. Ensure landfill operators used by Perth and Kinross are competent and meet all regulatory standards. If additional landfill becomes a requirement, work together with all stakeholders to identify the best option for the landfilling of Perth and Kinross's waste.		PKC would ensure that any residues produced via residual waste treatment were further treated and recovered or disposed of to the correct landfill facility.		PKC would ensure that any residues produced via residual waste treatment were further treated and recovered or disposed of to the correct landfill facility.
Enhancement		By continuing to compost as much organic waste as possible, and producing good quality PAS 100/110 compost, allows for that compost to be applied to, and consequently improve, soils in Perth and Kinross.		Residual waste treatment facilities would require areas of a significantly smaller footprint in comparison to a new landfill. By continuing to compost as much organic waste as possible, and producing good quality PAS 100/110 compost, allows for that compost to be applied to, and consequently improve, soils in Perth and Kinross.		Residual waste treatment facilities would require areas of a significantly smaller footprint in comparison to a new landfill. By continuing to compost as much organic waste as possible, and producing good quality PAS 100/110 compost, allows for that compost to be applied to, and consequently improve, soils in Perth and Kinross.

SEA Objective Perth and Kinross Waste Management Plan	Option 1: Status quo. Continue to roll out intiatives currently planned but continue to landfill residual waste		Option 2: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill.		Option 3: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill and work towards the achievement of Scottish Government Zero Waste Targets.	
Water						
5. To protect water courses from, and reduce adverse effects of, waste management activities.	O	PKC collect and dispose of waste to licensed sites that meet all regulatory standards with regard to the management of surface and foul water. While waste facilities may produce liquid liquor this is generally manageable either through recycling into the facility (e.g. in composting) or through controlled disposal to land or into wastewater treatment works.	O	PKC collect and dispose of waste to licensed sites that meet all regulatory standards with regard to the management of surface and foul water. While waste facilities may produce liquid liquor this is generally manageable either through recycling into the facility (e.g. in composting) or through controlled disposal to land or into wastewater treatment works.	O	PKC collect and dispose of waste to licensed sites that meet all regulatory standards with regard to the management of surface and foul water. While waste facilities may produce liquid liquor this is generally manageable either through recycling into the facility (e.g. in composting) or through controlled disposal to land or into wastewater treatment works.
6. To improve the quality of water and wastewater discharges resulting from waste management activities.	+, LT	Several of PKC's licensed sites utilise sustainable and urban drainage systems, including grey water reuse at 2 sites.	+, LT	Several of PKC's licensed sites utilise sustainable and urban drainage systems, including grey water reuse at 2 sites.	+, LT	Several of PKC's licensed sites utilise sustainable and urban drainage systems, including grey water reuse at 2 sites.
Mitigation						
Enhancement		The potential to further roll out SUDS to additional sites. Reuse rainwater for vehicle cleaning.		The potential to further roll out SUDS to additional sites. Reuse rainwater for vehicle cleaning.		The potential to further roll out SUDS to additional sites. Reuse rainwater for vehicle cleaning.
Air						
To minimise adverse impacts of waste management activities on the air quality and public health	?	On its own, it is not anticipated that there will be adverse impact from additional traffic movements. However, there are a number of unknowns such as the location of treatment/processing facilities in the future and future waste growth (which would result in greater number of uplift journeys).	?	Not anticipated that there will be adverse impact from additional traffic movements. However, there are a number of unknowns such as the location of treatment/processing facilities in the future and future waste growth (which would result in greater number of uplift journeys). Potential mitigation by streamlining vehicle movements and/or using more efficient engines and fuels. Residual waste facilities will produce air emissions. However waste facilities are required to meet regulatory standards.	?	Not anticipated that there will be adverse impact from additional traffic movements. However, there are a number of unknowns such as the location of treatment/processing facilities in the future and future waste growth (which would result in greater number of uplift journeys). Potential mitigation by streamlining vehicle movements and/or using more efficient engines and fuels. Residual waste facilities will produce air emissions. However waste facilities are required to meet regulatory standards.
Mitigation		Potential mitigation by streamlining vehicle movements and/or using more efficient engines and fuels		Potential mitigation by streamlining vehicle movements and/or using more efficient engines and fuels. Air emissions from waste facilties, particularly energy from waste technologies, must meet strict emissions targets (enforced by SEPA).		Potential mitigation by streamlining vehicle movements and/or using more efficient engines and fuels. Air emissions from waste facilties, particularly energy from waste technologies, must meet strict emissions targets (enforced by SEPA).
Enhancement		Staff travel plans. Eco (greener) driving promotion.		Staff travel plans. Eco (greener) driving promotion.		Staff travel plans. Eco (greener) driving promotion.

SEA Objective Perth and Kinross Waste Management Plan		Option 1: Status quo. Continue to roll out intiatives currently planned but continue to landfill residual waste		Option 2: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill.		Option 3: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill and work towards the achievement of Scottish Government Zero Waste Targets.
Climatic Factors						
To reduce GHG emissions from waste production and disposal.	+/-, LT	This option is expected to have both positive and negative effects on climate factors through the generation of greenhouse gases. Landfilling of waste is a significant source of greenhouse gases, producing methane which is a particularly potent GHG. While a large proportion of the methane produced by landfill sites is currently captured and used for energy and heat generation there is still a proportion which escapes to the atmosphere. A reduction of use of landfill will reduce this impact further.An increase in the frequency, quantity or types of recyclate collected could result in increased traffic movements where individual vehicles are used for collections of recyclable and residual wastes. It should be noted, however, that the Life Cycle Analysis carried out by SEPA for the Lothian and Borders Area Waste Plan suggested that any potential increase in traffic movements (and associated emissions) was marginal compared to other emissions in the waste management process.	+, LT	Would achieve a reduction in the use of landfill and associated emissions from landfill. Use of residual waste treatment facilities may result in the production of heat and energy without utilising fossil fuels. An increase in the frequency, quantity or types of recyclate collected could result in increased traffic movements where individual vehicles are used for collections of recyclable and residual wastes. It should be noted, however, that the Life Cycle Analysis carried out by SEPA for the Lothian and Borders Area Waste Plan suggested that any potential increase in traffic movements (and associated emissions) was marginal compared to other emissions in the waste management process.	++, LT	Would achieve a reduction in the use of landfill and associated emissions from landfill. Use of residual waste treatment facilities may result in the production of heat and energy without utilising fossil fuels. This option would recover a greater amount of material for recycling, therefore displacing virgin materials (and achieves associated energy savings). An increase in the frequency, quantity or types of recyclate collected could result in increased traffic movements where individual vehicles are used for collections of recyclable and residual wastes. It should be noted, however, that the Life Cycle Analysis carried out by SEPA for the Lothian and Borders Area Waste Plan suggested that any potential increase in traffic movements (and associated emissions) was marginal compared to other emissions in the waste management process.
Mitigation		Continue to support and provide opportunities to households and businesses in Perth and Kinross to reduce their waste, thereby lessening the volume of waste going to landfill. Ensure landfill operators used by Perth and Kinross are competent and meet all regulatory standards. The procurement process and service delivery plans will be developed to allow them to be flexible enough to take account of climate adaptation.		Continue to support and provide opportunities to households and businesses in Perth and Kinross to reduce their waste, thereby lessening the volume of waste going to landfill. Ensure landfill operators used by Perth and Kinross are competent and meet all regulatory standards. The procurement process and service delivery plans will be developed to allow them to be flexible enough to take account of climate adaptation.		Continue to support and provide opportunities to households and businesses in Perth and Kinross to reduce their waste, thereby lessening the volume of waste going to landfill. Ensure landfill operators used by Perth and Kinross are competent and meet all regulatory standards. The procurement process and service delivery plans will be developed to allow them to be flexible enough to take account of climate adaptation.
Enchancement						

SEA Objective Perth and Kinross Waste Management Plan		Option 1: Status quo. Continue to roll out intiatives currently planned but continue to landfill residual waste		Option 2: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill.		Option 3: Continue to roll out intiatives currently planned but with residual waste treatment that achieves targets for biodegradable municipal waste diversion from landfill and work towards the achievement of Scottish Government Zero Waste Targets.
Material assets and resource efficiency						
To maximise waste prevention, reuse, recycling and recovery rates by viewing waste as a resource.	+, LT	This option makes a commitment to increase our recycling and composting rates by rolling out schemes to capture a greater range and amount of these materials. This option also identifies waste prevention and the need to move up the waste hierarchy. This option continues to landfill residual waste.	+, LT	This option makes a commitment to increase our recycling and composting rates by rolling out schemes to capture a greater range and amount of these materials. This option also identifies waste prevention and the need to move up the waste hierarchy. This option would reduce waste to landfill and may recover a greater amount of materials for recycling and composting.	++, LT	This option makes a commitment to increase our recycling and composting rates by rolling out schemes to capture a greater range and amount of these materials. This option also identifies waste prevention and the need to move up the waste hierarchy. This option would reduce waste to landfill and would recover a greater amount of materials for recycling and composting.
To collect and/or treat waste at the nearest and appropriate stations	?	This option allows for the collection of materials at either the kerbside or local recycling centres and points with the use of localised bulking facilties. It is not possible to identify locations of future waste treatment facilities.	?	This option allows for the collection of materials at either the kerbside or local recycling centres and points with the use of localised bulking facilties. It is not possible to identify locations of future waste treatment facilities.	?	This option allows for the collection of materials at either the kerbside or local recycling centres and points with the use of localised bulking facilties. It is not possible to identify locations of future waste treatment facilities.
Mitigation						
Enhancement		Perth and Kinross Council will continue to support and promote waste prevention and reuse activities such as Real Nappies, bicycle repair and re-sale through the Bike Station, WRAP home composting initiatives and local furniture reuse projects.		Perth and Kinross Council will continue to support and promote waste prevention and reuse activities such as Real Nappies, bicycle repair and re-sale through the Bike Station, WRAP home composting initiatives and local furniture reuse projects.		Perth and Kinross Council will continue to support and promote waste prevention and reuse activities such as Real Nappies, bicycle repair and re-sale through the Bike Station, WRAP home composting initiatives and local furniture reuse projects.

Symbol Key

++ Major Positive	O No effect	-- Major negative	LT Long term	ST Short term
+ Positive	? Unknown	- Negative	MT Medium term	

Appendix 4

Scoping Report Consultation Responses

Consultation Response Table		
Consultee/ Respondent	**Comments/Key Points Raised**	**Perth & Kinross Council's Response**
Scottish Natural Heritage	Recommend under relationships with other PPS the inclusion of • Nature Conservation Act (Scotland) 2004 • NPPG 14 Natural Heritage • EU Habitats and Birds Directive	These PPS were looked at and included in overall list pf PPS however they were not deemed to be within the most relevant PPS category.
	Baseline Data. See other PKC scoping responses from SNH	Previous responses were studied however no changes made to this WMP baseline data in response.
	Environmental Problems Include problems for biodiversity, flora, fauna and landscape.	This WMP is not site specific, so while generally impacts on biodiversity, flora, fauna and landscape problems and the plan's impact are taken into account; it was not possible to provide specifics. This was discussed with Michael Shepard via telephone conversation in summer 2009 on PKC receiving SNH's comments.
	SEA Objectives Include Landscape	This WMP is not site specific therefore Landscape is not included. This was discussed with Michael Shepard via telephone conversation in summer 2009 on PKC receiving SNH's comments.
	Expect the assessment to also include synergistic and secondary effects.	This comment has been taken into account. Where possible, the possible effects are shown.
Historic Scotland	No comments	As per HS response to the Screening Report.
SEPA	Recommend under relationships with other PPS the inclusion of • Air Quality Framework Directive (96/62/EC) • Scottish Planning Policy 7 –Planning and Flooding • SEPA 2009 Guidelines for Thermal Treatment of Waste • River Basin Management Plan for Scotland – local draft Area Plan in particular.	Included as part of the Relevant PPS.
	Baseline Information. Make reference to Indicative Floor Map (Scotland). Change water info to reflect how it is described in the River Basin District plans.	Included.
	Scope of plan. SEPA asked that the need to protect soil resources be included.	This has been included within the Potential Problems section. However as this is not a site specific plan, it is in very general terms. Within the Options Assessment Matrix information on how soils are currently protected is given.

Draft Environment Report for the Perth and Kinross Waste Management Plan

Perth & Kinross Council

November 2009