Aberdeen Nigg Bay Framework SEA Environmental Report

PART 1

To

Sea.gateway@scotland.gsi.gov.uk

Or
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Scottish Executive
Area 1 H (Bridge)
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PART 2

An SEA Scoping Report is attached for the plan entitled

Nigg Bay Development Framework

The Responsible Authority is:

Aberdeen City Council

PART 3

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Date	September 2015

This Non-Technical Summary introduces Strategic Environmental Assessment (SEA) and summarises the contents of the full technical report, which begins on page 8.

Purpose of this Environmental Report and Key Stages

We (Aberdeen City Council) have written this Environmental Report ("the report") for the Nigg Bay Development Framework under the Environmental Assessment [Scotland] Act 2005. The process taken to write this report is called Strategic Environmental Assessment (SEA). The reason for undertaking SEA is to address all the effects that the Development Framework will have on the environment. The overall aim of the process is to protect the environment. Throughout this SEA process we have taken the views of others (including the public and key agencies) into account before coming to final decisions.

SEA should be applied to plans, programmes and strategies ('PPS') produced by public bodies, including local authorities. The key stages of SEA are pre-screening, screening, scoping, environmental report and post-adoption statement. An explanation of these stages can be found below:

1. Pre-screening

Pre-screening of a PPS is done to show that a plan is not likely to have any effect on the environment, or if it has any effects at all, they will be minimal. After pre-screening, a PPS will not be subject to any further SEA. This stage does not apply to the Nigg Bay Development Framework.

2. Screening

A PPS is screened to determine whether we should be doing an SEA for it. When a plan is likely to have significant (i.e. very bad, damaging, large or long-lasting) effects on the environment, we will do an SEA. The results of the screening process showed that the Development Framework was likely to have significant environmental effects and so we have carried out full SEA.

3. Scoping

At the scoping stage, we produced a report setting out how much information should be in the actual Environmental Report, how we plan to assess the effects of the different aspects of the Development Framework, and how long we will consult with others on the report. We then consulted with the Statutory Consultees on the contents of the Scoping Report, and their recommendations helped us to improve our approach.

4. Environmental Report

In the Environmental Report, we assess the effects of a plan on the environment and explain how we could address those effects, through a process called mitigation. We also describe how we will monitor any significant effects of the plan on the environment.

5. Post-adoption Statement

Once we have taken into account and addressed concerns raised by those we have consulted, we will adopt the Development Framework as Supplementary Guidance and tell everyone about the difference the SEA process and the views of those we have consulted have made to the final plan. We do this through a Post-adoption Statement.

Section 3 of the main report shows the SEA activities we have carried out to date. It also includes a summary of the comments we have received from other people, and how we have made changes to the report to take these into account.

Description of the Proposed Plan

The purpose of the Nigg Bay Development Framework is to consider how to maximise the opportunities presented by investment in the new Aberdeen harbour at Nigg Bay, in terms of economic development, regeneration, environmental improvements and co-ordination of essential infrastructure. The framework considers the site of a new harbour at Nigg Bay and its interaction with surrounding areas, particularly the existing industrial areas at Altens and East Tullos. **Section 4** of the main report contains a detailed description of the content of the Development Framework, and the different options and alternatives we considered while we were writing it.

Context of the Proposed Plan

To guide and help us deliver what we plan to do in the Development Framework we have made use of high-level documents, statements and pieces of legislation to influence how we have written this strategy, which affects Aberdeen, the North East, Scotland and Europe. These documents cover:

- Climate and water
- Plant and animal life on the land and in the water
- Noise
- Shops and town centres
- Historic and important buildings
- How we use energy
- How we throw away waste
- How we travel, walk and cycle
- Exercise and health

Section 5 of the main report contains a list of all the relevant plans, programmes, strategies and policies which have a bearing on the Development Framework. **Appendix 12.1** contains a more detailed description of these.

State of the Environment in Aberdeen

We have collected information on the key characteristics of the environment in Aberdeen and have gathered statistics which give an up-to-date picture of the state of the environment in Aberdeen. We have also identified a number of environmental problems in Aberdeen, what might happen if the Development Framework did not exist, and what the role of the Development Framework might be in addressing these problems.

The challenges we must deal with through this Plan:

- We have serious air quality problems in Aberdeen. The increasing number of cars, trucks and vehicles that pass through the City worsens this;
- We burn a lot of fuel to heat our homes and to drive our cars. This is releasing more CO2 into the air and causing our carbon and ecological footprints to rise;
- future climate change will affect how much water we will have and how stable our soils will be;
- petrol stations, factories, and other industries have all affected how good or bad our soil and water is;
- how we deal with waste also affects our soils, water and climate;
- Aberdeen is rich in cultural heritage and landscape, but the houses we have built in the past are putting pressure on these resources;
- new buildings are putting pressure on animal and plant life (biodiversity);
- when we have good parks or open spaces, people will want to build and live around them;
- increasing house prices and private rents; and
- the make up of the population is an issue that needs to be considered for future development. For example, there are a range of ages living in Aberdeen, but because we are living longer there will be an increased proportion of older people, and there is an increase in people coming to live here from other parts of the UK, Europe and the world.

Section 5 of the main report describe the state of the environment in Aberdeen in more detail. **Appendix 12.2 – 12.12** contains environmental statistics, targets and trends for Aberdeen on a wide range of topics. The appendix also contains map-based information.

Assessment of Environment Effects

The main part of SEA is assessing the effect of the strategy, policies and supplementary guidance on the environment. A summary of our findings can be found in the table below:

SEA Issue	Impact of the Local Development Plan
Air and Climatic factors	We found that the effects of the Development Framework on the environment are mixed (i.e. positive, negative & neutral). Building a new harbour, with the associated infrastructure and the likely increase in industrial activity in the area, will mean more vehicles on the roads which emit greenhouse gases. On the other hand, the Development Framework also includes key "Design Principles" to help promote sustainable modes of transport such as walking and cycling.
Water	The overall effects of the DF on water are also mixed, because the scale of new development proposed will require more water to be

	taken from the River Dee to construct and service it. On the other hand, the "Design Principles" promote the use of water-efficient technologies. (Please see the Habitats Regulation Assessment of the Aberdeen City and Aberdeenshire Strategic Development Plan and the Habitats Regulation Assessment of the Aberdeen City Local Development Plan for a fuller discussion of this issue).
Soil	When we build new development, such as a harbour and associated infrastructure, the soil on which we put these development can be damaged. Increased waste will lead to more landfill, which pollutes the soil. The Development Framework does not contain any specific guidance on the protection or enhancement of soils.
Biodiversity (flora and fauna)	The overall effects of the DF on biodiversity are mixed. The effects of large-scale new development have the potential to have a very negative impact on habitats and biodiversity, including the River Dee SAC. However, the DF includes key "Design Principles" which state that all new development must give due consideration to biodiversity.
Population and Health	The overall effects of the DF on people are positive, because the new development will provide for new employment opportunities and improved infrastructure. However, traffic from new development and other polluting uses make air quality worse and it may have a negative effect on human health. The DF includes Design Principles to try and limit this effect.
Cultural Heritage	We found that the effects of the DF on special or old buildings are mixed (i.e. positive, negative & neutral). The Design Principles state that heritage must be protected, and people's understanding and enjoyment of it enhanced through the new developments. However there will inevitably be some impact on their setting as a result of large-scale new development.
Landscape	The overall effects of the DF on our surroundings are mixed, some positive and others negative. Large scale development, that can be seen from lots of places, will have a negative effect on views and scenery and the character of the Green Belt. However the DF also contains "Design Principles" for new development which aims to limit this impact.
Material Assets	The overall effect of the Development Framework on the creation of new buildings, facilities, infrastructure and equipment is very good.

Section 6 of the main report describes in more detail how we approached the assessment of environmental effects. **Tables 6.2 and 6.3** contain detailed assessments for each aspect of the plan.

Mitigation Measures

Where an aspect of the plan will have significant negative effects on the environment, we have identified 'mitigation measures' to compensate for this. A summary of the broad measures which will be taken to help mitigate the negative (or enhance the positive) effects of the preferred options can be found in the table below:

SEA Issue	Mitigation Measures
Air and Climatic factors	We will seek to enhance (i.e. add value to) the positive impacts as we work with our partners. We will look to reduce car dependence and provide people with choice on how they travel. We ensure adequate transport infrastructure is in place, including provision for walking and cycling. We will avoid building on land which floods and we will make sure buildings need less heat and electricity.
Water	We will work with Scottish Water to make sure that the businesses, industries and other buildings built will have sufficient water. We will work with builders to ensure that the buildings will not use too much water. We will require soft structures (called 'SUDS') to be built and maintained to manage surface water from the new development. We will make sure that areas which flood when it rains will be avoided or zoned as an open space.
Soil	We will require new developments to clean up harmful pollution where appropriate. We will recycle more waste and reduce waste going to landfill.
Biodiversity (flora and fauna)	When we are building SUDS to take surface water from urban areas, we will make sure that they can encourage biodiversity (i.e. some plant and animal life) to live and grow within the SUDS system. We will also encourage the provision of open spaces, including wildlife areas, in new developments. We will also protect special areas where we find plants and animals (small and large). We will keep areas for animals to move from place to place.
Population and Health	We will encourage the provision of services, jobs, houses and facilities that cater for all sectors of society. We will avoid building where there are risks to health like areas of bad air quality or smell, or make sure that measures are in place to minimise these things.
Cultural Heritage	We will look to protect our most valued features wherever possible and encourage good design in new developments so they do not affect the setting of existing special buildings.
Landscape	We will look to protect our most valued landscapes and landscape features and encourage good master planning and design. We will not build on the areas that are easily seen from lots of different places.
Material Assets	We will make sure that new development provides opportunities for new jobs, and creates that the new infrastructure required. We would make sure that the plan supports all of this.

Section 7 of the main report contains a detailed description of the significant negative effects of each aspect of the plan and what mitigation measures we have identified to address them.

Monitoring

We will monitor the significant negative and positive affects of the plan through the monitoring plan that we have set out in the environmental report. We have stated what actions we must carry out, who must carry out each of the actions and when we must carry them out. **Section 8** of the main report contains a detailed description of all the things we will monitor, how we will do this and how often.

How to Comment on the Report

If you would like to express your views on the contents of this Environmental Report, please send written comments to the following address:

By e-mail

LDP@aberdeencity.gov.uk

By post:

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1 Introduction

The purpose of this Strategic Environmental Assessment Scoping Report is to set out sufficient information on the new Nigg Bay Development Framework (Aberdeen) to enable the Consultation Authorities to form a view on the consultation period and scope/level of detail that will be appropriate for the Environmental Report. This report has been prepared in accordance with the Environmental Assessment (Scotland) Act 2005.

Following this introduction, Section 2 tabulates the key facts. Next, Section 3 describes the content of the PPS while Section 4 discusses the issues that set the context for the strategy such as other PPS and environmental protection objectives, baseline data, the evolution of the baseline without the PPS; and environmental problems relevant to the plan. Section 5 then looks at the scope and level of details comprising alternatives, scoping in/out issues, assessment framework, SEA objectives, cumulative effects assessment, and mitigation as well as monitoring. The next steps are outlined in Section 6, while the Appendices occupy Section 7.

2 Key Facts

Table 2.1: Key Facts relating to the Development Framework

Name of Responsible Authority	Aberdeen City Council
Title of the PPS	Nigg Bay Development Framework (Aberdeen)
What Prompted the PPS	Planning & etc. (Scotland) Act 2006
Subject	Land Use
Period Covered by the PPS	2016- 2026
Frequency of Updates	Every five years
Area covered by the PPS	The Development Framework considers the site of the proposed new harbour facility at Nigg Bay (Opportunity Site: OP62) and its interaction with surrounding areas, focussing on the existing industrial areas at Altens and East Tullos.
Purpose and/or objectives of the PPS	The Nigg Bay Development Framework considers how to maximise the opportunities presented by investment in the proposed new harbour and associated facilities, in terms of economic development, regeneration and environmental improvements. The Framework also seeks to facilitate cohesive and properly planned growth, in particular the co-ordination of essential infrastructure and establishing the parameters within which new development can take place. The Nigg Bay Development Framework will ultimately form Supplementary Guidance to the next Aberdeen Local Development Plan 2016 (currently the Proposed ALDP 2015).
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3. SEA activities to date

Table 2.2 summarises the SEA activities to date in relation to the Environmental Report for the Nigg Bay Development Framework

Table 3.1: SEA activities to date

SEA Action/Activity	When carried out	Notes (e.g. comment on data availability, particular issues or any advice from the Consultation Authorities that has now been taken into account)
Preparation SEA Statement and Finalising the Framework as SG	October 2016	Post Adoption Statement
Taking account of the consultation outcome in reformation the final environmental report	October 2015-November 2015	In time for the Framework to be written as a supplementary Guidance
Statutory consultation on the Environmental Report	September – October 2015	Brief summary of any comments on ER
Carrying out full assessment and writing of the environmental report, taking into account Consultees comments on Scoping report	August 2015-September 2015	The opinion of the consultation authorities will be taken into account.
Scoping the consultation period, and the level of detail to be included in the Environmental Report for the Main Issues Report	July 2015	Brief summary of CA comments on Scoping
Preparation and consultation on Screening Report	June 2015	Decided to proceed with full SEA based on comments from Consultation Authorities

4 Description of PPS Content

4.1 Options of the Framework

In developing this framework, the following three options are considered to be reasonable. Theses are shown in table 3.1 below.

Table 4.1- Options Considered

Option	Description of Option
Option 1 – Do Nothing	This option retains the zoning within the Aberdeen Local Development Plan 2012. Although the land allocation zoning for the development area is Green belt, greenspace network and undeveloped coastal area, there is the risk that development in this area would be ad-hoc and unplanned.
Option 2 – Do minimum	Any development in the area is circumscribed by the national development proposed by the NPF3 and the LDP. This option therefore allows development within the site boundary identified within National Planning Framework 3 and

	LDP 2015 opportunity site (OP 62). Although the NPF3 and the LDP proposals seem to promote the same kind of developments, the details within this boundary are not clearly identified. And this may lead to ad-hoc development within the site boundary. • For example, the OP62 site boundary covers 55 hectares of land, and is zoned under policy B5: Aberdeen Harbour and Policy NE1: Green Space Network. The site boundary follows the coast on its eastern boundary, with the northern and western boundary extending beyond the Old Coast Road. The southern boundary abuts the Old Coast Road before encompassing it and the railway line. • The NPF3 boundary also includes the marine environment between the two headlands of the harbour area and beyond the east, and extends the southern boundary beyond that of the OP62 site to include the main transport link to the site.
Option 3 – Do optimum	For this option, the development framework recognises that the indirect impacts of the harbour development on the unplanned adjoining lands are likely to be negative and outlines a 20-year vision for the development. The envisaged development is in three phases and considers the transportation, access arrangements as well as the impact of the harbour extension on the wider business and industrial locations close to it. Three key areas of infrastructure are noted: the new harbour; upgrading the road network in and around Altens, and providing a direct link from Nigg Bay to East Tullos. • Phase 1 – years 1 -5 outlines the delivery of harbour and infrastructure improvements required to accommodate traffic to and from the harbour development, and ensure water infrastructure is developed. • Phase 2 – years 6-10 outlines intervention may be sought to improve Wellington Road. Consideration is also given to the railway bridge crossing on the Old Coast Road; and monitoring is suggested to identify if this would require upgrading or replacement. • Phase 3 – years 11-20 outlines two options to tackle new connections between the harbour and East Tullos. Option one – the construction of an access across St Fitticks Park and under the railway line and embankment. This solution would likely be required alongside an upgraded or replacement bridge. Option two – a new bridge crossing the railway south of Nigg Bay with a road link around the landfill edge between the Coast Road and East Tullos. These options could have the ability to open up East Tullos for regeneration and redevelopment. The selection of either option would be considered through a masterplan for East Tullos and subject to a Transport Assessment. • Further, transport improvements could be developed by enhancing the rail freight facilities and possibility passenger services at the rail sidings at East Tullos but these are dependant on third party stakeholders.

4.2 Summary of the contents of the framework

The vision, objectives and design principles which will be subject to assessment are listed below in Table 3.2 below.

Table 4.2- Vision, Broad objectives, Objectives and Design Principles

	Vision		**Broad Objectives**
1	To retain existing business as well as expand into new markets for the benefit of the city region and Scotland as a whole. It will seek to facilitate cohesive and properly planned growth, in particular the coordination of essential infrastructure and establishing parameters within which new development can take place	**1.1**	To inform the process of clearly defining the extent and content of the forthcoming applications for the new harbour at Nigg Bay and its associated facilities;
		1.2	To inform the preparation of the proposed Local Development Plan;
		1.3	To consider the interaction with the Aberdeen City Centre Development Framework;
		1.4	To establish a clear brief for more detailed masterplans at the new harbour, Altens and East Tullos;
		1.5	To ensure consideration and identification of all opportunities to promote sustainable, low-carbon development;
		1.6	To consider how surrounding land uses can evolve to maximise opportunities to benefit from the arrival of this major piece of investment;
		1.7	To identify aspects of broader strategic infrastructure investment, including roads and rail, that will support this process and consider ways in which all stakeholders can work together to deliver this infrastructure
		1.8	To involve local people at the heart of this process and identify mechanisms which ensure an ongoing benefit to those communities

		1.9	To engage with local business and landowners on these matters.
Nigg Bay – Economy and Business			
	Objectives		**Design Principles**
1	Facilitate the construction and operation of a new harbour facility at Nigg Bay.	1.1	Land as identified in ALDP 2016 should be safeguarded and made available for the construction of a new harbour facility at Nigg Bay in line with NPF3.
		1.2	Suitable supporting roads and services infrastructure should be provided to enable construction and operation.
		1.3	The new harbour should be capable of accommodating larger vessels than currently possible within the existing harbour.
		1.4	The new harbour should be designed to accommodate future predicted traffic flows.
2	Maintain and expand existing harbour related activity in the region i.e. oil and gas, energy, general cargo etc.	2.1	Development proposals should take cognisance of their surroundings, sensitively integrating with existing work streams and enhancing possibilities where possible.
3	Expand the potential range of uses where possible, attracting new work streams i.e. Cruise related tourism, decommissioning, offshore renewables etc.	3.1	Development proposals should be sufficiently flexible so as to respond to and accommodate the specific needs of new industries.
4	Connect to digital infrastructure networks		In line with LDP policy, new development will have access to modern, up-to-date high-speed communications infrastructure.
Nigg Bay – Land Use			
1	Complement and not compromise the vitality and regeneration of the city centre.	1.1	Proposals for development should not introduce significant uses which could compete with and detract from the offer of the city centre, compromising its regeneration.
2	Sensitively manage the interaction between existing communities, businesses and	2.1	Provide a safe and secure harbour environment with clear definition between public and private space.

	industry.		
		2.2	Industrial development should be screened from public and residential areas as far as practicably possible.
		2.3	Particular regard should be given to issues of noise, vibration, air quality, odour and light.
3	Development proposals should seek to avoid compromising Green Belt and Green Space Network objectives as defined in planning policy.	3.1	Development proposals within the initial phases of the Development Framework should be compliant with Green Belt policy.
		3.2	Future proposals for development beyond those proposed as part of the Baseline Scenario will require to be in line with current development plan policy and any associated Green Belt / Green Space Network review.
Nigg Bay – Infrastructure and Access			
1	Maximise connectivity to, from and through the development.	1.1	All roads, streets and spaces shall be well connected, both internally and externally.
		1.2	Roads and streets shall be designed so as to traffic calm naturally.
		1.3	Make efficient use of road space / junctions to help create quality streetscapes.
2	Establish new sustainable transport connections.	2.1	New and improved routes for walking and cycling should be designed into proposals at an early stage.
3	Provide road access suitable for the construction and operation of the new harbour at Nigg Bay.	3.1	Any access arrangements and infrastructure improvements, including parking and interim arrangements, will be addressed in a Transport Assessment, in full consultation and accordance with ACC Transportation and Roads Services.
		3.2	The existing road network should be maintained and upgraded in line with ACC requirements as agreed with ACC Roads Development Management to facilitate construction and operational traffic.
		3.3	Construction and operation of development should not result in a significant adverse impact upon the road network to the detriment of other road users, particularly at peak times.
		3.4	Provide temporary access points during the construction of the harbour which will not negatively

			impact on existing land uses and infrastructure.
		3.5	Establish a principal point of access for the proposed harbour which will aid traffic flow in the area.
		3.6	Safeguard road network capacity from emerging development proposals for harbour purposes.
		3.7	Access arrangement for the new harbour should be designed so as to restrict the access or egress of HGV's via St Fitticks Road or Greyhope Road. This will be considered further in the Nigg Bay Masterplan and agreed with ACC through a Transport Assessment.
		3.8	Suitable measures to facilitate the movement of cruise / ferry passengers should be put in place in advance of these operations commencing.
4	Provide improvements along the existing Coast Road and bridge.	4.1	Upgrades to the Coast Road will require to be made to facilitate the construction and operation of the harbour without compromising its current function.
		4.2	Upgrades will include opportunities for improved pedestrian and cyclist access.
5	Ensure any planned infrastructure is future proofed for extreme weather events and impacts of coastal flooding as a result of climate change.	5.1	Climate change impacts will be addressed in an Environmental Statement in the form of an allowance in the flooding and drainage considerations.
6	Minimise impact of infrastructure upgrade works	6.1	Necessary upgrades to water, road and other infrastructure should be planned and programmed so as to minimise the impact upon local communities and businesses.
Nigg Bay – Public Space and Access			
1	Protect and enhance existing heritage sites, and places of local importance; such as St Fitticks Church, Girdle Ness Lighthouse, Torry Coo etc.	1.1	Proposals for development should sensitively respond to the setting of nearby Listed Buildings and Scheduled Ancient Monuments in the area. Any adverse impact upon the heritage value of these assets or their settings will be appropriately mitigated against. Furthermore any direct impact on areas of known archaeological potential will also be mitigated against.
		1.2	Opportunities for interpretation of the historic environment should be maximised.
		1.3	Where possible, new and improved paths connecting

			these local landmarks should be considered.
2	Provide new and improved public spaces.	2.1	Detailed proposals for the public realm should demonstrate the creation of a high quality environment for the user and contribute toward making a positive first impression to port users arriving into the city at this location.
		2.2	Where the loss of public space is inevitable, compensatory measures should be considered. This could include the reinstatement of temporary constructions areas not required for operational areas or other development as enhanced public spaces.
		2.3	Areas required temporarily during construction should be reinstated with opportunities to increase the recreational value of these spaces through the reinstatement process maximised.
		2.4	Car parking should be accommodated by a variety of means to provide flexibility and lessen visual impact.
		2.5	Public art should be used appropriately to add quality and assist with legibility.
3	Provide new and improved path networks for cycling and recreation.	3.1	Care should be taken to preserve and respect the different nature of routes i.e. Coastal Path, Core Paths, Cycle Paths and upgrade where identified through agreement with ACC
		3.2	Where possible, new footpaths and cycle paths should be segregated from motor vehicles.
Nigg Bay - Environment			
1	Minimise environmental impact.	1.1	Proposals for development must minimise environmental impact through avoidance or mitigation.
		1.2	Where impacts are anticipated, these should be assessed against the ability to secure compensatory measures.
		1.3	Particular regard should be given to: landscape and visual impact; surface water drainage; biodiversity (flora and fauna); air quality; light pollution; noise and vibration, with suitable design response and/or mitigation measures put in place to reduce or offset any adverse impact.
		1.4	A Noise Mitigation Plan which addresses avoidance of residential areas for HGV movement will be considered and a Dust Management Plan will be required for both the construction and operational phases of the harbour. Ongoing discussions with Environmental Health

			on these matters should be held.
		1.5	Consideration must be given to climate change adaptation and adapting to climate change projections. Surface water will be a key impact, however, other considerations should also include sea level rise and additional impacts created through storm / tidal surge.
2	Create a 'Green Harbour' with high sustainability credentials.	2.1	Development proposals should embrace sustainable construction methods and technologies.
		2.2	Proposals should be future proofed, facilitating the ability to embrace renewables and low carbon technology and connect to wider heat and energy networks in future.
		2.3	Proposals should contribute toward water efficiency and not compromise water quality
3	Development should attempt to reduce reliance on the use of the car as a movement choice, through the use of travel planning, to facilitate an increase of sustainable mode share.	3.1	In situations where car use cannot be avoided, provision should be put in place to encourage access by ultra-low emission vehicles, including those with a plug-in component.
	Protect and enhance the surrounding land and marine environment.	3.2	Development should enhance local habitats and improve biodiversity, where possible.
		3.3	Measures should be taken to protect and improve the health and diversity of land and marine environments, in particular where enhanced public access is afforded to land along the coast.
Nigg Bay –Community Benefits			
1	Provide jobs and apprenticeships for the local community.	1.1	Developers should provide a number of jobs and / or apprenticeships for the local community which reflect the scale of their development.
2	Establish 'Community Projects' which correlate with development proposals where	2.1	The design and delivery of proposals for replacement or new public spaces should involve local and city-wide communities where possible.

	possible.		
3	Provide educational opportunities, not just locally but city wide, throughout the process of development.	3.1	Proposals for development should enable educational interpretation features during construction and once operational through a series of spaces along the coastal path and within new and existing open spaces.
Altens – Economy and Business			
1	Secure the development or redevelopment of underused or empty sites.	1.1	Bring forward proposals for development at Altens, Altens East and Peterseat as part of a considered and engaged masterplan.
		1.2	Avoid piecemeal development and proposals for non-complementary uses which do not conform to an approved masterplan.
2	Increase employment density in the area.	2.1	Maximise land use and employment densities as far as possible through encouraging higher density development in appropriate locations subject to infrastructure capacity and environmental acceptability
3	Connect to digital infrastructure networks	3.1	In line with LDP policy, new development will have access to modern, up-to-date high-speed communications infrastructure.
Altens – Land Use			
1	Complement and not compromise the vitality and regeneration of the city centre.	1.1	Proposals for development should not introduce significant uses which could compete with and detract from the offer of the city centre, compromising its regeneration.
2	Identify vacant sites for development, and the types of business which could accommodate these sites.	2.1	Support and encourage the development of sites identified within the Biggar Economic Report for Classes 4, 5 and 6 in line with Local Development Plan Policy BI1.
3	Sensitively manage the interaction between existing communities, businesses and industry.	3.1	Industrial development should be screened from public and residential areas as far as practicably possible.
		3.2	Particular regard should be given to issues of noise, vibration, air quality, odour and light.
4	Development proposals should	4.1	Development proposals within the initial phases of the Development Framework should be compliant with

	seek to avoid compromising Green Belt and Green Space Network objectives as defined in planning policy.		Green Belt policy. •
		4.2	Future proposals for development beyond those proposed as part of the Baseline Scenario will require to be in line with current development plan policy and any associated Green Belt / Green Space Network review.
Altens – Infrastructure and Access			
1	Maintain and enhance road network to accommodate new development.	1.1	Any access arrangements and infrastructure improvements, including parking and interim arrangements, will be addressed in a Transport Assessment, in full consultation and accordance with ACC Transportation and Roads Services. Further transport work and detailed studies will be required in addition to the Transport Appraisal, in order to support any planning applications.
		1.2	Bring forward development in line with agreed phasing of road network improvements. These are likely to include: • Coast Road widening south of Hareness Road • Link from Coast Road to Souter Head Roundabout • Improvements to Souter Head Roundabout.
		1.3	Contributions will be sought from developers for transportation infrastructure improvements.
		1.4	Any contributions to the Strategic Transport Fund (STF) will be determined through the application of STF policy.
2	Establish new sustainable transport connections.	2.1	New and improved routes for walking and cycling should be designed into proposals at an early stage.
3	Maximise connectivity to, from and through the development.	3.1	All roads, streets and spaces shall be well connected, both internally and externally.
		3.2	Roads and streets shall be designed so as to traffic calm naturally.
		3.3	Make efficient use of road space / junctions to help create quality streetscapes.
4	Ensure any planned infrastructure is	4.1	Proposals for development would be subject to screening for an Environmental Impact Assessment, and in turn any new regulations which come into force.

	future proofed for extreme weather events and impacts of coastal flooding as a result of climate change.		
Altens – Public Space and Access			
1	Provide new and improved public spaces.	1.1	Detailed proposals for the public realm should demonstrate the creation of a high quality environment for the user and contribute toward making a positive first impression to port users arriving into the city at this location.
		1.2	Where the loss of public space is inevitable, compensatory measures should be considered. This could include the reinstatement of temporary constructions areas not required for operational areas or other development as enhanced public spaces.
		1.3	Areas required temporarily during construction should be reinstated with opportunities to increase the recreational value of these spaces through the reinstatement process maximised.
		1.4	Car parking should be accommodated by a variety of means to provide flexibility and lessen visual impact.
		1.5	Public art should be used appropriately to add quality and assist with legibility.
2	Maintain existing and provide new and improved path networks for walking, cycling and recreation.	2.1	• Care should be taken to preserve and respect the different nature of routes i.e. Coastal Path, Core Paths, Cycle Paths
		2.1	Development on Wellington Road should enhance the quality of public realm and pedestrian experience.
		2.2	Where possible, new footpaths and cycle paths should be segregated from motor vehicles.
		2.3	Development should facilitate improved linkages to existing and new pathways and connections to public spaces and surrounding communities including Torry, the Gramps and Altens
3	Protect and enhance existing heritage sites, and places of local importance	3.1	Proposals for development should sensitively respond to the setting of nearby Listed Buildings and Scheduled Ancient Monuments in the area. Any adverse impact upon the heritage value of these assets or their settings will be appropriately mitigated against. Furthermore

			any direct impact on areas of known archaeological potential will also be mitigated against.
		3.2	Opportunities for interpretation of the historic environment should be maximised.
		3.3	Where possible, new and improved paths connecting these local landmarks should be considered.
Altens - Environment			
1	Development proposals should minimise and mitigate against adverse environmental impacts.	1.1	Proposals for development must minimise environmental impact through avoidance or mitigation. Particular regard should be given to: landscape and visual impact; surface water drainage; biodiversity (flora and fauna); air quality; light pollution; noise and vibration, with suitable design response and/or mitigation measures put in place to reduce or offset any adverse impact.
		1.2	Where impacts are anticipated, these should be assessed against the ability to secure compensatory measures.
		1.3	The Altens Masterplan should give particular consideration to the impact of development on city-wide views, coastal views and the character and nature of the coast and how these contribute toward a sense of place. Any developmnet proposals within Altens may require to be subject to Landscape and Visual Appraisal and Impact Assessment
2	Development proposals should be energy efficient where possible.	2.1	Development proposals should embrace sustainable construction methods and technologies. .
		2.2	Proposals should be future proofed, facilitating the ability to embrace renewables and low carbon technology and connect to wider heat and energy networks in future.
		2.3	Proposals should contribute toward water efficiency and not compromise water quality
3	Development should attempt to reduce reliance on the use of the car as a movement choice, through the use of travel planning, to facilitate an increase of sustainable mode share.	3.1	In situations where car use cannot be avoided, provision should be put in place to encourage access by ultra-low emission vehicles, including those with a plug-in component.
		3.2	The opportunities presented by the existing rail sidings at

			Craiginches in particular should be harnessed subject to wider network availability
4	Protect and enhance the surrounding land and marine environment.	4.1	Development should enhance local habitats and improve biodiversity, where possible.
		4.2	Measures should be taken to protect and improve the health and diversity of environments
Altens –Community Benefits			
1	Avoid reduction in residential amenity.	1.1	Development proposals should not result in an unacceptable adverse impact upon residential amenity. Particular regard should be given to noise; light; air quality; public access and recreation.
2	Establish 'Community Projects' which correlate with development proposals where possible.	2.1	The design and delivery of proposals for replacement or new public spaces should involve local and city-wide communities where possible.
3	Provide educational opportunities, not just locally but city wide, throughout the process of development.	3.1	Proposals for development should enable educational interpretation features during construction and once operational through a series of spaces along the coastal path and within new and existing open spaces.
East Tullos – Economy and Business			
1	Redevelop and regenerate the business and industry use in this area.	1.1	Bring forward proposals for development at East Tullos as part of a considered and engaged masterplan.
		1.2	Avoid piecemeal development and proposals for non-complementary uses which do not conform to an approved masterplan.
2	Increase employment density in the area.	2.1	Maximise land use and employment densities as far as possible through encouraging higher density development in appropriate locations subject to infrastructure capacity and environmental acceptability
3	Connect to digital infrastructure networks	3.1	In line with LDP policy, new development will have access to modern, up-to-date high-speed communications infrastructure.
East Tullos – Land Use			
3	Complement and not compromise the vitality and regeneration of	1.1	Proposals for development should not introduce significant uses which could compete with and detract from the offer of the city centre, compromising its regeneration.

	the city centre.		
2	Identify vacant sites for development, and the types of business which could accommodate these sites.	2.1	Support and encourage the development of sites identified within the sites for Classes 4, 5 and 6 in line with Local Development Plan Policy BI1.
		2.2	Particular support should be given to new industries to the region including decommissioning which would benefit from close proximity to the harbour.
3	Sensitively manage the interaction between existing communities, businesses and industry.	3.1	Industrial development should be screened from public and residential areas as far as practicably possible.
		3.2	Particular regard should be given to issues of noise, vibration, air quality, odour and light.
4	Development proposals should seek to avoid compromising Green Belt and Green Space Network objectives as defined in planning policy.	4.1	Development proposals within the initial phases of the Development Framework should be compliant with Green Belt policy. •
		4.2	Future proposals for development beyond those proposed as part of the Baseline Scenario will require to be in line with current development plan policy and any associated Green Belt / Green Space Network review.
East Tullos – Infrastructure and Access			
1	Maintain and enhance road network to accommodate new development.	1.1	Any access arrangements and infrastructure improvements, including parking and interim arrangements, will be addressed in a Transport Assessment, in full consultation and accordance with ACC Transportation and Roads Services. Further transport work and detailed studies will be required in addition to the Transport Appraisal, in order to support any planning applications.
		1.2	Engineering, traffic and environmental impact will be weighed up prior to selection of any new route.
		1.3	Bring forward development in line with agreed phasing of road network improvements. These are likely to include: • Improvements to junction at Wellington Road / Greenwell Road. • Creation of a direct link from Nigg Bay into East

			Tullos, potentially including new bridge crossing railway.
		1.4	Contributions will be sought from developers for transportation infrastructure improvements.
2	Establish new sustainable transport connections.	2.1	Work should be undertaken with Network Rail to establish the potential for the introduction of a rail freight and / or passenger halt at Craiginches.
		2.2	New and improved routes for walking and cycling should be designed into proposals at an early stage.
3	Ensure any planned infrastructure is future proofed for extreme weather events and impacts of coastal flooding as a result of climate change.	3.1	Proposals for development would be subject to screening for an Environmental Impact Assessment, and in turn any new regulations which come into force.
4	Ensure Development does not adversely impact upon existing infrastructure.	4.1	Proposals for development should not impact upon the ability of the existing infrastructure network to perform to an acceptable standard.
		4.2	Any proposals for development or works in St Fitticks Park should be considered against a full understanding of the presence of existing infrastructure including any underground water reserves and aquifiers which may be present in the area.
East Tullos – Public Space and Access			
1	Provide new and improved public spaces.	1.1	Loss of open space which is of value for movement and / or recreation should be avoided.
		1.2	Any potential for adverse impact upon such spaces as a result of development should be mitigated against.
		1.3	Where the loss of public space is inevitable, compensatory measures should be considered. This could include the improvement of existing sub-standard public spaces in line with wider open space network aspirations.
		1.4	Should a vehicular route between Nigg Bay and East Tullos be provided across open space, this should be considered against Aberdeen City Council's Open Space Audit and Guidelines.
		1.5	Detailed proposals for the public realm should demonstrate the creation of a high quality environment

			for the user and contribute toward making a positive first impression to port users arriving into the city at this location.
		1.6	Public art should be used appropriately to add quality and assist with legibility.
2	Provide new and improved path networks for walking and cycling.	2.1	New and enhanced existing linkages should be made from East Tullos to surrounding areas.
3	Avoid reduction in residential amenity.	3.1	Development proposals should not result in an unacceptable adverse impact upon residential amenity. Particular regard should be given to noise; light; air quality; public access and recreation.
4	Protect and enhance existing heritage sites, and places of local importance	4.1	Proposals for development should sensitively respond to the setting of nearby Listed Buildings and Scheduled Ancient Monuments in the area. Any adverse impact upon the heritage value of these assets or their settings will be appropriately mitigated against. Furthermore any direct impact on areas of known archaeological potential will also be mitigated against.
		4.2	Opportunities for interpretation of the historic environment should be maximised.
		4.3	Where possible, new and improved paths connecting these local landmarks should be considered.
East Tullos - Environment			
1	Development proposals should minimise and mitigate against adverse environmental impacts.	1.1	Proposals for development must minimise environmental impact through avoidance or mitigation.
		1.2	Where impacts are inevitable, these should be assessed against the ability to secure compensatory measures.
		1.3	Particular regard should be given to: landscape and visual impact; surface water drainage; biodiversity (flora and fauna); air quality; light pollution; noise and vibration, with suitable design response and/or mitigation measures put in place to reduce or offset any adverse impact.
		1.4	Noise impact on local schools i.e. Tullos School will be addressed in a Noise Impact Assessment.
		1.5	The East Tullos Masterplan should give particular consideration to the impact of development on city-wide views, coastal views and the character and nature of the coast and how these contribute toward a sense of place. Any development proposals within East Tullos may require to be subject to Landscape and

			Visual Appraisal and Impact Assessment.
2	Development proposals should be energy efficient where possible.	2.1	Development proposals should embrace sustainable construction methods and technologies. .
		2.2	Proposals should be future proofed, facilitating the ability to embrace renewables and low carbon technology and connect to wider heat and energy networks in future.
		2.3	Proposals should contribute toward water efficiency and not compromise water quality
3	Development should attempt to reduce reliance on the use of the car as a movement choice, through the use of travel planning, to facilitate an increase of sustainable mode share and contribute to air quality management in the area, in particular on Wellington Road.	3.1	In situations where car use cannot be avoided, provision should be put in place to encourage access by ultra-low emission vehicles, including those with a plug-in component.
		3.2	The opportunities presented by the existing rail sidings at Craiginches in particular should be harnessed subject to wider network availability
4	Protect and enhance the surrounding land and marine environment.	4.1	Development should enhance local habitats and improve biodiversity, where possible.
		4.2	Measures should be taken to protect and improve the health and diversity of environments
East Tullos –Community Benefits			
1	Provide jobs and apprenticeships for the local community.	1.1	Developers should provide a number of jobs and / or apprenticeships for the local community which reflect the scale of their development.
2	Establish 'Community Projects' which	2.2	The design and delivery of proposals for replacement or new public spaces should involve local and city-wide communities where possible.

	correlate with development proposals where possible.		

5 Plan, Programme or Strategy Context

5.1 Relationship with other PPS and environmental objectives

The Environmental Assessment (Scotland) Act 2005 requires that the Environmental Report includes an outline of the PPS relationships with other relevant PPS and how environmental protection objectives have been taken into account in the PPS preparation. This section covers these issues and describes the policy context within which the PPS operates, and the constraints and targets that this context imposes on the PPS. Table 4.1 summarises how the Development Framework affects, and is affected by, other relevant PPS and environmental protection objectives. Appendix 7.1 shows a more detailed analysis of each relevant PPS and its implications for the Nigg Bay Development Framework.

Table 5.1: Other relevant PPS & environmental protective objectives of the FRAMEWORK

	Name of Plan, Programme, Strategy or Environmental Protection Strategy
International Level	
Nature Conservation	
	The Habitats Directive 92/43/EEC
	The Birds Directive 2009/147/EC
	European Biodiversity Framework
Water	
	Water Framework Directive 2000/60/EC
	Nitrate Directive 91/43/EC
Waste	
	The Landfill Directive 99/31/EC
	The Waste Framework Directive 2008/98/EC
National Level	
Overarching Planning Policy	
	National Planning Framework for Scotland 3
	Scottish Planning Policy 2014
Cross- Sectoral	
	Scotland's National Transport Strategy (2006)
	Strategic Transport Projects Review (2009)
	The Government's Economic Strategy (2007)
	Choosing Our Future: Scotland's Sustainable Development Strategy (2005)
	Natural Resource Productivity (2009)
	Getting the best from our land: A land use strategy for Scotland 2011
Air and Climate Change	
	Scottish Climate Change Delivery Plan (2009)
	UK Air Quality Strategy (2007)
	A Low Carbon Economic Strategy for Scotland (2010)
Heritage, Design and Regeneration	
	The Scottish Historic Environment Policy
	The Planning (Listed Buildings and Conservation Areas) Act 1997
	Designing Places: A Policy Statement for Scotland (2001)
	Designing Streets: A Policy Statement for Scotland (2010)
	People and Place: A Policy Statement for Scotland (2006)
Soil and Landscape	
	The Scottish Soil Framework (2009)
	Scottish Landscape Forum: Scotland's Living Landscape (2007)
Homes, Population and Health	
	All Our Futures: Planning for a Scotland with an Ageing Population (2007)
	Reaching Higher- Building on the Success of Sport 21 (2007) (Scotland's Sport Strategy)
	Let's Make Scotland More Active: A Strategy for Physical Activity (2003)
	Equality Act 2010
	Disability Discrimination Acts 1995 and 2005
Natural Conservation	
	Wildlife and Countryside Act 1981 (as amended)

	Name of Plan, Programme, Strategy or Environmental Protection Strategy
	The Nature Conservation (Scotland) Act 2004
	Scotland's Biodiversity Strategy- Its in your hands (2004)
	The Conservation (Natural Habitats etc.) Regulations 1994 (as amended)
	The Conservation (Natural Habitats) Amendment (Scotland) Regulations 2007
	Making the Links: Greenspace for a more successful and sustainable Scotland (2009)
Water	
	Water Environment (Controlled Activities) (Scotland) Regulations 2005
	Water Environment and Water Services (Scotland) Act 2003
	Flood Risk Management (Scotland) Act 2009
	River Basin Management Plan for Scotland (2009)
	Scottish Water Strategic Asset and Capacity Development Plan (2009)
	SEPA Groundwater Protection Policy for Scotland v3: Environmental Policy 19 (SEPA)
	Action Programme for Nitrate Vulnerable Zones (Scotland) Regulations 2008)
Waste	
	Scotland's Zero Waste Plan (2010)
Marine and Coastal	
	Scottish Executive Marine and Coastal Strategy (2005)
	Upcoming: Marine (Scotland) Act 2010
	Our Seas- a Shared Resource. High Level Marine Objectives (2009)
Cross- Sector Guidance	
	PAN 60: Planning for Natural Heritage
	PAN 61: Planning and Sustainable Urban Drainage
	PAN 63: Waste Management Planning
	PAN 65: Planning and Open Space
	PAN 75: Transport and Planning
	PAN 76: New Residential Streets
	PAN 77: Designing Safer Places
	PAN 78: Inclusive Design
Regional Level	
Overarching Planning Policy	
	Aberdeen City and Shire Strategic Development Plan 2014
Cross- Sectoral	
	Economic Growth Framework for North East Scotland
	The Economic Action Plan for Aberdeen City and Shire 2013-2018
	NESTRANS Regional Transport Strategy 2021 (2008)
Nature Conservation	
	North East of Scotland Local Biodiversity Action Plan
	River Dee Catchment Management Plan (2007)
Local Level	
	Aberdeen City Local Development Plan 2012
	Aberdeen City Proposed Local Development Plan 2015
	Aberdeen City Local Transport Strategy
	Aberdeen City Air Quality Action Plan

	Name of Plan, Programme, Strategy or Environmental Protection Strategy
	Aberdeen Futures- Aberdeen Community Plan
	Aberdeen Nature Conservation Strategy 2010-2015
	Open Space Audit and Strategy 2011-2016
	Aberdeen City Core Paths Plan
	Landscape Character Assessment of Aberdeen
	Contaminated Land Strategy

From the analysis of the relevant plans, programmes and environmental protection objectives, the key points arising from this analysis are that the Development Framework should:

- Avoid adverse impacts on both statutory and non-statutory protected sites for natural heritage interests i.e. habitats, species, earth science interests and landscape interests
    - Internationally important Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated under the terms of the Conservation Regulations 1994
    - Nationally important Sites of Special Scientific Interest (SSSIs) notified under the terms of the Wildlife and Countryside Act 1981
    - Nationally important areas for landscape and visual amenity e.g. Designed Landscapes
    - Locally important wildlife sites e.g. Local Nature Reserves (LNRs) and Local Nature Conservation Sites.
- Ensure compliance with statutory provisions for statutory protected species and with regional biodiversity plans e.g.
    - EPS (e.g. otters and bats), Wildlife and Countryside Act schedule 1 species (e.g. golden eagle),
    - Wildlife and Countryside Act schedule 5 species (e.g. red squirrel and water vole),
    - the Protection of Badgers Act, and with objectives of North East Scotland Biodiversity Action Plan (e.g. aspen hover fly and wych elm)
- Promote biodiversity, maintain and restore natural habitats and habitat networks;
- Maintain and support landscape character and local distinctiveness.
- Promote the provision of access links to adjacent access routes e.g. core path network, or existing footpaths;
- Promote sustainable use of water and mitigate the effects of floods and droughts;
- Support strategies that help to limit or reduce the emissions of greenhouse gases;
- Encourage increased use of renewable energy resources and more efficient use energy and water
- Support strategies that help to limit or reduce the emissions of pollutants;
- Protect wildlife from disturbance, injury intentional destruction;
- Promote good design, safe environment, clean environment and good quality services;
- Promote sustainable alternatives to car and reduce congestion traffic pollution through walking, cycling and the location of sports facilities;
- Promote economic growth, social inclusion, environmental improvement, health and safety;
- Promote strategies that do not degrade the coastal environment;
- Promote the economy, support the community and the public service;
- Set the framework for development consents for major sport facilities development;
- Help to promote protect and, where appropriate, enhance the historic environment;

- Seek to promote watercourses as valuable landscape features and wildlife habitats;
- Ensure that the water quality and good ecological status of the water framework directive are maintained.

5.2 Relevant aspects of the current state of the environment

The Environmental Assessment (Scotland) Act 2005 Schedule 3 requires that the Environmental Report includes a description of the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the PPS, and "the environmental characteristics of areas likely to be significantly affected". This section aims to describe the environmental context within which the PPS operates and the constraints and targets that this context imposes on the PPS. The detailed analysis of the baseline data is presented in Appendix 7.2.1 – 7.2.11.

5.3 Likely evolution of the environment without the Framework

It is envisaged that future changes to the environment are inevitable due to natural processes, but also due to human interventions that are unconnected with the Framework. The existing environmental problems described in the previous section would likely persist in the absence of a Framework.

Potential changes to the environmental baseline without the Framework are listed in Table 4.2 below.

Table 5.2 Potential Environmental Changes without the Framework

SEA Topic	Possible Changes without the Framework
Biodiversity, flora & fauna	The effects on biodiversity predicted due to the plan would not occur and adverse effects on biodiversity caused by other activities would remain. This includes the loss and fragmentation of habitats caused by unplanned development indirectly promoted by the Development Framework.
Landscape	Impacts on landscape character are not expected to be significantly changed without the framework. The site will remain green belt/green space network and undeveloped coast. However there is a greater risk of unplanned sporadic development affecting landscape character without an up-to-date Framework. Those impacts associated with proposals within other plans and human activities would remain.
Cultural Heritage	Without the Framework, it is expected that the proposals within the NPF3 will significantly affect the historic environment and its setting.
Air Quality & Climatic Factors	There is an issue of air quality in the city resulting from other PPS like the LDP, LHS, LTS and other human activities. Without this PPS, these effects will continue. The carbon footprint of the City is high and will persist without this PPS.
Water	Adverse effects on water quality and quantity would remain in the absence of the Framework. Additional development proposed by this framework and the harbour development will exacerbate the problem.
Population & Human Health	There is no change anticipated as a result of this Framework.

SEA Topic	Possible Changes without the Framework
Soil & Material Assets	Without the framework impacts on soil and material asset will persist because of other PPS like the LDP, LHS, LHS, SDP, City Centre Masterplan and Development Framework.

5.4 Characteristics of Areas likely to be significantly affected

The analysis of the baseline information indicates that the Framework is likely to have more significant effects on certain areas than others. This is due to the sensitivity of those areas in terms of international, national and local designation. Although other areas may not be designated the effects of these sites, combined with those identified in the Development Framework could be cumulative. Appendices 7.2.7 and 7.2.11 contain sites which are likely to be significantly affected.

5.5 Environmental problems

Environmental problems that affect the PPS were identified through discussions with planners and policy makers as well as the analysis of baseline data relevant to Aberdeen City and previous SEAs. Some of the problems relating to the City are taken up in other PPS The main issues relevant to this Framework are very similar to those of the LDP and are summarised below.

Table 5.3 Environmental Problems relevant to the Framework

SEA topics	Environmental Problem	Implications for the Framework
Biodiversity (flora and fauna)	• Potential disturbance to protected species from new development • Potential loss of green space to develop housing and employment areas • Disturbance to species from new development • Potential loss of green linkages and wildlife corridors • Pressure on the River Dee SAC • Pressure on European Protected Species (bats, badgers and otter)	The Framework should protect biodiversity through minimising the impact on protected and non protected designations.
Air & Climatic factors	• Temporary release of particulate matter in constructing new development • Substantial energy consumption in new developments • Lack of renewable energy use in new developments • Continuing car dependence with high CO2 emissions •	The Framework should encourage the use of renewable energy sources and energy efficiency measures in buildings. The implementation of the strategy should minimise car dependence, air pollution and nuisance
Soil	• Impact of run-off from hard surfaces and new development • Soil sealing and compaction arising from new development • Substances used in construction , cleaning and redevelopment could potentially contaminate the soil • Increase in the amount of waste arising from new development •	The Framework should ensure that SUDS are delivered in new development. The implementation of developments should avoid soil contamination. The waste hierarchy should be promoted.
Water	• Potential pollution from new developments, especially industrial areas • Disturbance to qualifying features in River Dee from new development • Increased need to abstract water during the construction of, and servicing new development • Flooding events are predicted to increase in frequency and severity due to the effects of climate change; consequently any future development below 5m datum is liable to flooding	The Framework should minimise water pollution and avoid disturbance to qualifying features of the River Dee. The implementation of the Framework should avoid the risk of flooding The implementation of the Framework should improve water quality and ensure sustainable use of water
Landscape	• New development reducing public	The Framework must ensure

	open space and green space in the City • New development harming the landscape setting of the city • New developments harming landscape features • New development resulting in coalescence and urban sprawl	that playing fields and public open spaces are protected The Framework must take into account landscape setting when setting the allocations.
Population and Human Health	• Development activities around certain parts of the City, declared air quality management areas, affecting people's health. • Severance of links between residential areas and recreational sites limiting healthy sporting activities • Lack of family housing leading to a decline in the number of younger people • Changing demographics – loss of population and ageing population • Lack of affordable housing	The Framework must recognise air quality management areas. The Framework should provide adequate facilities and open spaces, The Framework should take into account the needs of all sectors of society.
Cultural Heritage	• New development can potentially impact on historical features. • Development activities can damage historical features •	The Framework should protect and where appropriate enhance the historical environment. It should manage the conflict between modern requirements and historic buildings.
Material Asset	• Lack of adequate employment land and community facilities to meet the needs of people in Aberdeen City • Lack of adequate infrastructure to accommodate the scale of development proposed within the Framework • Limited use of recycled building materials	The Framework should promote the development of assets.

6.1 Framework for assessing environmental effects

We have assessed the options, objectives and design principles under in the Framework against SEA objectives, according to the questions shown in Table 5.1 below. We have predicted whether these effects will be negative, positive, uncertain, mixed or neutral. We have further evaluated the effects to determine their significance in relation to reversibility or irreversibility of affects, risks and duration (permanent, temporary, long-term, short-term and medium-term). We have assessed cumulative (direct, indirect, secondary and synergistic) in Table 5.2 below. To help the assessment process and ensure consistency we set questions based on the SEA topics, the objectives and questions we used are shown in **Table 6.1**. In **Tables 6.2 and 6.3** below, we have shown the full assessments and our reasons.

Table 6.1: Environmental Objectives and Questions

SEA Topic	**Objective**	**Will the Option/Objective/Action Plan…?**	**Score** (+, -. ?, 0)	**Comments** (long-term, short-term and medium-term reversibility or irreversibility of affects, risks, duration (permanent, temporary)
Biodiversity (flora and fauna)	Conserve, protect and enhance the diversity of species and habitats and natural heritage of Aberdeen. Maintain and enhance the populations of protected species, including European Protected Species, including protection of their resting places or roosts. Maintain or enhance existing green networks	Protect, provide and improve habitats to enhance biodiversity? Affect the conservation objectives of any international, national or locally designated site? Result in any negative impacts or place pressure on the conservation objectives of the River Dee SAC? Affect populations of any protected species, their habitats and resting places or roosts? (Protected species include Otters, Bats, Red Squirrels, water Vole, Badgers and species in the North East Scotland Biodiversity Action		

	and improve connectivity/function and create new links where needed.	Plan) Result in or provide opportunity for enhancement and expansion of green networks? Avoid habitat fragmentation and enhance habitat connectivity? Protect and enhance areas of existing trees, woodland and hedges? Seek to promote watercourses as valuable landscape features and wildlife habitats?		
Air	Limit or reduce the emissions of air-borne pollutants	Result in the temporary release of particulate matter in constructing new development? Increase vehicle traffic increasing carbon footprint and negatively impacting on air quality? Impact on or be affected by the Air Quality Management Areas?		

Climatic factors	Limit or reduce the emissions of greenhouse gases and promote the production of renewable energy Reduce vulnerability to the effects of climate change on flood risk	Promote sustainable and active travel, reducing congestion and traffic pollution by promoting alternative to cars through walking, cycling and the location of facilities? Significantly increase energy consumption? Promote the use of renewable energy and the efficient use of energy and water? Result in the development of peat rich soils? Increase the area at risk from flooding, or result in increased flooding in other areas?		
Soil	Reduce contamination, safeguard soil quantity and quality Minimise waste production and amount of waste sent to landfill	Cause soil sealing and compaction? Result in the release of substances during construction, cleaning or redevelopment that could potentially contaminate the soil? Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health or the water environment? Increase in the amount of waste produced?		

Water	Promote sustainable use of water and mitigate the effects of floods and droughts Ensure that the water quality and good ecological status of the water framework directive are maintained. Maintain water abstraction, run-off and recharge within carrying capacity	Increase the need to abstract water during the construction of, and servicing new development? Increase the area at risk from flooding, or result in increased flooding in other areas? Increase the area vulnerable to the effects of changes in climate, including increased rainfall and extreme weather events? Result in the release of water-borne pollution into watercourses, groundwater or reservoirs? Increase the amount of surface water run-off into water bodies? Increase development that physically impacts on a watercourse or the coastline? Allow or encourage connection to the public sewerage system? Locate development in areas at risk from flooding? Ensure adequate space is provided for surface water drainage including SUDS to be implemented?		
Landscape	Maintain and support landscape character	Reduce public open space and green space in the City?		

	and local distinctiveness.	Detract from or harm the landscape setting of the city? Impact on any landscape or geological features? Result in coalescence of settlements or urban sprawl? Degrade the coastal environment?		
Population	Promote economic growth, social inclusion, environmental improvement, health and safety;	Provide a range of employment and tourism facilities to support identified population needs?		
Human Health	Protect and enhance human health Retain and improve quality, quantity and connectivity of publicly accessible open space	Improve and make provision of open space and sporting facilities? Maintain links between areas and recreational sites, increasing healthy sporting activities?		
Cultural Heritage	Promote protect and, where appropriate, enhance the historic environment	Conserve and enhance historic buildings, archaeological sites, conservation areas? Impact on the landscape setting of Aberdeen or any historic features or sites?		

Material Assets	Promote good design, safe environment, clean environment and good quality services Protect and enhance outdoor access opportunities and access rights	Provide adequate employment land and community facilities to meet the needs of people in Aberdeen City? Allow for the sustainable use of resources including waste and energy? Promote more sustainable waste facilities to divert it away from landfill? Provide suitable infrastructure: transport, education, health, water, waste management, sports, business, flood prevention and regeneration programmes? Promote the provision of safe pedestrian access links? Provide improved access to natural and built assets? Remove or sever any core path or right of way?		

Table 6.2 Full Assessment of Options

ASSESSMENT OF OPTIONS : 1, 2 & 3 (including Vision and Broad Objectives)		
SEA Topic	Objective	Will the Option/Objective/Action Plan…?
biodiversity		
Biodiversity (flora and fauna)	Conserve, protect and enhance the diversity of species and habitats and natural heritage of Aberdeen. Maintain and enhance the populations of protected species, including European Protected Species, including protection of their resting places or roosts. Maintain or enhance existing green networks and improve connectivity/function and create new links where needed.	Protect, provide and improve habitats to enhance biodiversity? Affect the conservation objectives of any international, national or locally designated site? Result in any negative impacts or place pressure on the conservation objectives of the River Dee SAC? Affect populations of any protected species, their habitats and resting places or roosts? (Protected species include Otters, Bats, Red Squirrels, water Vole, Badgers and species in the North East Scotland Biodiversity Action Plan) Result in or provide opportunity for enhancement and expansion of green networks? Avoid habitat fragmentation and enhance habitat connectivity? Protect and enhance areas of existing trees, woodland and hedges?

		Seek to promote watercourses as valuable landscape features and wildlife habitats?
Comments and Score		
OPTION 1 DO NOTHING	- -	This option will have significant negative impacts on biodiversity, because it would allow completely ad-hoc development to take place in the immediate Nigg Bay area as well the wider area including East Tullos and Altens industrial estates. Each development would be dealt with via separate planning applications on a case-by-case basis, in the absence of any coherent strategy. This option risks adverse impacts on any international, national and locally designated sites and species that may be present, including the Balnagask to Cove and Tullos Hill LNCS and the River Dee SAC. There would be little or no opportunity for the enhancement and expansion of green networks, and there would be the risk of habitat fragmentation as a result of individual ad-hoc developments. There would also be little or no opportunity to promote a cohesive approach to watercourse management, viewing them as landscape features and wildlife habitats.
OPTION 2 – DO MINIMUM	--	This option will have significant negative impacts on biodiversity, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. This option risks adverse impacts on any international, national and locally designated sites and species that may be present. There would be little or no opportunity for the enhancement and expansion of green networks, and there would be the risk of habitat fragmentation as a result of individual ad-hoc developments. There would also be little or no opportunity to promote the length of watercourses as valuable landscape features and wildlife habitats. There would also be the risk of negative impacts or pressure arising on the conservation objectives of the River Dee SAC, the cumulative result of individually planned developments.
OPTION 3 – DO OPTIMUM	++/- -	The Development Framework includes the development of a new harbour at Nigg Bay and associated infrastructure, and acknowledges that there will be likely pressure for additional development and intensification of uses on the existing East Tullos and Altens Industrial Estate. The Vision of the Development Framework, therefore, is to facilitate cohesive and properly planned growth, in particular the co-ordination of essential infrastructure and establishing key "design principles" which new development in the area must meet. The impacts of the Development Framework will be mixed, therefore, because the new development proposed will have significant negative impacts, yet the existence of the DF will have long-term positive impacts on biodiversity, because all of the new development will be guided by a coherent,

		long-term vision and design principles for the whole area (Nigg Bay, East Tullos and Altens). The Development Framework sets out key "Design Principles" which will guide future development. These include the principle of protecting and improving local habitats and biodiversity.
AIR		
Air	Limit or reduce the emissions of air-borne pollutants	Result in the temporary release of particulate matter in constructing new development? Increase vehicle traffic increasing carbon footprint and negatively impacting on air quality? Impact on or be affected by the Air Quality Management Areas?
Comments and Score		
OPTION 1 – DO NOTHING	- -	This option is likely to have significant negative impacts on air, because it would allow completely ad-hoc development, dealt with on a case-by-case basis. The lack of any coherent strategy or principles for strategic transportation, infrastructure improvements or sustainable transport would be likely to increase vehicle trips and congestion, negatively impacting upon air quality. Other cumulative issues impacting on air quality, such as dust or particulate matter, may not be addressed through individual developments. The Wellington Road Air Quality Management Area would also be likely to be negatively affected, with vehicles likely to use this route unless directed elsewhere by strategic transport interventions, as outlined in the Development Framework.
OPTION 2 – DO MINIMUM	- -	This option will have significant negative impacts on air, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. In particular, the lack of any coherent strategy for strategic transportation or infrastructure improvements would be likely to increase vehicle trips and congestion, negatively impacting upon air quality. One of the key routes likely to be negatively affected would be the Wellington Road Air Quality Management Area, with vehicles using this route heavily unless directed elsewhere by strategic transport interventions.

OPTION 3 – DO OPTIMUM	++/- -	The impacts of this option will be mixed, because although the scale of new development proposed would have negative impacts, the existence of a Development Framework will have significant positive benefits, ensuring new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). A coherent strategy for strategic transportation and infrastructure improvements will help to reduce vehicle trips and congestion at key junctions, helping to avoid congestion and a negative impact on air quality. This will help to avoid any further decrease in air quality at the Wellington Road Air Quality Management Area, which vehicles would be most likely to use heavily unless directed elsewhere by strategic transport interventions.

CLIMATIC FACTORS		
Climatic factors	Limit or reduce the emissions of greenhouse gases and promote the production of renewable energy Reduce vulnerability to the effects of climate change on flood risk	Promote sustainable and active travel, reducing congestion and traffic pollution by promoting alternative to cars through walking, cycling and the location of facilities? Significantly increase energy consumption? Promote the use of renewable energy and the efficient use of energy and water? Result in the development of peat rich soils? Increase the area at risk from flooding, or result in increased flooding in other areas?

Comments and Score		
OPTION 1 – DO NOTHING	- -	The 'do nothing' option is likely to have significant negative impacts on climatic factors, because it would allow completely ad-hoc development, dealt with on a case-by-case basis. The lack of any coherent strategy for strategic transportation or infrastructure improvements would be likely to increase vehicle trips and congestion, negatively impacting upon traffic pollution and greenhouse gases. It would also discourage the implementation of strategic and connected walking, cycling and public transport routes throughout the area, further encouraging trips by private vehicle and increasing GHG emissions. Without a Development Framework, there would be nothing to encourage the use of renewable energy and efficient use of energy and water, as each development is dealt with

		individually with little opportunity for connection, synergy or renewable energy networks. Development in this area is not likely to result in the development of peat rich soils. *The new harbour itself is likely to be at risk of flooding. This issue is dealt with as part of the assessment of the NPF3 and LDP2016 site assessments.*
OPTION 2 – DO MINIMUM	- -	This option will have significant negative impacts on climate, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. In particular, the lack of any coherent strategy for strategic transportation or infrastructure improvements would be likely to increase vehicle trips and congestion, negatively impacting upon traffic pollution and greenhouse gases. It would also discourage the implementation of strategic and connected walking, cycling and public transport routes throughout the area, further encouraging trips by private vehicle. This option would discourage the use of renewable energy and efficient use of energy and water, as each development is dealt with individually with little opportunity for connection, synergy or renewable energy networks. Option not likely to result in the development of peat rich soils. T*he new harbour itself is likely to be at risk of flooding. This issue is dealt with as part of the assessment of the NPF3 and LDP2016 site assessments.*
OPTION 3 – DO OPTIMUM	+ + / - -	The impacts of this option will be mixed, because although the scale of new development proposed would have negative impacts, the existence of a Development Framework will have significant positive benefits, ensuring new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). A coherent strategy for strategic transportation and infrastructure improvements will help to reduce vehicle trips and congestion at key junctions, helping to avoid congestion and a negative impact on air quality. The Development Framework would also be able to encourage the implementation of strategic and connected walking, cycling and public transport routes throughout the area, which will help to discourage trips by private vehicle. The development framework also includes key principles with regards to the impact of climate change, including the need to future-proof infrastructure for extreme weather events and flooding as a result of climate change. Other key principles include a 'Green Harbour' which high sustainability credentials, embracing sustainable construction methods, and future proofing development to allow for renewables, low carbon technology and connections to heat networks in the future. Development in this area is not likely to result in the development of peat rich soils so there will be no significant effect in this regard *The new harbour itself is likely to be at risk of flooding. This issue is dealt with as part of the assessment of the NPF3 and LDP2016 site assessments.*
Soil		

Soil	Reduce contamination, safeguard soil quantity and quality Minimise waste production and amount of waste sent to landfill	Cause soil sealing and compaction? Result in the release of substances during construction, cleaning or redevelopment that could potentially contaminate the soil? Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health or the water environment? Increase in the amount of waste produced?
Comments and Score		
OPTION 1 – DO NOTHING	- -	This option is likely to have negative impacts on soil, because it would allow completely ad-hoc development, dealt with on a case-by-case basis. A proliferation of individual developments in an unplanned fashion would be likely to have significant negative impacts on soil sealing and compaction, potentially covering a larger ground area. Despite development being ad hoc each individual development will be required to ensure that substances are not released during construction, and that any contamination is properly remediated and does not impact on sensitive receptors. So in this regard, there will not be any significant negative impact.
OPTION 2 – DO MINIMUM	- -	This option will have significant negative impacts on soil, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. A proliferation of individual developments in an unplanned fashion would be likely to have significant negative impacts on soil sealing and compaction, potentially covering a larger ground area. Despite development being ad hoc each individual development will be required to ensure that substances are not released during construction, and that any contamination is properly remediated and does not impact on sensitive receptors. So in this regard, there will not be any significant negative impact.

OPTION 3 – DO OPTIMUM	+/- -	The impacts of this option will be mixed, because although the scale of new development proposed would have negative impacts, the existence of a Development Framework will have significant positive benefits, ensuring new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). This will help to avoid a proliferation of individual developments in an unplanned fashion, directing development to the most appropriate places. This would help to avoid a significant negative impact on soil sealing and compaction by limiting the ground area covered. Each individual development will be required to ensure that substances are not released during construction, and that any contamination is properly remediated and does not impact on sensitive receptors. So in this regard, there will not be a very significant impact.
Water		
Water	Promote sustainable use of water and mitigate the effects of floods and droughts Ensure that the water quality and good ecological status of the water framework directive are maintained. Maintain water abstraction, run-off and recharge within carrying capacity	Increase the need to abstract water during the construction of, and servicing new development? Increase the area at risk from flooding, or result in increased flooding in other areas? Increase the area vulnerable to the effects of changes in climate, including increased rainfall and extreme weather events? Result in the release of water-borne pollution into watercourses, groundwater or reservoirs? Increase the amount of surface water run-off into water bodies? Increase development that physically impacts on a watercourse or the coastline? Allow or encourage connection to the public sewerage system?

		Locate development in areas at risk from flooding? Ensure adequate space is provided for surface water drainage including SUDS to be implemented?
Comments and Score		
OPTION 1 – DO NOTHING	- -	This option is likely to have negative impacts on water, because it would allow completely ad-hoc development, dealt with on a case-by-case basis. A proliferation of individual developments in an unplanned fashion would be likely to increase the area covered by development, increasing the amount of run-off into surface water bodies. It would also place pressure on connections to public sewerage systems, as many individual developments require their own new infrastructure to be connected. This option would also significantly reduce the scope for strategic and integrated SUDS to be provided to serve the wider area. Each individual development would be required to design drainage arrangements for its site only. It is also possible that, through the lack of any coherent plan identifying the most appropriate areas for development, there could be an increase in the development which physically impacts on a watercourse or coastline, is vulnerable to the effects of changes in climate and at risk of flooding. New development will also increase the need to abstract water for it to be serviced.
OPTION 2 – DO MINUMUM	- -	This option will have significant negative impacts on water, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. A proliferation of individual developments in an unplanned fashion would be likely to increase the area covered by development, increasing the amount of run-off into surface water bodies. It would also place pressure on connections to public sewerage systems, as many individual developments require their own new infrastructure to be connected. This option would also significantly reduce the scope for strategic and integrated SUDS to be provided to serve the wider area. Each individual development would be required to design drainage arrangements for its site only.
OPTION 3 – DO OPTIMUM	++ / --	The impacts of this option will be mixed, because although the scale of new development proposed would have negative impacts, the existence of a Development Framework will have significant positive benefits, ensuring new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). This will help to avoid a proliferation of individual developments in an unplanned fashion, directing development to the most appropriate places. This would help to limit the area covered by development, limiting the amount of run-off into surface water bodies. It would also ease pressure on connections to public sewerage

		systems, as co-located developments can benefit from shared connections to the public sewer. This option would also present opportunities for strategic and integrated SUDS to be provided for co-located development, serving a wider area than just individual developments. A coherent plan will direct development to the most appropriate locations, helping to avoid an increase in development which will have an inappropriate physical impact on a watercourse or coastline, is vulnerable to the effects of climate change or is at risk of flooding. New development will also increase the need to abstract water for it to be serviced.
Landscape		
Landscape	Maintain and support landscape character and local distinctiveness.	Reduce public open space and green space in the City? Detract from or harm the landscape setting of the city? Impact on any landscape or geological features? Result in coalescence of settlements or urban sprawl? Degrade the coastal environment?
Comments and Score		
OPTION 1 – DO NOTHING	- -	This option is likely to have negative impacts on landscape, because it would allow completely ad-hoc development, dealt with on a case-by-case basis. A proliferation of individual developments, in unplanned fashion, would be very likely to detract from or harm the landscape setting of the city. It may result in a sprawling pattern of development radiating out from the harbour itself, and degrade the landscape setting of the coast which is a key part of this area. Although individual areas of public open space and green space are protected through the policies in the LDP, there is the danger that their connectivity could be incrementally eroded through ad-hoc development.
OPTION 2 – DO	- -	This option will have significant negative impacts on landscape, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site

MINIMUM		boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. A proliferation of individual developments, in unplanned fashion, would be very likely to detract from or harm the landscape setting of the city. It may result in a sprawling pattern of development radiating out from the harbour itself, and degrade the landscape setting of the coast which is a key part of this area. Although individual areas of public open space and green space are protected through the policies in the LDP, there is the danger that their connectivity could be incrementally eroded through ad-hoc development.
OPTION 3 – DO OPTIMUM	++ / - -	The impacts of this option will be mixed, because although the scale of new development proposed would have negative impacts, the existence of a Development Framework will have significant positive benefits, ensuring new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). This will help to avoid a proliferation of individual developments in unplanned fashion, directing development to the most appropriate location where it will not detract from or harm the landscape setting of the city. The Development Framework will help to avoid a sprawling pattern of development radiating out from the harbour itself, and will protect the landscape setting of the coast which is a key part of this area. Although individual areas of public open space and green space are protected through the policies in the LDP, the Development Framework will also be able to take a strategic view to enhancing their connectivity.
Population		
Population	Promote economic growth, social inclusion, environmental improvement, health and safety;	Provide a range of employment and tourism facilities to support identified population needs?
Comments and Score		
OPTION 1 – DO NOTHING	-	This option is likely to have some negative impacts on population and economic growth. Although all new development, albeit ad-hoc and unplanned, will contribute new employment opportunities. However, the benefits to be found through co-locating and ensuring strong connections between businesses will not be had. There will also not be the opportunity to identify the need for shared public facilities.

OPTION 2 – DO MINIMUM	-	This option will have significant negative impacts on population, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. Despite this, all new development will still contribute new employment opportunities. However, the benefits to be found through co-locating and ensuring strong connections between businesses will not be had. There will also not be the opportunity to identify the need for shared public facilities.
OPTION 3 – DO OPTIMUM	++	This option will have significant positive impacts on population, because new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). All new development will still contribute new employment opportunities. This option will be able to explore the benefits to be found through co-locating and ensuring strong connections between businesses, and there will also not be the opportunity to identify the need for shared public facilities to support the success of the employment areas.
Human Health		
Human Health	Protect and enhance human health Retain and improve quality, quantity and connectivity of publicly accessible open space	Improve and make provision of open space and sporting facilities? Maintain links between areas and recreational sites, increasing healthy sporting activities?
Comments and Score		
OPTION 1 – DO NOTHING	- -	This option is likely to have negative impacts on human health, because it would allow completely ad-hoc development, dealt with on a case-by-case basis. There would be little or no opportunity for the enhancement and expansion of open space and connections between recreational sites. There will also not be the opportunity to identify the need for shared public facilities.

OPTION 2 – DO MINIMUM	- -	This option will have significant negative impacts on human health, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. There would be little or no opportunity for the enhancement and expansion of open space and connections between recreational sites. There will also not be the opportunity to identify the need for shared public facilities.
OPTION 3 – DO OPTIMUM	-/+	The impacts of this option will be mixed, because although the scale of new development proposed would have negative impacts, the existence of a Development Framework will have significant positive benefits, ensuring new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). All new development will still contribute new employment opportunities. There will be the opportunity for the enhancement and expansion of open space and connections between recreational sites, as well as the chance to identify the need for shared public facilities.
Cultural Heritage		
Cultural Heritage	Promote protect and, where appropriate, enhance the historic environment	Conserve and enhance historic buildings, archaeological sites, conservation areas? Impact on the landscape setting of Aberdeen or any historic features or sites?
Comments and Score		
OPTION 1 – DO NOTHING	- -	This option is likely to have negative impacts on cultural heritage, because it would allow completely ad-hoc development, dealt with on a case-by-case basis. A proliferation of individual developments, in unplanned fashion, would be very likely to detract from or harm the landscape setting of the city including historic features or sites including Girdleness Lighthouse, St Fittick's church and a number of scheduled ancient monuments in the area. The actual site of these assets would still be protected through the planning process but there would be little scope to consider any strategic enhancements.

OPTION 2 – DO MINIMUM	- -	This option will have significant negative impacts on cultural heritage, because it would allow ad-hoc development to take place in the wider Nigg Bay area, outwith of the area circumscribed by the NPF3 and LDP2016 harbour site boundary. Each development would be dealt with on a case-by-case basis, in the absence of any coherent strategy. A proliferation of individual developments, in unplanned fashion, would be very likely to detract from or harm the landscape setting of the city including historic features or sites including Girdleness Lighthouse, St Fittick's church and a number of scheduled ancient monuments in the area. The actual site of these assets would still be protected through the planning process but there would be little scope to consider any strategic enhancements
OPTION 3 – DO OPTIMUM	+/-	The impacts of this option will be mixed, because although the scale of new development proposed would have negative impacts, the existence of a Development Framework will have significant positive benefits, ensuring new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). The Development Framework will help to avoid a proliferation of individual developments in unplanned fashion, thereby helping to protect the landscape setting of the city including historic features or sites including Girdleness Lighthouse, St Fittick's church and a number of scheduled ancient monuments in the area. The actual site of these assets would still be protected through the planning process but there would be additional scope to consider strategic enhancements.
Material Assets		

Material Assets	Promote good design, safe environment, clean environment and good quality services Protect and enhance outdoor access opportunities and access rights	Provide adequate employment land and community facilities to meet the needs of people in Aberdeen City? Allow for the sustainable use of resources including waste and energy? Promote more sustainable waste facilities to divert it away from landfill? Provide suitable infrastructure: transport, education, health, water, waste management, sports, business, flood prevention and regeneration programmes? Promote the provision of safe pedestrian access links? Provide improved access to natural and built assets? Remove or sever any core path or right of way?
Comment and Score		
OPTION 1 – DO NOTHING	+	This option is likely to have some negative impacts on material assets. Although it should be noted that all new development, albeit ad-hoc and unplanned, will contribute new built assets and employment opportunities. Policies in the LDP will provide for sustainable waste facilities and the protection of Core Paths etc. However, the benefits to be found through co-locating and ensuring strong connections between businesses will not be had. There will also not be the opportunity to identify the need for shared public facilities. The lack of any coherent strategy for strategic transportation or infrastructure improvements would be likely to increase vehicle trips and congestion, negatively impacting upon air quality. It would not allow strategic consideration of safe and connected pedestrian links and would discourage efforts to provide suitable infrastructure for the whole area.

OPTION 2 – DO MINIMUM	+	This option is likely to have some negative impacts on material assets. Although it should be noted that all new development, albeit ad-hoc and unplanned, will contribute new built assets and employment opportunities. Policies in the LDP will provide for sustainable waste facilities and the protection of Core Paths etc. However, the benefits to be found through co-locating and ensuring strong connections between businesses will not be had. There will also not be the opportunity to identify the need for shared public facilities. The lack of any coherent strategy for strategic transportation or infrastructure improvements would be likely to increase vehicle trips and congestion, negatively impacting upon air quality. It would not allow strategic consideration of safe and connected pedestrian links and would discourage efforts to provide suitable infrastructure for the whole area.
OPTION 3 – DO OPTIMUM	++	This option will have significant positive impacts on material assets, because new development would be guided by a coherent, long-term vision for the whole area (Nigg Bay, East Tullos and Altens). Part of the "Broad Objectives" for the DF is to identify aspects of broader strategic infrastructure investment and consider how surrounding land uses can evolve to maximise opportunities to benefit from the arrival of this investment. It should be noted that all new development, albeit ad-hoc and unplanned, will contribute new built assets and employment opportunities. Policies in the LDP will provide for sustainable waste facilities and the protection of Core Paths etc. However, the Development Framework will ensure benefits to be found through co-locating and ensuring strong connections between businesses will be taken advantage of. There will also be the opportunity to identify the need for shared public facilities. A coherent strategy for strategic transportation and infrastructure improvements will help to reduce vehicle trips and congestion at key junctions, helping to avoid congestion and a negative impact on air quality. It would also allow for the strategic consideration of safe and connected pedestrian links and would encourage efforts to provide suitable infrastructure for the whole area.

Table 6.3 – Full Assessment of Design Principles in Framework

ASSESSMENT OF DESIGN PRINCIPLES: NIGG BAY, ALTENS AND EAST TULLOS		
SEA Topic	Objective	Will the Option/Objective/Action Plan…?
Biodiversity		
Biodiversity (flora and fauna)	Conserve, protect and enhance the diversity of species and habitats and natural heritage of Aberdeen. Maintain and enhance the populations of protected species, including European Protected Species, including protection of their resting places or roosts. Maintain or enhance existing green networks and improve connectivity/function and create new links where needed.	Protect, provide and improve habitats to enhance biodiversity? Affect the conservation objectives of any international, national or locally designated site? Result in any negative impacts or place pressure on the conservation objectives of the River Dee SAC? Affect populations of any protected species, their habitats and resting places or roosts? (Protected species include Otters, Bats, Red Squirrels, water Vole, Badgers and species in the North East Scotland Biodiversity Action Plan) Result in or provide opportunity for enhancement and expansion of green networks? Avoid habitat fragmentation and enhance habitat connectivity? Protect and enhance areas of existing trees, woodland and hedges?

		Seek to promote watercourses as valuable landscape features and wildlife habitats?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	- - / ++	The development of a new harbour facility will have significant negative implications for any habitats (including habitat connectivity) and species present, including the Balnagask to Cove and Tullos Hill LNCS and the River Dee SAC. The Development Framework also seeks to encourage economic growth and, by association, the expansion and intensification of physical development in the vicinity of the new harbour insofar as this is in line with the adopted Development Plan. However, the DF contains "key Design Principles" for all new development which seek to ensure that the impact on designated sites and species is minimised, through appropriate avoidance, mitigation and compensatory measures. The design principles state that particular regard should be given to biodiversity. They also explicitly states that all new development should enhance local habitats and improve biodiversity where possible. For these reasons the effects on biodiversity will be mixed, however it could be argued that nothing in the Development Framework goes 'above and beyond' the policies already contained in the adopted Local Development Plan so the positive effect will not be very significant.
ALTENS DESIGN PRINCIPLES	0	The framework will have no impact on biodiversity. Altens is an existing built up industrial area, which has many larger scale heavy industrial sites and large office building HQs.. There are relatively few areas of open space located within Altens. The proposed long term framework for the area is not expected to be produced until 2022. There are no international, national or locally designated site within this location, and no protected species. The frameworks environmental objectives outline development proposals should seek to minimise the mitigate against adverse environmental impacts. The expansion of green networks on Tullos Hill are identified as a potential future development.
EAST TULLOS DESIGN PRINCIPLES	0/-	No impact on biodiversity for East Tullos industrial area (short or long-term), however potential negative impact on biodiversity in short-term for 1 option of new link to East Tullos from Nigg Bay (during construction of link). East Tullos is an existing business area, of a built up and industrial nature, consisting primary of heavy industry uses. The proposed long term framework for the area is not expected to be produced until 2027 onwards. There is very little with regard to areas of open space located within East Tullos industrial area. There are no international or national designated site within this area, and no European protected species. Tullos Hill LNCS is located immediately south of the industrial area and forms a

		significant green space buffer between East Tullos and Altens industrial areas. The expansion of green networks on Tullos Hill are identified as a potential future development which ensures this green network asset is maintained. This is in accordance with the framework objective to avoid compromising greenbelt and green space network policy objectives. The framework environmental objectives for East Tullos outline development proposals should seek to minimise the mitigate against adverse environmental impacts, including particular regard given to biodiversity (flora and fauna). Objectives also outline that development should enhance local habitats and improve biodiversity. One of the 2 options for new link into East Tullos from Nigg Bay is through St Fitticks Park and could have implications for biodiversity. Framework objective outlines that where impacts are inevitable, these should be assessed against the ability to secure compensatory measures, and, suitable design response and/or mitigation measures put in place to reduce or offset any adverse impact.
AIR		
Air	Limit or reduce the emissions of air-borne pollutants	Result in the temporary release of particulate matter in constructing new development? Increase vehicle traffic increasing carbon footprint and negatively impacting on air quality? Impact on or be affected by the Air Quality Management Areas?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	- -/ + +	The development of a new harbour facility will have significant negative implications for air quality, through the release of emissions and particulate matter by HGVs, vessels and construction activities. The Development Framework also seeks to encourage economic growth and, by association, the expansion and intensification of physical development in the vicinity of the new harbour insofar as this is in line with the adopted Development Plan which will also have a negative effect. However one of the "key design principles" within the DF is to require a 'Dust Management Plan' for both the construction and operational phases of the harbour, subject to discussions with Environmental Health. Another key principle is to reduce the reliance on private traditional fuel cars, by putting in place ultra-low emission vehicles such as electric, using travel planning, and facilitating an increase in sustainable modal share. An integrated strategy for infrastructure and access, maximising connectivity and

		establishing new sustainable transport connections (including walking and cycling) will also be designed into proposals at an early stage helping to avoid congestion and a negative impact on air quality. This will help to avoid any further decrease in air quality at the Wellington Road Air Quality Management Area, which vehicles would be most likely to use heavily unless directed elsewhere by strategic transport interventions. In this case it is considered that the Development Framework will have long-term significant positive effects on air, because it contains specific principles to guide new development that specifically address the issues associated with this particular development, giving additional detail to that contained in policies in the LDP.
ALTENS DESIGN PRINCIPLES	-	The framework will result in a long term negative impact on air. The proposal in this area is to secure development or redeveloped underused or empty sites, including increasing the density of the industrial area. The construction of new building including for densification would result in the temporary release of particulates. There would be an increase in vehicular traffic bringing workers and works vehicles to and from the site. The framework does outline it will seek to minimise the potential increase in air particulate release by ensuring development attempts to reduce reliance on car usage and increases sustainable transport modal share wherever possible. Provision will be put in place for low emission and plug in vehicles. The framework also outlines developments must minimise and mitigate against any air quality issues. Within this area it is expected interventions will be required on Wellington Road and upgrades will also be required at Souter Head Road and Hareness Road. The upgrades are to support traffic movement to and from the harbour development; this will include freight, articulated vehicles, workers and tourists, either independent tourists or those who are being bussed due to arriving in Nigg Bay via cruise ships.
EAST TULLOS DESIGN PRINCIPLES	-	The framework will result in a long term negative impact on air. The proposal in Eats Tullos area is to enable the development and/or redevelopment of underused, vacant or brownfield sites. This includes intensification (increased density) of the industrial area. Construction of new buildings as part of this intensification and regeneration of the area would result in the temporary release of particulates. There would also be an increase in vehicular traffic bringing workers and works vehicles to and from the area. The framework outlines that development proposals should minimise and mitigate against adverse environmental impacts, including that development should seek to reduce reliance on the use of the car as a movement choice, through the use of travel planning, to facilitate an increase of sustainable mode share and contribute to air quality management in the area, in particular on Wellington Road. In situations where car use cannot be avoided, provision should be put

		in place to encourage access by ultra-low emission vehicles, including those with a plug-in component. The framework outlines that proposals must sensitively manage the interaction between existing communities, businesses and industry. Proposals should not result in an unacceptable adverse impact upon residential amenity – giving particular regard to air quality. Within the East Tullos area it is expected interventions will be required at the junctions where Wellington Road affords access and egress into East Tullos, and, 1 of 2 options will be progressed in order to enhance access from Nigg Bay into East Tullos. Such road infrastructure upgrades are required to support traffic movement to and from the harbour development and facilitate regeneration of the East Tullos industrial area. Such traffic movements will include freight, articulated vehicles, workers and tourists.
CLIMATIC FACTORS		
Climatic factors	Limit or reduce the emissions of greenhouse gases and promote the production of renewable energy Reduce vulnerability to the effects of climate change on flood risk	Promote sustainable and active travel, reducing congestion and traffic pollution by promoting alternative to cars through walking, cycling and the location of facilities? Significantly increase energy consumption? Promote the use of renewable energy and the efficient use of energy and water? Result in the development of peat rich soils? Increase the area at risk from flooding, or result in increased flooding in other areas?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	- - / ++	The development of a new harbour facility will have significant negative implications for climate change, through the release of GHG emissions by cars, HGVs, vessels and construction activities. The Development Framework also seeks to encourage economic growth and, by association, the expansion and intensification of physical development in the vicinity of the new harbour insofar as this is in line with the adopted Development Plan which will also have a negative effect. However one of the "key design principles" of the Development Framework is to

		reduce the reliance on private traditional fuel cars, by putting in place ultra-low emission vehicles such as electric, using travel planning, and facilitating an increase in sustainable modal share. An integrated strategy for infrastructure and access, maximising connectivity and establishing new sustainable transport connections (including walking and cycling) will also be designed into proposals at an early stage helping to avoid congestion and a negative impact on air quality. With regards to the impact of climate change, the DF states that planned infrastructure must be future-proofed for extreme weather events and coastal flooding as a result of climate change, which will be addressed through an Environmental Statement. Another key design principle is to create a 'Green Harbour' which high sustainability credentials, embracing sustainable construction methods, and future proofing development to allow for renewables, low carbon technology and connections to heat networks in the future. In this case it is considered that the Development Framework will have long-term significant positive effects on air, because it contains specific principles to guide new development that specifically address the issues associated with this particular development, giving additional detail to that contained in policies in the LDP.
ALTENS KEY PRINCIPLES	+	The framework will have both positive impact on climatic factors. The framework does outline it will seek to minimise the potential increase in air particulate release by ensuring developments attempts to reduce reliance on car usage and increases sustainable transport modal share wherever possible. Provision will be put in place for low emission and plug in vehicles. The framework promotes high density development in appropriate locations. The development will use of up to date, high speed communication infrastructure. The frameworks outlines development proposals will be as energy efficient where possible, facilitating the use of renewable and low carbon technology, with a future connection to the wider heat and energy networks possible. Proposals will not compromise water quality, and should contribute towards water efficiency.
EAST TULLOS DESIGN PRINCIPLES	0	The framework will have neutral impact on climatic factors. The proposals include intensification of uses in appropriate locations, i.e. on existing business and industrial land, however, this should be offset by promotion of sustainable design and practices. Development of East Tullos is not on peat rich soils. The framework objectives outline proposals should contribute toward water efficiency. The framework objectives outline proposals will seek to minimise the potential increase in air particulate release by ensuring developments attempts to reduce reliance on car usage and increases sustainable transport modal share wherever possible. Provision will be put in place for low emission and plug in vehicles. Framework objectives outline that any planned infrastructure should be future proofed for extreme weather events and impacts of coastal flooding as a result of climate change. Proposals for

		development would be subject to screening for an Environmental Impact Assessment, and in turn any new regulations which come into force. This includes new link from Nigg Bay to East Tullos. The framework objectives outline that development proposals should be energy efficient and future proofed, embracing sustainable construction methods and technologies, renewables, low carbon technology, and, ability to connect into wider heat and energy networks in future.
Soil		
Soil	Reduce contamination, safeguard soil quantity and quality Minimise waste production and amount of waste sent to landfill	Cause soil sealing and compaction? Result in the release of substances during construction, cleaning or redevelopment that could potentially contaminate the soil? Ensure that possible contamination will be properly remediated and not impact upon sensitive receptors such as human health or the water environment? Increase in the amount of waste produced?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	- - / ++	The development of a new harbour facility will have significant negative implications for soil, through an increase in the amount of physical built development causing soil sealing, erosion and compaction. The Development Framework also seeks to encourage economic growth and, by association, the expansion and intensification of physical development in the vicinity of the new harbour insofar as this is in line with the adopted Development Plan which will also have a negative effect. A key design principle for the DF is to minimise the environmental impact, and it is the Framework's stated aim to maximise the use of land, thereby making most efficient use of land to be built upon. By directing development to the most appropriate places, the framework will help to avoid a proliferation of individual developments in an unplanned fashion. Each individual development will be required to ensure that substances are not released during construction, and that any contamination is properly remediated

		and does not impact on sensitive receptors. So in this regard, there will not be any significant impact. In this case it is considered that the DF will have long-term positive effects as it gives additional weight to environmental objectives and the protection of the environment. However, it does not explicitly mention soil protection, and nothing in the DF goes 'above and beyond' the policies already contained in the adopted Local Development Plan so the effect will not be very significant.
ALTENS DESIGN PRINCIPLES	- -	The economic and business aspect of the framework will have a long term negative impact on soil. The objectives include securing development, and promotes higher density development in appropriate locations. The development on the site will lead to soil sealing and compaction, the release of substances during construction and increase the amount of waste being produced from the site(s). The framework does outline proposals will not compromise water quality, and should contribute towards water efficiency.
EAST TULLOS DESIGN PRINCIPLES	+/-	Long term negative impact on soil. The framework objectives include enabling development, regeneration, and, promoting intensification of development in appropriate locations, i.e. on existing business and industrial land. Development on East Tullos industrial area and potential option of new road link from Nigg Bay to East Tullos will lead to soil sealing and compaction, the release of substances during construction and increase the amount of waste being produced from the area during construction of sites, as and when development comes forward. The framework objectives outline proposals will not compromise water quality, and should contribute towards water efficiency. The identification of Tullos Hill for green space improvements and as a green space buffer between East Tullos and Altens, ensures this green asset and the soil quantity and quality in this location is maintained.
Water		
Water	Promote sustainable use of water and mitigate the effects of floods and droughts Ensure that the water quality and good ecological status of the water framework	Increase the need to abstract water during the construction of, and servicing new development? Increase the area at risk from flooding, or result in increased flooding in other areas? Increase the area vulnerable to the effects of changes in climate, including increased rainfall and extreme weather events?

	directive are maintained. Maintain water abstraction, run-off and recharge within carrying capacity	Result in the release of water-borne pollution into watercourses, groundwater or reservoirs? Increase the amount of surface water run-off into water bodies? Increase development that physically impacts on a watercourse or the coastline? Allow or encourage connection to the public sewerage system? Locate development in areas at risk from flooding? Ensure adequate space is provided for surface water drainage including SUDS to be implemented?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	- - / +	The development of a new harbour facility will have significant negative implications for water, creating a demand for water abstraction, increasing surface water run-off and the potential for water-borne pollution. The Development Framework also seeks to encourage economic growth and, by association, the expansion and intensification of physical development in the vicinity of the new harbour insofar as this is in line with the adopted Development Plan which will also have a negative effect. However a "key design principle" within the DF is to minimise the environmental impact through avoidance or mitigation, particularly with regard to surface water drainage. It also explicitly states that proposals should contribute to water efficiency and not compromise water quality as part of credentials for a "Green Harbour". In this case it is considered that the DF will have some long-term positive effects as it gives additional weight to environmental objectives and the protection of the environment. However, nothing in the DF goes 'above and beyond' the policies already contained in the adopted Local Development Plan so the effect will not be very significant.

ALTENS KEY PRINCIPLES	-	The economic and business aspect of the framework will have a long term negative impact on water. The objectives include securing development, and the economic and business objective promotes higher density development in appropriate location. This will lead to the need to abstact water during construction and for serving new and higher density development. The area is not presently at risk of flooding and the economic and business objectives, the developments, will be assessed by flood risk assessments. The framework outlines infrastructure will be future proofed for extreme weather events and impacts of coastal flooding as a result of climatic change. The framework outlines developments will minimise and mitigate against adverse environmental impacts including water.
EAST TULLOS KEY PRINCIPLES	-	The economic and business aspect of the framework will have a long term negative impact on water. The objectives include enabling development and promoting intensification of business and industrial uses development in appropriate location. This will lead to the requirement for increased water abstraction, during both the construction period and for serving new and/or intensified development. The framework objective do outline that developments will minimise and mitigate against adverse environmental impacts including water quality and promoting water efficiency. The East Tullos area is not presently at risk of flooding and the individual development sites/plots/proposals, will be assessed by flood risk assessments where required. The framework outlines infrastructure will be future proofed for extreme weather events and impacts of coastal flooding as a result of climatic change.
Landscape		
Landscape	Maintain and support landscape character and local distinctiveness.	Reduce public open space and green space in the City? Detract from or harm the landscape setting of the city? Impact on any landscape or geological features?

		Result in coalescence of settlements or urban sprawl? Degrade the coastal environment?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	- -	The development of a new harbour facility will have significant negative implications for landscape as a result of increased development on a prominent stretch of coastline. The Development Framework also seeks to encourage economic growth and, by association, the expansion and intensification of physical development in the vicinity of the new harbour insofar as this is in line with the adopted Development Plan which will also have a negative effect. The framework design principles include preserving the Green Belt and the Green Space Network in the initial stages, which will help to protect the landscape setting of the city. Another key principle is to minimise the environmental impact, with particular regard to landscape and visual impact. In this case it is considered that the DF will have some long-term positive effects as it gives additional weight to environmental objectives and the protection of the environment. However, nothing in the DF goes 'above and beyond' the policies already contained in the adopted Local Development Plan so the effect will not be very significant.
ALTENS KEY PRINCIPLES	0	The framework will have no long term impact on landscape. The site is an existing indusial area. The framework states development proposals should seek to avoid compromising green belt and greenspace network objectives, and should minimise and mitigate against adverse environmental impacts including to landscape, where by a design response and/or mitigation measures are put in place. The framework makes reference to future masterplans outlining consideration needs to be given to city wide views, vistas, and coastal view.
EAST TULLOS KEY PRINCIPLES	0	The framework will have no long term impact on landscape. East Tullos site is an existing indusial area. The framework objectives outline that development proposals should seek to avoid compromising green belt and greenspace network objectives, and should minimise and mitigate against adverse environmental impacts including to landscape, where by a design response and/or mitigation measures are put in place. The framework makes reference to future masterplans outlining consideration needs to be given to city wide views, vistas, and coastal view.
Population		

Population	Promote economic growth, social inclusion, environmental improvement, health and safety;	Provide a range of employment and tourism facilities to support identified population needs?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	-	The new development and economic growth provided by the harbour will have significant, long-term positive impacts for both the local and city-wide population. The design principles in the DF seek to enhance and increase this growth by ensuring that the new harbour, and additional associated development, is a success. It also includes key principles with regards to community benefit, including ensuring new development provides jobs and apprenticeships for the local community, establishing "Community Projects" for the design and delivery of new public spaces, and providing educational opportunities. The local and city-wide population will also benefit from new and improved public spaces, improved public realm and public art to assist with legibility. In this case it is considered that the Development Framework will have long-term significant positive effects on population, because it contains specific principles to guide new development that specifically address the issues and opportunities associated with this particular development, giving additional detail to that contained in policies in the LDP.
ALTENS KEY PRINCIPLES	++	The framework will have a long term positive influence on population as the proposed densification of the employment areas will lead to an increased range of employment opportunities. The framework outlines development will not compete with or detract from the city centre offer, vacant sites will be identified for development again adding to the mix of employment opportunity. The framework objectives also outlined new and improved paths connecting local landmark/heritage assets should be considered, alongside opportunities for interpretation of the historic environment. Further to this, the framework outlines pubic art should be used in the development framework area. This will encourage tourism to the location.
EAST TULLOS KEY	+	The framework will have a long term positive influence on population. The proposed intensification of uses at East Tullos will lead to an increase in the attractiveness of Aberdeen to develop employment areas and therefore enhances employment opportunities. The framework objectives outline that proposals will support and

PRINCIPLES		encourage the development of sites identified within the sites for Classes 4, 5 and 6 in line with Local Development Plan Policy BI1. Proposals for development should not introduce significant uses which could compete with and detract from the offer of the city centre, and, developers should seek to provide a number of jobs and / or apprenticeships for the local community which reflect the scale of their development. The framework objectives also outline opportunities for interpretation of the environment, including paths connecting local landmark/heritage assets should be considered. This alongside the proposed new link from Nigg Bay to East Tullos aids promotion of tourism in the area.
Human Health		
Human Health	Protect and enhance human health Retain and improve quality, quantity and connectivity of publicly accessible open space	Improve and make provision of open space and sporting facilities? Maintain links between areas and recreational sites, increasing healthy sporting activities?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	- /++	The development of a new harbour and associated infrastructure and development in the vicinity will have mixed effects on human health. There will be negative effects through the production of dust and air pollutants associated with construction and vehicle movements. However, the DF Design Principles seeks to ensure that these harmful effects are minimised, for example through a 'Dust Management Plan' to control particulate matter during the construction and operation of the harbour. It will also have positive effects by ensuring that new and improved public spaces and path networks are provided through development, increasing opportunities for recreation and physical activity. It also seeks to establish improved routes for walking and cycling. In this case it is considered that the Development Framework will have long-term significant positive effects on human health, because it contains specific principles to guide new development that specifically address the issues and opportunities associated with this particular development, giving additional detail to that contained in policies in the LDP.

ALTENS DESIGN PRINCIPLES	++	The framework will have long term positive impact on human health. The framework will maintain links between areas as there is a network of core paths surrounding the site. New footpaths and cycle paths will be segregated from motor vehicles, and development on Wellington Road should enhance the quality of the public realm and pedestrian experience. The framework outlines development should facilitate improved linkages to existing and new pathways and connections to public spaces and surrounding communities. The framework proposes public space lost during the construction period, either permanently or temporality will be reinstated. Where possible, new and improved paths connecting local landmarks should be considered. The framework encourages the sensitive management of integration between communities, business and industry with industrial development being screened from public and residential areas as far as practicably possible. The framework will encourage and support connectivity.
EAST TULLOS DESIGN PRINCIPLES	-/+	The framework will overall have long term positive impact on human health. The option of new link from Nigg Bay into East Tullos through St Fitticks Park would have negative impact in terms of maintaining the area of open space which has been subject to East Tullos Burn Project. This aspect of the proposal at East Tullos would result in loss of and fragmentation of accessible open space. The framework objective does outline that where impact cannot be avoided and where the loss of public space is inevitable, compensatory measures should be considered. This could include the improvement of existing sub-standard public spaces in line with wider open space network aspirations. In addition, it states that the design and delivery of proposals for replacement or new public spaces should involve local and city-wide communities where possible. The framework maintains links between areas as there is a network of core paths surrounding the site and where possible will include the creation of new, supporting connections to public spaces, local landmarks/heritage assets and surrounding communities. New connections wherever possible will be segregated from vehicular traffic. The identification of Tullos Hill for green network improvements ensures this green asset, and the connections it affords, is maintained. The framework objectives outline that proposals should sensitively manage the interaction between existing communities, businesses and industry. Industrial development should be screened from public and residential areas as far as practicably possible, and particular regard should be given to issues of noise, vibration, air quality, odour and light.

Cultural Heritage		
Cultural Heritage	Promote protect and, where appropriate, enhance the historic environment	Conserve and enhance historic buildings, archaeological sites, conservation areas? Impact on the landscape setting of Aberdeen or any historic features or sites?
Comments and Score		
NIGG BAY DESIGN PRINCIPLES	- /++	The development of a new harbour and associated infrastructure and development in the vicinity will have mixed effects on cultural heritage. There will be possible negative effects through impacts on the site or setting of designated heritage assets, but there may also be positive effects, through design principles that ensure new development should protect and enhance existing heritage sites, and places of local importance, naming St Fittick's Church, Girdle Ness Lighthouse and Torry Coo as examples. Any adverse impacts should be appropriately mitigated against. The Development Framework also states that opportunities for the interpretation of the historic environment should be maximised and where possible, new and improved paths connecting the landmarks should be considered. In this case it is considered that the Development Framework will have long-term significant positive effects on cultural heritage because it contains specific principles to guide new development that specifically address the issues and opportunities associated with this particular development, giving additional detail and stipulations to those contained in policies in the LDP.
ALTENS DESIGN PRINCIPLES	+	The framework will have a positive impact on Cultural Heritage. There are a number of hits from the sites and monuments record located in Altens. There are three Scheduled Monuments beyond the Altens areas. A public space and access objective states the framework will protect and enhance existing heritage sites and places of local importance. Any adverse impact upon the heritage value of these assets or their settings will be appropriately mitigated against. Furthermore any direct impact on areas of known archaeological potential will also be mitigated against. The framework outlines development must minimise environmental impact through avoidance or mitigation, with landscape outlined as an topic where particular regard must be taken.

EAST TULLOS DESIGN PRINCIPLES	+/-	The framework will overall have a positive impact on Cultural Heritage. Potential impact on setting of St Fitticks Church if option of new link through St Fitticks Park is progressed and this will require mitigation. There are a number of cultural heritage resources in the East Tullos area or close by. Including, St Fitticks Church (scheduled ancient monument/B listed) and a number of scheduled cairns and sites located on Tullos Hill. The identification of Tullos Hill for green network improvements ensures this green asset, and the cultural assets it contains, are protected. The framework objectives for public space and access outlines that proposals should protect and enhance existing heritage sites, and places of local importance. Including proposals for development should sensitively respond to the setting of nearby Listed Buildings and Scheduled Ancient Monuments in the area. One option for the new link from Nigg Bay into East Tullos includes crossing through St Fitticks Park which could impact on the setting of scheduled site of St Fitticks Church. The framework objectives outline that any adverse impact upon the heritage value of these assets or their settings will be appropriately mitigated against. Furthermore any direct impact on areas of known archaeological potential will also be mitigated against. The framework outlines development must minimise environmental impact through avoidance or mitigation, with landscape outlined as an topic where particular regard must be taken.
Material Assets		
Material Assets	Promote good design, safe environment, clean environment and good quality services Protect and enhance outdoor access opportunities and access rights	Provide adequate employment land and community facilities to meet the needs of people in Aberdeen City? Allow for the sustainable use of resources including waste and energy? Promote more sustainable waste facilities to divert it away from landfill? Provide suitable infrastructure: transport, education, health, water, waste management, sports, business, flood prevention and regeneration programmes?

		Promote the provision of safe pedestrian access links? Provide improved access to natural and built assets? Remove or sever any core path or right of way?
Comment and Score		
NIGG BAY DESIGN PRINCIPLES	++	The Design Principles for the Development Framework seek to encourage economic growth and, by association, the expansion of physical development in the vicinity of the new harbour. For this reason, it will have significant positive impacts for economic growth and material assets which the DF seeks to increase. It does this by expressing its support for the construction and operation of a new harbour at Nigg Bay, maintaining and expanding existing harbour-related activity in the region. It also includes design principles for development which aim to expand the potential range of uses where possible, attracting new work streams, and connecting to digital infrastructure. The DF will also facilitate the provision of new and improved strategic infrastructure for the area, including new roads, junctions, bridges and rail interventions as well as walking and cycling routes. Detailed design principles ensure that the necessary upgrades can be made whilst maintaining the smooth operation of the existing network during construction. With regard to Core Paths and rights of way, the DF states that care should be taken to preserve and respect the different nature of the routes. In this case it is considered that the Development Framework will have long-term significant positive effects on cultural heritage because it contains specific principles to guide new development that specifically address the issues and opportunities associated with this particular development, giving additional detail and stipulations to those contained in policies in the LDP. In particular, it sets out the new infrastructure requirements in detail, which will have very significant long term benefits.
ALTENS KEY PRINCIPLES	+	The framework will have a long term positive impact on material assets. The framework will enhance the employment opportunities from the people of Aberdeen and beyond. The proposal encourages developments should be as energy efficient where possible. The framework states developments will be connected to digital infrastructure. There are a number of transport and access objectives outlined within the framework which will ensure the road network is enhanced and maintained to accommodate new development. Access and infrastructure improvements include phased road network improvements, establishing sustainable transport

		connections through new and improved walking and cycling routes, and well connected roads, streets and spaces. The framework will avoid piecemeal development thereby creating a plan led development where the design of roads and streets will traffic calm naturally, promoting safe pedestrian access, with quality streetscapes proposed. New paths introduced providing access to natural and built assets.
EAST TULLOS DESIGN PRINCIPLES	+	The framework will have a long term positive impact on material assets. The development of East Tullos industrial area will enhance the employment opportunities from the people of Aberdeen and beyond. The proposal encourages development to be as energy efficient where possible and promotes sustainable design. The intensification of use for business and industrial uses within East Tullos promotes regeneration of brownfield land and the most efficient use of land. Identification of Tullos Hill for green network improvements promotes and provides public accessibility of this green asset, and maintains existing core paths in the area. There are a series of infrastructure and access objectives in the framework which will ensure the road network is enhanced and maintained to accommodate new development. Access and infrastructure improvements include phased road network improvements, establishing transport connections through new and improved walking and cycling routes, and well connected roads, streets and spaces (including new link to East Tullos from Nigg Bay). The framework states developments will be connected to digital infrastructure networks. The framework will avoid piecemeal development thereby creating a plan led development.

7. Cumulative Effect Assessment

Paragraph 6 (e) of Schedule 3, of the Environmental Assessment (Scotland) Act 2005 requires that we assess the likely significant effects on the environment, including secondary, cumulative and synergistic effects. We have assessed cumulative effects of the Development Framework, taking into account the information available to us. In doing so have considered the evolution of the environment without the Framework, environmental characteristics of areas likely to be significantly affected as well as the assessment undertaken for this Framework. In this part of the report, we have assessed direct/indirect/secondary, time crowding, time lag, space crowding, cross-boundary, nibbling and synergistic effects in gauging cumulative effects. We have presented the detailed assessment in Table 7.1 below.

Cumulative effects

In order to work out the cumulative effects the following summarises the objectives pursued across the three areas covered by the Framework.

- The **economy and business** objective aims to redevelop and regenerate the business and industry use in this area; increase employment density in the area; encourage higher density development in appropriate locations subject to infrastructure capacity and environmental acceptability and connect to digital infrastructure networks

- **The land use objective** seeks to complement and not compromise the vitality and regeneration of the city centre; identify vacant sites for development, and the types of business which could accommodate these sites; support and encourage the development of sites identified within the sites for Classes 4, 5 and 6 in line with Local Development Plan Policy; identify potential new industries and decommissioning near the harbour; screen industrial development from communities and sensitively manage interaction between existing communities, businesses and industry. At the same time, it will safeguard noise, vibration, air quality, odour and light. It will protect Green Belt and Green Space Network

- The **infrastructure and access** objective seeks to maintain and enhance road network to accommodate new development; and establish new sustainable transport connections. Specifically it will (i) create direct link from Nigg Bay into East Tullos, potentially including new bridge crossing railway (ii) improve the junction at Wellington Road/ Greenwell Road; (iii) widen coast road south of Hareness Road (iv) improve link from Coast Road to Souter Head Roundabout (v) improve Souter Head Roundabout (vi) improve existing Coast Road and bridge and (vii) upgrade the Coast Road. At the same time it will manage engineering, traffic, transport and environment and climatic impacts as well as protect the water environment as in St Fiticks Park

- The **public space and access** objective aims to provide new and improved public spaces; protect open space; provide for recreation; it proposes new and improved path networks for walking and cycling; it will ensure proposed routes are consistent with Open Space Audit and Guidelines. Its proposed public realm would demonstrate the creation of a high quality environment; it will protect residential amenity and public art; protect and enhance existing heritage sites, setting of the historic environment; Listed Buildings and Scheduled Ancient Monuments and archaeological remains. It will protect and enhance St Fitticks Church, Girdle Ness Lighthouse, Torry Coo. At Altens, it will preserve and respect Coastal Path, Core Paths, Cycle Paths

- The **environment** objective aims to minimise and militate against adverse environmental impacts across range of all environmental topics. It will promote energy efficiency, water efficiency, renewables, low carbon technology and future heat and energy networks. It will minimise car use; protect and enhance marine environment; it will protect biodiversity, habitats; it will protect and improve health. It also has a requirement for Noise Mitigation Plan and Dust Management Plan

- The **community benefit** objective seeks to provide jobs, apprenticeships, maintaining residential amenity, providing new public spaces, public access, recreation and educational opportunities. At the same time it seeks to avoid or minimise adverse impacts from noise; light and air quality.

Table 7.1 Assessment of Cumulative and Synergistic effects of the plan options/alternatives

Policy Options	Business and Economy	Land use	Infrastructure & Access	Public Space & Access	Environments	Community Benefits	Cumulative Effects	Comment Cumulative effects including Time crowding (frequent and repetitive effect); Time lag (long delays in cause and effect); space crowding (high spatial density of effects); cross-boundary (effects occurring distances from source); synergistic (effects from multiple sources or combined effects different in nature from the individuals); indirect (secondary effects resulting from a primary activity); nibbling (incremental)
Air	-	-	-	0	0	0	-	Air; There are areas in the City which are AQMA, the phased developments to support the new harbour is likely to create incremental air quality hotspots through **time-crowding effects**, if the proposed transport improvements do not go ahead. In the longer term, improvement of transport facilities can encourage more vehicles on the roads leading to future air quality issues through **time lag**. Depending on the timing of the developments, there is the possibility that dust nuisance will be generated through regeneration objective in business and the economy objective but the requirement for Dust Management Plan under the environment objective minimises impact from time lag. Emphasis on increased density is under business and economy objective could increase release of particulate matter through **space crowding effects**. But the proposed of developments in the three area and the safeguards provided under the environment objective minimises impacts. There are discernible **cross-boundary effects. Synergistic effects** of developments on air quality are unlikely. Although there NOx continue to exceed national objectives, these are limited to AQMA in Aberdeen City. Again it is not considered that there will be a significant and **indirect** air pollution issues for the City arising from the deposition of air pollutants on other receptors. If the proposed transport improvements do not go ahead, small additional traffic pressures will act cumulatively in the long-term to increase overall emissions of air pollutants through nibbling effects. The framework's business and economy objective conflicts with the environment objective. The business and economy and land use to some extent could have negative implications for this receptor. The other objectives are likely to have positive benefits for this receptor in the long-run. These do not necessarily neutralise air quality issues, through **neutralising effects** since there exists AQMAs in the City. Our assessments reflect are view.

Water	-/+	-/+	-/+	0	0	0	-/+	Water: It is water abstraction need for new industrial development and regeneration under business and economy as well as land use that will add a burden to water abstraction from theDee. The various road improvement works could add to water pollution and so will the development near St Fittick's Park affect the water environment and any underground water reserves and aquifers. For the effects on the water environment is assessment as significant on the basis **time-crowding effects; time lag effects**; **space crowding effects**; indirect and **synergistic effects but not for** cross-boundary effects.
Soil	-	-	-	0	0	0	-	Soil: harbour development, supporting the harbour through road infrastructure and industrial regeneration within the area is likely to affect soil compaction, loss, sealing and erosion; and these are thought to be over a short to long term period through time-crowding effects, time lag, space crowding effects through higher density, indirect and synergistic although it is not thought to be cross-boundary in effect.
Biodiversity	-/+	-/+	-/+	0	0	0	-/+	Biodiversity: harbour development, supporting the harbour through road infrastructure and industrial regeneration is likely to affect biodiversity particularly for local nature conservation site, green network and protected SACs adversely through time-crowding effects, time lag, and space crowding effects through higher density, indirect and synergistic although it is not thought to be cross-boundary effects.
Climatic Factors	-	-	-	0	0	0	-	**Climate:** harbour development, supporting the harbour through road infrastructure and industrial regeneration is likely to affect climatic factors particularly through increased car use over time. However, the whole development is premised on green harbour with the aim to minimise and mitigate against adverse environmental impacts across a range of all environmental topics. It will promote energy efficiency, water efficiency, renewables, low carbon technology and future heat and energy networks. The effects on climate are unlikely to be significant through time-crowding effects, time lag, and space crowding effects, indirect and synergistic and cross-boundary effects.
Cultural Heritage	-	-	-	0	0	0	-	Naturally a harbour development, supporting the harbour through road infrastructure and industrial regeneration are likely to affect some aspects of the historical environment and its setting. On the other hand the Framework provides safeguards to protect residential amenity and public art; protect and enhance existing heritage sites, setting of the historic environment; Listed Buildings and Scheduled Ancient Monuments and archaeological remains. It also proposes to protect and enhance St Fitticks Church, Girdle Ness Lighthouse and Torry Coo. The effects of the Framework on the historic environment are therefore unlikely to be significant through time-crowding effects, time lag, and space crowding effects, indirect and synergistic and cross-boundary effects.
Landscape	-/+	-/+	-/+	0	0	0	-/+	**Landscape:** harbour development, supporting the harbour through road infrastructure and industrial regeneration is likely to affect the landscape and its setting, the greenspace network adversely through time-crowding effects, time lag, space crowding effects through higher density, indirect and synergistic although it is not thought to be cross-boundary effects.

Material Assets	++	++	++	++	++	++	++	The new harbour development, supporting the harbour through road infrastructure and industrial regeneration is likely to provide the scope for creation of fixed assets. The use of natural and material assets, promoting waste minimisation, recycling and composting is encouraged. Regeneration and use of the area in support of the new harbour is also likely to have similar impacts. In that sense it is not envisaged that there will be any adverse effects accumulating through time-crowding, time lag, space crowding effects, synergistic and nibbling effects. The Framework is likely to have significant positive effects overall.
Population	++	++	++	+	++	+	++	The new harbour development, supporting the harbour through road infrastructure and industrial regeneration is likely to provide the scope for new assets by part of the population in the City. New development and infrastructure are likely to meet the needs of many people and enhance their quality of life. In that sense it is not envisaged that there will be any adverse effects accumulating through time-crowding, time lag, and space crowding effects, synergistic and nibbling effects. The Framework is likely to have significant positive effects overall.
Human health	-/+	-/+	-/+	+	+	+	-/+	Human Health. The new harbour development, supporting the harbour through road infrastructure and industrial regeneration provide some scope for improving access, minimising air quality through its environment objective. Through the Framework's public space and access and public benefits objectives, it seeks to protect open space; provide for recreation; it proposes new and improved path networks for walking and cycling; it will ensure proposed routes are consistent with Open Space Audit and Guidelines. Its proposed public realm would demonstrate the creation of a high quality environment. It also seeks to provide jobs, apprenticeships, maintain residential amenity, provide new public spaces, public access, recreation and educational opportunities. At the same time it seeks to avoid or minimise adverse impacts from noise; light and air quality. These provisions are likely to be positive for human health. There is the possibility of some air quality issues in the long run. But it is not thought to be significant because of the environmental objective.
Key	+ = positive effect ++ = significant positive effect - = negative effect -- = significant negative effect 0 = neutral effect ? = uncertain effect Direct (SDP → Impact A) Indirect (SDP→ Impact A → Impact B Induced (SDP→other PPS →Impact A) Additive (Impact A +Impact B= Impact A+B) Neutralising (Impact A +Impact B <Impact A+B) Synergistic (Impact A +Impact B>Impact A+B)							

8 Proposed Mitigation Measures

The SEA Directive requires that through mitigation measures, recommendations will be made to prevent, reduce or compensate for the negative effects of implementing the strategy. The proposed framework to be adopted to mitigate significant environmental effects is at Table 8.1.

Table 8.1 Proposed Mitigation Measures

SEA Issue	Plan Impact	Mitigation Measures	When should mitigation be considered?	Who is responsible for undertaking the mitigation?
Air	Increased air pollution from traffic, harbour development, regeneration and road improvements	Enforce dust management plan Apply air quality policy, which states that planning applications which have the potential to have a detrimental impact on air quality will not be permitted unless measures to mitigate the impact of air pollutants can be agreed (Policy T4). Apply the SGs on air quality.	When considering planning applications	DM team, Environmental Health, Masterplanning and Design Team
Water	Water abstraction need and water pollution through development; likelihood of effect on water environment	The City Council will liaise with SEPA where there is the potential for the pollution of the water environment. Apply policies and Supplementary Guidance on Buffer Strips to protect and enhance water bodies. This measure is consistent with the mitigation identified by the SDP (future plans should have policies to improve the ecological status of water). Apply policy requiring all new developments to install water-saving technologies. Apply policy presumption against excessive engineering or culverting, with natural treatment preferred where possible. EIA, DIA, FRA, HRA are required for the harbour development and any other major development	When considering planning applications	DM team, Masterplanning and Design Team, in consultation with SEPA
Biodiversity	Potential loss of biodiversity, LNCS, Disturbance to qualifying interests of the Dee, Isle of May, Moray Firth and	Framework and subsequent applications flowing from the Frameworks will require HRA where a proposal is likely to affect the Natura 2000 sites which will outline site specific mitigation measures. HRA will also trigger a requirement for EIA. This measure is consistent with the mitigation identified by the SDP (EIA and HRA will be required through policy and conditions as appropriate). GSN policy will be applied so that proposals ensure habitat links are maintained and enhanced. Watercourses will be maintained as naturalised channels with riparian buffer strips, and not subject to excessive engineering work. Where there are existing culverts,	When considering planning applications	DM team, Masterplanning and Design Team, in consultation with SNH

	Berwickshire and North Northumberland Coast SAC:	opportunities to reinstate them as open watercourses will be explored, which would enhance their biodiversity value. Policy will require Ecological Assessments to be completed where a development is likely to affect a designated site or protected species, with specific mitigation measures. Bat surveys will also be required where bats are suspected		
Landscape	Landscape degradation from development	Landscape impact will be mitigated through screening or sensitive siting of buildings within the site where appropriate. The Framework will protect and enhance St Fitticks Church, Girdle Ness Lighthouse, Torry Coo	When considering planning applications	DM team, Masterplanning and Design Team
Population	Positive impacts on material assets	Enhance material asset by applying community benefit and public space and access objectives in the Framework to enhance population benefits.	When considering planning applications	DM team, Masterplanning and Design Team
Material Assets	Positive impacts on material assets	Enhance material asset by applying community benefit and public space and access objectives in the Framework to enhance material assets Provide recycling facilities	When considering planning applications	DM team, Masterplanning and Design Team

9 Monitoring

9.1 Monitoring Plan

Aberdeen City Council is required to monitor the significant environmental effects when the plan is implemented. A monitoring report will be prepared to constantly monitor the significant effects. The framework for monitoring significant effect of the implementation of the plan is shown in the Table 5.4below. The monitoring data will be incorporated into the PPS

Table 9.1 Monitoring Plan

Effects	What sort of information is required? (Indicators)	Where will information be obtained from?	Are there gaps in the existing information and how can it be resolved?	When should the remedial action be considered?	Who is responsible for undertaking the monitoring?	How should the results be presented?	What remedial actions could be taken?
Biodiversity	Impact on the qualifying features of the River Dee SAC	Dee catchment management plan		Remedial action should be considered if water quality deteriorates or there is a decrease in water resource.	Aberdeen City Council Environment Team, SNH, SEPA, Dee Catchment Partnership, North East Scotland Biodiversity Partnership	Annually	A review of land allocations through the Local Development Plan Process Review of Supplementary Guidance on Natural Heritage should a quicker response be required
	Disturbance to dolphins and grey seals	HRA, SNHi and JNCC		If SNH draws the authorities attention to it	Aberdeen City Council and SNH, The Harbour Board	Annually	If SNH draws the authorities attention to it
	Water abstraction	Scottish Water		When abstraction rate approaches licensed capacity	Scottish Water and SEPA	Annually	To be determined by SEPA

Effects	What sort of information is required? (Indicators)	Where will information be obtained from?	Are there gaps in the existing information and how can it be resolved?	When should the remedial action be considered?	Who is responsible for undertaking the monitoring?	How should the results be presented?	What remedial actions could be taken?
	Habitat fragmentation	Open Space Strategy and Greenspace Network reviews		When Local Nature Conservation Strategy indicates a negative impact on habitats and species as a result of development pressure	Aberdeen City Council Environment Team, SNH, SEPA, Dee Catchment Partnership, North East Scotland Biodiversity Partnership	Open Space Strategy Annual Monitoring	Review of supplementary guidance on open space and greenspace network
Air	Nitrogen dioxide emissions Air quality (PM_{10})	Aberdeen City Council Local Air Quality Management: Progress Reports	None	When new Air Quality Management Areas are declared. Planning Applications Review of supplementary guidance on Air Quality	Environmental Health	As part of the Air Quality Action Plan or As and when is necessary	Review Supplementary Guidance on Air Quality
Water	Impact on water quality of River Dee SAC Water abstraction Impact of development on water pollution Physical impact of development on water bodies and the coast	Dee catchment management plan SNH on the impact on the qualifying interests of the River Dee SAC		When data from SEPA and SNH indicate potential pollution in the Dee When data indicates that there has been an increase in flood incidents action should be taken	SEPA, SNH and Aberdeen City Council	Annually	Review the action programme of the local development plan Review supplementary guidance on flooding and drainage Apply policy on water efficiency

Effects	What sort of information is required? (Indicators)	Where will information be obtained from?	Are there gaps in the existing information and how can it be resolved?	When should the remedial action be considered?	Who is responsible for undertaking the monitoring?	How should the results be presented?	What remedial actions could be taken?
Landscape	Impact of development on visually prominent areas Development adversely affecting the landscape and townscape setting.	Landscape appraisal Public complaints		When landscape appraisal indicates a negative impact on landscape and townscape setting When there is a large amount of opposition to development	Development Management and developers	Annually	Review land allocations and/or prepare supplementary guidance
Population	Enhancing positive effects	The Framework/SG		When development commences	Masterplanning and design team	Annually in	Review objective on community benefits
Material Assets	Enhancing positive effects	The Framework/SG		When development commences	Masterplanning and design team	Annually in	Review objective on community benefits

9.2 An outline of the reasons for selecting the alternatives dealt with

The preferred option is chosen because, given the framework set by the NPF3 and the LDP, it is the most reasonable option. Producing a coherent, long-term vision for development in the area will help to avoid an-hoc development, and ensure that development is well planned and has the least possible impact on the environment. Following the assessment of the options, the preferred option comes on top environmentally (See Table 6.2).

9.3 General Difficulties, Weaknesses and Limitations

A difficulty of this Environmental Report is that the Framework is a high level document and therefore could not go into details about every development and leaves that assessment at a high strategic level.

10 Consultation Analysis and Actions Taken

In Table 10.1 below we show how we have analysed the consultation responses from the scoping stage!
The Statutory Consultation Authorities will send their responses on 4 September 2015. Only then can this section be completed.

Table 10.1 Analysis of Comments from Consultation Authorities on the Scoping Report

Consultation Authority	Issue	Concern / Comments	Action proposed
Historic Scotland			
Historic Scotland			
Historic Scotland			
Historic Scotland			
Scottish Natural Heritage			
Scottish Natural Heritage			
Scottish Natural Heritage			
Scottish Natural Heritage			
Scottish Natural Heritage			
Scottish Natural Heritage			
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Scottish Natural Heritage			
Scottish Natural Heritage			
Scottish Environment Protection Agency			
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Scottish Environment Protection Agency			
Scottish Environment Protection Agency			
Scottish Environment Protection Agency			
Scottish Environment Protection Agency			
Scottish Environment Protection Agency			

11 Next Steps

11.1 Proposed Consultation Timescale

Aberdeen City Council will ensure an early and effective consultation on the new Framework and the accompanying Environmental Report. In this connection, the minimum consultation period Aberdeen City Council intends to specify under Section 16(1)(b) and notify under Section 16(2)(a)(iv) is eight (8) weeks.

11.2 Anticipated Milestone

Table 6.1 shows the remaining steps needed for the SEA of Aberdeen Framework and how these steps would be carried out and described in the final environmental report.

Table 11.1 Proposed consultation timescale and methods

Expected time frame	Milestone	Comments
35 days	Consulting on the Scoping Report	
3 weeks	Collating views on the Consultation and take the appropriate action on the Scoping report and the plan as the result of the consultations	
4 weeks	Finalise the environmental report	
6 weeks	Consulting on the Environmental Report and the Framework	
3 weeks	Collating views on the Consultation	
3 weeks	Take the appropriate action on the environmental report and the Framework as the result of the consultations	
2 weeks	Finalise the environmental report	
2 weeks	Take post-adoption measures	

12. Appendices: PPS Context, Baseline & Assessments

Appendix 12.1 - Links to other PPS & Environmental Protection Objectives

	Name of PPS / Environmental protection objective	Main Requirements of the PPS	Implications of the PPS for Framework
	INTERNATIONAL		
	Nature Conservation		
	The Habitats Directive	Protects habitats and species. Gives basis to classify SACs and SPAs	The Framework should ensure the protection of all wild, rare and vulnerable birds, their nests, eggs and habitats.
	The Birds Directive	Protection of wild birds and their habitats	
	European Biodiversity Framework	Promotes the conservation and sustainable use of biological diversity	The Framework should support the conservation and sustainable use of biological diversity
	Water		
	Water Framework Directive 2000/60/EC	Safeguard the sustainable use of surface water; transitional waters, coastal waters and groundwater. Supports the status of aquatic ecosystems and environments; Addresses groundwater pollution; flooding and droughts; river basin management planning.	The Framework should consider sustainable use of water and mitigate the effects of floods and droughts
	The Nitrates Directive 91/43/EEC	Reduce water pollution caused or induced by nitrates from agricultural sources; and preventing further such pollution.	The Framework should not increase water pollution caused or induced by nitrates from point source pollution sources.
	Waste		

	The Landfill Directive 99/31/EC	Sets a framework for waste management and sets out demanding targets to reduce the amount of biodegradable municipal landfilled up to 2020.	The Framework should reflect the needs of the Landfill Directive, including the infrastructure required to meet the municipal biodegradable waste targets to 2020.
	The Waste Framework Directive 2006/12/EC	Requires the planning system to: • Provide policies and sites for waste disposal. • Recover or dispose of waste without endangering human health and without processes or methods which could harm the environment. • Liaison between planning authorities and SEPA. Provide the right infrastructure for the new thematic strategy on the prevention and recycling of waste.	The Framework should ensure it utilises waste management facilities identified under higher-tier plans whilst safeguarding the natural and built environment including designated areas, green belts, open countryside and the coast.
	NATIONAL		
	Overarching Planning Policy		
	National Planning Framework for Scotland 3	• Promotes the development of City Regions • Facilitates the regeneration of socially disadvantaged areas. • Facilitates the implementation of sustainable transport and other key infrastructure. • Development of skills and the knowledge economy (accessibility). • Encourages environmental stewardship.	The Framework should take account of the spatial and environmental issues set out in the NPF3 such as: • promoting the concepts of sustainable development, community regeneration, transportation infrastructure, and other environmental issues; & • ensuring land required to meet the city region's needs (e.g. infrastructure and affordable housing) is delivered.

	Scottish Planning Policy	Identifies the Scottish Government's central purpose at sustainable economic growth. SPP sets out the main purpose and tasks of the planning system and national policies across all policy sectors.	The Framework must accord with the national policies set out by SPP.
	Cross-Sectoral		
	Scotland's National Transport Strategy (2006)	Sets out a long- term vision for transport, identifies reduction of emissions, improved quality, accessibility and affordable as key aims.	The Framework should seek to integrate with the aims of strategies. It should reduce the need to use private transport and assist in the reduction of emissions.
10	Strategic Transport Projects Review (2009)	Sets out recommendations for land-based strategic transport interventions in Scotland's national transport network from 2012	Although the Framework should have regard to the strategic aims it has for the future of Scotland's transport system.
	The Government Economic Strategy (2007)	Identifies strategic priorities critical to achieving sustainable economic growth.	The Framework should support sustainable economic growth whilst meeting the differing needs of a diverse population.
	Choosing Our Future: Scotland's Sustainable Development Strategy (2007)	It highlights the need to build a sustainable future taking account of pubic well-being (e.g. quality of life, food, economic opportunities), travel, natural resources and waste.	The Framework should aim to conserve Scotland's biodiversity whilst reducing resource depletion and encouraging responsible use of our natural resources.
	Air and Climate Change		
	Scottish Climate Change Delivery Plan (2009)	Sets out high level measures required to meet Scotland's statutory climate change targets to 2020.	The Framework should include measures to contribute to the reduction of greenhouse gases

			considering methods of adaptation, diversification and mitigation.
	UK Air Quality Strategy (2007)	Seeks to "render polluting emissions harmless". Sets objectives for protecting human health to be included in regulations for the purposes of Local Air Quality Management relating to concentrations of, amongst others, carbon monoxide, lead, nitrogen dioxide, ozone and particulates.	The Framework should improve local air quality
	A Low Carbon Economic Strategy for Scotland	Sets out the Scottish Government's plans to move towards a low carbon economy in Scotland.	The Framework must contribute to the promotion of development which helps to reduce Scotland's carbon footprint and help meet carbon saving targets for Scotland.
	Heritage, Design and Regeneration		
	The Scottish Historic Environment Policy (2009)	Provides a framework for more detailed strategic and operational policies for managing the historic environment	The Framework should promote the management of the historic environment in a sustainable way which avoids adverse impacts as a result of new development.
	Scottish Historic Environment Policies (December 2011)	• Is the overarching policy statement for the historic environment, covering all types of designations and consents. • It provides a framework for more detailed strategic policies and operational policies that inform the day to day work of a range of organisations that have a role and interest in managing the historic environment. • They are intended to sit alongside and complement	The Framework should take account of the vision statements in the SHEP by managing the historic environment in a sustainable way.

		the Scottish Planning Policy series and other relevant Ministerial policy documents.	
	The Planning (Listed Buildings and Conservation Areas) Act 1997	• Prescribes the approach to be taken in planning for listed buildings, conservation areas and designed landscapes and gardens.	The Framework should ensure that listed buildings, conservation areas and designed landscapes and gardens are not adversely affected by new development.
	Designing Places: A Policy Statement for Scotland (2009) Designing Streets: A Policy Statement for Scotland (2010)	• Development plans should: • set out the council's distinctive vision for how its area will develop. It should summarise its appraisals of the most important features of the area's character and identity. • have effective design policies, and urban design frameworks, development briefs and master plans to provide planning and design guidance; and • explain how the plan's priorities are distinctly different from those of other places, and not just say that the council is committed to good design, or that development should respect its context.	The Framework should set out concisely the local authorities' priorities in relation to design, including new street design.
	Scottish Executive (2006) People and Place: Regeneration Policy Statement	Sets out a forward looking strategic framework and priorities for regeneration in Scotland encouraging proactive and integrated approaches.	The Framework should take account of changing regeneration priorities and provide support where possible.
	Landscape and Soil		
	The Scottish Soil Framework (2009)	Promote the sustainable management and protection of soils consistent with the economic, social and environmental needs of Scotland. Protection of soil as an asset- for the future of the Scottish economy as well as a contributor to challenges of climate change.	The Framework should promote the sustainable management of soils.
	Scottish Landscape Forum' (2007)	The Scottish Landscape Forum has published a report	The Framework should consider how

	Scotland's living landscapes	entitled *Scotland's Living Landscapes – places for people*. It considers how to promote good management of all landscapes, to secure benefits for all. It provides seven key recommendations to the Scottish Government and other public bodies as first steps to delivering better care for Scottish landscapes. This includes preparing a European Landscape Convention action plan.	to maintain and restore natural habitats to ensure biodiversity and landscapes
	Homes, Population and Health		
	All Our Futures: Planning for a Scotland with an Ageing Population (2007)	Provides a strategic approach which considers how best to respond to and plan for a Scotland with an ageing population.	The Framework should consider the needs of an ageing population.
	Reaching Higher- Building on the Success of Sport 21	Is the national strategy for sport in Scotland and sets out the long-term aims and objectives for sport until 2020 and plans for its delivery and evaluation. It has been produced following a scheduled review of *Sport 21*: 2003-2007. The strategy maintains a vision of Scotland as: • a country achieving and sustaining world class performances in sport; • a country where sport is more widely available to all; and • a country where sporting talent is recognised and nurtured.	The Framework should contribute to implementing the strategy.
	Let's Make Scotland More Active: A Strategy for Physical Activity (2003)	Aims to increase and maintain the proportion of physically active people in Scotland setting out targets to 2022.	The Framework should promote physical activities.
	Equalities Act	Sets out a framework which prevents individuals from unfair treatment and promotes a more equal society.	The Framework should build the needs of people with protected

			characteristics into its providing services through the framework.
	Disability Discrimination Acts 1995 & 2005	Ensures that discrimination law covers all the activities of the public sector; and requires public bodies to promote equality of opportunity for disabled people. Aims to end the discrimination that many disabled people face and gives disabled people rights in the areas of employment, education, access to goods, facilities and services and buying or renting land or property.	The Framework should build the needs of disabled persons into its actions
	Nature Conservation		
	Wildlife and Countryside Act 1981 (as amended)	Gives protection to listed species from disturbance, injury intentional destruction or sale.	The Framework should protect wildlife from disturbance, injury and intentional destruction
	The Nature Conservation (Scotland) Act 2004	Sets out a series of measures, which are designed to conserve biodiversity and to protect and enhance the biological and geological natural heritage of Scotland. Places a general duty on all public bodies to further the conservation of biodiversity.	The Framework should promote and protect biodiversity
	Scotland's Biodiversity Strategy- Its in Your Hands (2004)	Is a 25 year strategy, which sets out a vision for the future health of Scotland's biodiversity to 2030. It highlights the need to: • look at the bigger picture: reconnecting and extending habitats and reducing barriers; • think in terms of landscapes and ecosystems (not just in terms of species and habitats), which it says can be better delivered through strategic planning; and	The Framework needs to: • ensure the protection and conservation of biodiversity; • to assist in reversing the decline of important species and habitats; and to maximise habitat linkage in both urban and rural areas and minimise

		encourage more engagement with people in biodiversity conservation.	further fragmentation.
	The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007	These Regulations implement the Habitats and Wild Birds Directives. The Regulations provide for the: • designation and protection of 'European sites' (e.g. SACs); • protection of 'European protected species' from deliberate harm; and • adaptation of planning and other controls for the protection of European sites. The Habitats Regulations only apply as far as the limit of territorial waters (12 nautical miles from baseline). The amended Regulations: • simplifies the species protection regime to better reflect the Habitats Directive; • provides a clear legal basis for surveillance and monitoring of European protected species (EPS); • toughens the regime on trading EPS that are not native to the UK ensures that the requirement to carry out appropriate assessments on water abstraction consents and land use plans is explicit.	The Framework should not adversely affect habitats and species protected under the Wild Birds and Habitats Directives. An appropriate assessment will be required where the plan is likely to have a significant effect on a European site.

	Making the Links: Greenspace for a more successful and sustainable Scotland' (2009)	Sets out the key actions that are needed to ensure that greenspace delivers for people, communities and places across the whole of urban Scotland.	**The Framework** should take account of the actions required to deliver quality greenspace to shape better places and increase quality of life for those working and living in the SDP area.
	Water		
	Water Environment and Water Services (Scotland) Act 2003	Ensures that all human activity that can have a harmful impact on water is controlled.	The Framework should not promote development that would have adverse impacts on the water environment, and lead to the authorities failing to ensure water bodies achieve good ecological status, as required in the Water Framework Directive by 2015.
	Water Environment (Controlled Activities) (Scotland) Regulations 2005	Implements the obligations of section 20 of the Water Environment and Water Services (Scotland) Act 2003 (WEWS Act), and the requirements of the Water Framework Directive (2000/60/EC). • Sets out the framework for protecting the water environment that integrates the control of pollution, abstractions, dams and engineering activities in the water environment.	Same as above.
	Flood Risk Management (Scotland) Act 2009	Creates a framework in which organisations involved in flood risk management can co-ordinate actions to deliver sustainable and modern approaches to flood risk management.	The framework should not create flood risks (from the sea or rivers) and should actively promote sustainable flood risk management.
	River Basin Management Plan for Scotland (2009)	Details the strategy and requirements for River Basin Management Planning in Scotland	The framework should not conflict with River Basin Management Plans for the area (River Dee)

	Scottish Water Strategic Asset and Capacity Development Plan (2009)	Provides a description of Scottish Waters processes and systems for calculating capacity available, at waste/ water treatment works in Scotland.	The Framework should take into account existing infrastructure and provide for new infrastructure if required.
	SEPA (2003) Groundwater Protection Policy for Scotland: Environmental Policy	To protect groundwater quality by minimising the risks posed by point and diffuse sources of pollution, and to maintain the groundwater resource by influencing the design of abstractions and developments, which could affect groundwater quantity.	The Framework should not adversely affect ground water supplies, principally from water abstraction and point source pollution.
	Waste		
	Scotland's Zero Waste Plan (2010)	The plan outlines Scotland's key objectives in relation to waste prevention, recycling and reducing the amount of waste sent to landfill on the journey to a zero waste Scotland. The plan proposes targets for Scotland's waste	The Framework should have regard to the Scottish Governments targets for 70% of all waste to be recycled by 2025. The Scottish Gov also intends to establish sector specific programmes of work to deliver the Zero Waste Plan.
	Marine and Coastal		
	Scottish Executive Marine & Coastal Strategy (2005)	• To enhance and conserve the overall quality of the coasts and seas, their natural processes and their biodiversity. • To integrate environment and biodiversity considerations into the management of marine activities. • To promote wider public awareness, on the value of the marine and coastal environments and the pressures on them. • To identify means of working with natural processes to protect against coastal flooding and to maintain	The Framework should promote clean, safe, healthy and productive coastal and water environments.

		inter-tidal and coastal habitats of importance for biodiversity.	
	Marine (Scotland) Bill 2010 UK Marine Policy Statement	Expresses outcomes for the UK marine area and underpins the development of the joint Marine Policy Statement (MPS) guides development of national and regional marine plans. The MPS builds and expands upon 'Our Seas - a Shared Resource. High Level Marine Objectives (2009)' and provides a framework which will help balance competing demands on Scotland's seas and introduces duties for sustainable development, protection and enhancement of marine areas, mitigation of and adaptation to climate change, marine planning and conservation and measures to encourage economic investment.	Although the framework is not tasked directly with delivering Marine Plans or the High Level Marine Objectives, the framework should support them.
	National Planning Advice & Guidance		
	PAN 60: Planning for Natural Heritage	Provides advice on how development and the planning system can contribute to the conservation, enhancement, enjoyment and understanding of Scotland's natural environment. Encourages developers and planning authorities to be positive and creative in addressing natural heritage issues	The Framework should contribute to the conservation, enhancement, enjoyment and understanding of the natural environment.
	PAN 61 Planning & sustainable urban drainage	Describes how the planning system has a central co-ordinating role in getting SUDS accepted as a normal part of the development process. In implementing SUDS on the ground, planners are central in the development control process, from pre-application discussions through to decisions, in bringing together the parties and guiding them to solutions which can make a significant contribution to sustainable development	The Framework should consider the role of sustainable urban drainage

	PAN 63 Waste Management Planning	Ensures that development plans reflect the land use requirements for the delivery of an integrated network of waste management facilities Enables planning authorities to implement the emerging and future Area Waste Plans Provides a basis for more informed consideration of development proposals for waste management facilities Provides developers seeking planning permission for waste management facilities with advice on the issues taken into consideration when determining applications.	The Framework should promote integrated waste management
	PAN 65: Planning and Open Space	Raise the profile of open space as a planning issue Provides advice on the role of the planning system in protecting and enhancing existing open spaces and providing high quality new spaces Sets out how local authorities can prepare open space strategies and gives examples of good practice in providing, managing and maintaining open spaces	The Framework should promote conservation and environment protection
	PAN 75 Transport and Planning	Provides good practice guidance which planning authorities, developers and others should carry out in their policy development, proposal assessment and project delivery. Creates greater awareness of how linkages between planning and transport can be managed. Highlights the roles of different bodies and professions in the process and points to other sources of information.	The Framework should promote the use of existing transportation networks and develop new cycling and walking alternatives.
	PAN 76 New Residential Streets.	Aims at creating attractive, safe residential environments, which reflect the needs of people, rather than cars. Requires that street design should reflect local character, be appropriate to the built form and linked	The Framework should safeguard safe and high standard design of streets

		to surrounding areas by direct pedestrian, cycle and car routes; that the character of the street should be determined by space requirements of people and vehicles, street furniture should fit with its surroundings and streets should use high quality materials, be well maintained and may employ signage to reinforce its sense of place; and that streets should provide easy movement within and beyond the site, street design itself should be used to limit traffic speed and home zones, prioritising pedestrian and cycle needs over car users, should be considered for residential streets.	
	PAN 77 Designing safer places	Highlights the positive role that planning can play in helping to create attractive, well-managed environments which help to discourage antisocial and criminal behaviour. Aims to ensure that new development can be located and designed in a way that deters such behaviour as poorly designed surroundings can create feelings of hostility, anonymity and alienation and can have significant social, economic and environmental costs.	The Framework should safeguard safety
	PAN 78 Inclusive Design	Seeks to deliver high standards of design in development and redevelopment projects; and widens the user group that an environment is designed for. Makes is a legal requirement to consider the needs of disabled people under the terms of Disability Discrimination legislation.	The Framework should promote high standard of design
	REGIONAL		
	Overarching Planning Policy		
	Aberdeen City and Shire Strategic Development Plan (2014)	Creates a long-term sustainable framework of settlements in a hierarchy, which focuses major development on the main settlements in the North	The Framework should support the provisions of the SDP

		East. Sets the strategic context for Aberdeen City Local Plan which in turn set the framework for land use development	
	Cross-Sectoral		
	Economic Growth Framework for North East Scotland	Sets the context for economic prosperity which will in turn drive sports development Promote sustainable economic growth; sustainable competitiveness and inclusive communities	The Framework should support sustainable economic growth
	Economic Action Plan for Aberdeen City and Shire 2008	Sets out a 5 year life plan identifying actions to be undertaken towards the longer term economic ambitions for Aberdeen City and Shire.	The Framework should support sustainable economic growth.
	Regional Transport Strategy (RTS),	Sets the long-term framework to improve the transport network in the North East, including: • integrating land use and transportation; • creating a long-term sustainable framework; • providing communities with a choice of means of travel and improving people's access to jobs; • improving air quality both locally and globally; • improving external links to the area by rail, road, sea and air; and • integrating different modes of transport to provide seamless interchange.	The Framework should contribute to the goals of the RTS
	Nature Conservation		
	North East of Scotland Local Biodiversity Action Plan	Ensures the protection and enhancement of the biodiversity in the north east through the development of effective, local, working partnerships; Ensure that national targets for species and habitats, as specified in the UK Action Plan, are translated into effective local action.	The Framework should promote and protect biodiversity.
	River Dee Catchment Management Plan	• Records the current state of the Dee catchment, including water quality, the type and extent of habitats and species in the catchment, and	The Framework should contribute to delivering the actions proposed in the Catchment Management Plan

		important land management activities. • Identifies key issues and puts forward potential solutions through a series of actions.	
	LOCAL		
	Aberdeen Local Development Plan 2012 and the Proposed Plan 2015	It sets the framework for development in the city in the next 25 years consistent with the SDP	Framework should conform to the LDP
	Aberdeen City Local Transport Strategy	Makes the Framework to take full account of the environment, social and economic implications of transport; Promotes the maximisation of accessibility for all to services and jobs; efficient resource use, as well as safety in delivering transportation	The Framework should support sustainability, environment protection, accessibility and safety and reduce social exclusion.
	Aberdeen City Air Quality Action Plan	To reduce nitrogen dioxide within the Air Quality Management Area (AQMA) in Aberdeen City Centre, and to a lesser extent reduce particulates (PM_{10}) through short, medium and long term infrastructure and other projects.	The Framework should contribute to delivering the actions proposed in the Action Plan in order to improve air quality with the AQMA and ensure land required to implement the Action Plan is provided timeously.
	Aberdeen Futures – Aberdeen Community Plan	Stresses access to services of a high quality that meet their needs; seeks to make Aberdeen an attractive, clean, healthy and safe place to live; promotes Aberdeen as a forward looking city that recognises its heritage and its internationally recognised institutions and services; and seeks to give Aberdeen a strong, positive image of itself both nationally and internationally.	The Framework should support accessibility, health, safety, and the environment
	Aberdeen City Nature Conservation Strategy 2010-2015	Aims to control and maintain remaining natural habitats and associated wildlife through the identification of designated sites and additional non-statutory sites. This will benefit both biodiversity and the citizens that live, work and visit the City of Aberdeen.	The Framework should promote biodiversity
	Open Space Audit and Strategy 2011-	This Strategy sets out a strategic vision, aims and	The Framework should supports the

	2016	objectives for open space in Aberdeen. Its main purpose is to ensure the city has enough accessible and good quality open space. The Strategy is based on the findings of the Aberdeen Open Space Audit 2010.	aims of the open space audit.
	Aberdeen City Core Paths Plan	Core Paths Plans are required under the Land Reform (Scotland) Act 2003 for each council area *sufficient for the purpose of giving the public reasonable access throughout their area*. They set out the core paths network. The Plans are developed in consultation with local communities, user groups, land managers and other stakeholders. Drafts are expected in 2008. Their aims include: • connecting residential areas, green-spaces, amenities, other attractions and the wider countryside; • forming a basic, safe framework for outdoor recreation and sustainable and active travel; • assisting people to lead healthier lifestyles; • promoting environmental protection and foster the development of a more sustainable city; and • being well integrated in policy and usage terms, encouraging access opportunities for all.	The Framework should support the aims of the Core Paths Plans.
	Landscape Character Assessment of Aberdeen.	Seeks to maintain a balance between landform, geology, ecology, and vegetation despite human influences. Encourages development in existing settlements; avoiding coalescence between settlements and discouraging isolated development in the open countryside unless it is clearly identified in development plan	The Framework should take account of landscape character and promote good landscape designs
	Aberdeen Contaminated Land	The Contaminated Land Strategy sets out how local	The Framework should avoid

	Inspection Strategy (2001)	authorities deal with potentially contaminated land.	development actions that contaminate land

Appendix 12.2 Baseline Data - Air and Climate

SEA Indicator	Quantified information- Aberdeen City	Comparators and targets- Aberdeenshire, North East and Scotland	Trends	Issues/constraints	Data source(s)
Natural Resources Consumption (footprint)	Aberdeen City's annual global footprint: Total: 5.73gha/per Energy and Consumption: 1.14gha (20% Food and Drink 1.07gha/p(19%) Land Travel: 0.81ha/p (14%) Other: 2.7gha/p (48%) Scotland's annual global footprint: Total: 5.37gha/per	Aberdeenshire's annual global footprint - in global hectares per person (gha/p) Total: 5.60gha/p Energy Consumption: 1.09gha/p (19%) Food and drink: 1.11gha/p (20%) Land Travel: 0.74ha/p (13%) Other (Government, capital investment, holiday activities, consumables, services and sports), 2.7gha/p	Both Aberdeenshire and Aberdeen City's global footprint is higher than the Scottish average. The main contributors to the NE's global footprint are energy consumption, food and drink and land travel.	Energy is the largest contributor to Aberdeen City and Shire's Global Footprint and indicates high energy consumption associated with domestic fuels like gas, oil, electricity and other fuels. Sustainable transport is a key issue in both Aberdeen City and Shire, as it contributes 14% and 13% to global footprint respectively. Aberdeen consumes more resources per person than any other	North East Global Footprint Project http://www.scotlandsfootprint.org/tthe-project/north-east.php Aberdeen City Council and Aberdeenshire Council (2006) Scotland's Global Footprint Project – Reduction Report for North East Scotland Global Footprint Project, Joint Global Footprint Co-ordinator, Aberdeen City Council

		(48%)		Scottish city, and it has the largest footprint in Scotland which cannot be sustained in the long-term.	
Total CO_2 emissions (kt)	Aberdeen City 2007 - 1,772.72 2008 - 1,761.38 2009 - 1,583.95 2010 - 1,660.35 2012- 1,645	Aberdeenshire 2007 - 2,391.21 2008 - 2,518.62 2009 - 2,335.33 2010 - 2,344.17 2012 – 1,744	Continues to fluctuate in the medium term.	Energy is the biggest contributor to Aberdeen's C02 emissions. 2012 data: Industry and Commercial Electricity: 430 kt. Domestic Gas: 280kt Domestic Electricity: 255kt Road Transport (Minor roads): 152kt Road Transport (A Roads): 137kt Industrial and Commercial other uses: 66kt Industry and Commercial Gas: 228kt Large Industrial Installations: 63kt Domestic Other Fuels: 13kt	DECC Data dated 23/08/2012 National Atmospheric Emissions Inventory: http://naei.defra.gov.uk/data/local-authority-co2-map

				Agricultural combustion: 3kt Railways: 2kt New development should consider energy efficiency as an issue. Increased travel, inefficient old housing stock. More housing and dependence on fossil fuels are also key issues.	
Per Capita CO_2 emissions (kt)	Aberdeen City 2007 – 8.5 2008 – 8.4 2009 – 7.4 2010 – 7.6	Aberdeenshire 2007 - 10.0 2008 - 10.4 2009 - 9.6 2010 - 9.5	Rising by 2008 and falling since 2008 in the Shire- continues to fluctuate in the medium term.	Increased travel, inefficient old housing stock and more housing account for this.	DECC Data dated 23/08/2012
Industry and Commercial CO_2 emissions (kt)	Aberdeen City 2007 - 868.99 2008 - 846.45 2009 - 692.34 2010 - 666.04 2012 - 787	Aberdeenshire 2007 - 841.39 2008 - 840.24 2009 - 745.63 2010 - 791.33 2012 - 532	No consistent fall in the City and the Shire	How to mitigate or reduce of industrial and commercial C02 whilst promoting sustainable economic growth.	DECC Data dated 23/08/2012
Domestic CO_2 emissions (kt)	Aberdeen City 2007 - 580.98 2008 - 582.17 2009 - 519.86	Aberdeenshire 2007 - 762.63 2008 - 765.92 2009 - 711.89	Domestic CO2 emissions in the City and the Shire continue to	Inefficient old housing stock and domestic energy demand are likely to account for this.	DECC Data dated 23/08/2012

	2010 - 552.38 2012 - 548	2010 - 770.13 2012 - 743	fluctuate in the short term.		
Road Transport CO_2 emissions (kt)	Aberdeen City 2007 - 327.85 2008 - 317.79 2009 - 298.78 2010 - 298.88 2012 - 289	Aberdeenshire 2007 - 674.39 2008 - 647.82 2009 - 622.64 2010 - 622.62 2012 - 597	There appears to be a slight improvement in Road Transport emissions in both the city and Shire.	Increased travel by private vehicle may account for this.	DECC Data dated 23/08/2012
LULUCF* CO_2 emissions (kt)	Aberdeen City 2007 - 22.49 2008 - 21.18 2009 - 19.67 2010 - 17.76 2012 - -4	Aberdeenshire 2007 - 85.19 2008 - 258.44 2009 - 308.47 2010 - 285.38 2012 - -230	The City shows a slight improvement, compared to the Shire which continues to fluctuate in the medium term.	This depends on the way we use our land and Forest resources.	DECC Data dated 23/08/2012 *LULUCF - Land Use, Land Use Change and Forestry
Properties at risk within inland and coastal areas	Aberdeen City: 309 inland floodplain 571 coastal (below 5m OD) Scotland: 77,191 inland floodplain	Aberdeenshire 2,219 inland floodplain 1,743 coastal (below 5m OD)	The impact of climate change and flooding in the North East is unpredictable. However there may be increased duration and	There may be an increasing need to implement flood defence systems in the City.	Office of Science and Technology (2005) Foresight report: *Future Flooding Scotland* http://www.foresight.gov.uk/Scotland/Final_Scotland.pdf

	93,830 coastal (below 5m OD) Compared with the rest of Scotland, far fewer properties in Aberdeen and Aberdeenshire are at significant risk from flooding.		frequency of storms and rising sea levels. Weather throughout the year is predicted to change resulting in longer wetter winters and shorter drier summers with implications for flooding.		
Potential Vulnerable Area (PVA) to flooding No of Area	Aberdeen City: 9 areas/catchments including Buchan Coastal (Bridge of Don), Aberdeen North Coastal (Seaton), River Don (Danestone), River Don (Dyce), Aberdeen South Central (Kincorth), Aberdeen South Central (Rosemount), River Dee (Cults), River Dee (Peterculter)	Aberdeenshire 18 Areas/Catchments including Banff Coastal around Banff, River Devron around Huntly, and Turrff, Buchan Coastal around Ellon, Peterhead, Fraserburgh and Newmachar; River Ythan around Ellon, and Methlick; River Don around Strathdon, Port Elphinstone/Kintore/In	No trend	PVA areas and issues have to be taken into account and allocating land for development and imposing conditions on development.	SEPA (2011) *Flood Risk Management (Scotland) Act 2009: Flooding in Scotland – A Consultation on Potentially Vulnerable Areas and Local Plan Districts- Appendix 6: Aberdeenshire and Aberdeen City.* Edinburgh: SEPA

		verurie; River Dee around Ballater, Westhill and Aboyne; Kinkandine and Angus Coastal around Stonehaven			
Estimated Weighted Annual Average damages within PVA	Aberdeen City • 2011- £22,390,000.00	Aberdeenshire • 2011 - £17,080,000.00	No trend	Cost implication for developing areas at risk from flooding must be taken into account and allocating land for development and imposing conditions on development.	SEPA (2011) *Flood Risk Management (Scotland) Act 2009: Flooding in Scotland – A Consultation on Potentially Vulnerable Areas and Local Plan Districts- Appendix 6: Aberdeenshire and Aberdeen City.* Edinburgh: SEPA
Total Area (Km 2) in PVA	Aberdeen City • 2011 - 344	Aberdeenshire • 2011- 529	No trend	It has implications for land allocation and development.	SEPA (2011) *Flood Risk Management (Scotland) Act 2009: Flooding in Scotland – A Consultation on Potentially Vulnerable Areas and Local Plan Districts- Appendix 6: Aberdeenshire and Aberdeen City.* Edinburgh: SEPA
Residential Properties in PVA	Aberdeen City • 2011- 1943	Aberdeenshire • 2011- 1820	No trend	It has implications for land allocation and development.	SEPA (2011) *Flood Risk Management (Scotland) Act 2009: Flooding in*

					Scotland – A Consultation on Potentially Vulnerable Areas and Local Plan Districts- Appendix 6: Aberdeenshire and Aberdeen City. Edinburgh: SEPA
Non-Residential Properties in PVA	Aberdeen City • 2011- 375	Aberdeenshire • 2011- 272	No trend	It has implications for land allocation and development.	SEPA (2011) *Flood Risk Management (Scotland) Act 2009: Flooding in Scotland – A Consultation on Potentially Vulnerable Areas and Local Plan Districts- Appendix 6: Aberdeenshire and Aberdeen City*. Edinburgh: SEPA
Air quality (N02) in µ g/m^3	Aberdeen City Market Street 1 • 2007 – 62.0 • 2008 – 73.0 • 2009 – 38.0 • 2010 – 44.0 • 2011 – 40.0 • 5/3/2013 - 43.1-110 Union Street • 2007 – 53.0 • 2008 – 54.0 • 2009 – 56.0	Aberdeenshire Inverurie 1-4 • 2007 – 12.0 – 35.1 • 2008 – 09.5 – 32.9 • 2009 – 11.4 – 37.5 • 2010 – 10.4 – 33.6 • 2011 – 09.1 – 34.8 Mintlaw • 2006 – 17.5 • 2007 – 21.0 • 2008 - 16.1 • 2009 – 18.9	There is little change in Aberdeen City between 2006 and 2009 but a fall between 2009 and 2011	NO2 concentrations monitored by Aberdeen City Council at Union Street and Market Street continuous monitoring sites exceed national objectives. The location of the Harbour in the City Centre is a driver of	2010 Air Quality Progress Report For Aberdeenshire Council Aberdeenshire Council Air Quality Updating and Screening Assessment (2012) Real-Time Air Quality Monitoring in Aberdeen on

	• 2010 – 59.0 • 2011 – 44.0 • 5/3/2013 - 41.2-52 Anderson Drive • 2007 – 28.0 • 2008 – 25.0 • 2009 – 24.0 • 2010 – 27.0 • 2011 – 23.0 • 5/3/2013: 36.3-41 Wellington Road • 2007 – No data • 2008 – 40.0 • 2009 – 43.0 • 2010 – 52.0 • 2011 – 51.0 • 5/3/2013: 61.3-91-9 Errol Place • 2007 – 23.0 • 2008 – 25.0 • 2009 – 26.0 • 2010 – 21.0 • 2011 – 23.0 • 5/3/2013: 8.4-24.7 king's Street • 2007 – No data • 2008 – No data • 2009 – 32.0 • 2010 – 29.0	• 2010 – No data • 2011 - No data Peterhead 1-4 • 2007 – 24.1 – 28.4 • 2008 – 20.0 – 25.4 • 2009 – 23.7 – 25.0 • 2010 – 21.7 – 27.0 • 2011 – 23.3 – 28.7 Stonehaven 1 • 2007 – 28.1 • 2008 – 24.9 • 2009 – 23.7 • 2010 – 26.1 • 2011 – 22.4 Westhill 1-2 • 2007 – 21.5 • 2008 – 16.6 • 2009 – 18.4 • 2010 – 20.3 • 2011 – 20.9		poor air quality in the City Centre. There is an increasing need to increase energy efficiency and reduce our reliance on private transport to improve air quality, greenhouse gas emissions and health. Traffic growth may be a constraining factor in the future.	5/3/2013 Aberdeen City Council Air Quality Progress Report 2009 2012 Air Quality Updating and Screening Assessment for Aberdeen City Council

	• 2011 – 32.0 • 5/3/2013: 32.7-47.6 EU annual mean limit value (40 µg/m^3)				
Air quality (Properties exposed to PM10 concentrations above the 2010 Scottish objective) (projected)	Wellington Road AQMA • 2010 - < 10 • 2012 - 0 Anderson Drive AQMA • 2010 - 10-100 • 2012-2016 -<10 City Centre AQMA • 2010 - 100-1000 • 2012 - 100-1000 • 2016 - 10-100 EU annual mean limit value (40 µg/m3)	No issues in Aberdeenshire	There has been little change in Aberdeen City between 2006 and 2013.	No monitoring of NO2 in Aberdeenshire but NO2 concentrations are monitored by Aberdeen City Council at Union Street and Market Street. It continuous monitoring sites exceed national objectives. Same issues as above.	Aberdeenshire Council Air Quality Updating and Screening Assessment (2009) Council Aberdeen City Council Air Quality Progress Report 2010
Air quality (PM10) in µg/m^3	Market Street • 2006-2009:50 – 85 • 2009-2011:22-28 Union Street • 2006-2009:18 – 25 • 2009-2011:18-22 Anderson Drive • 2006-2009:15 – 18 • 2009-2011:24-27 Wellington Road:	No issues in Aberdeenshire 2010 annual mean Scottish Objective - 18 µg/m3 2004 annual mean objective for EU 40 µg/m3	Little change in Aberdeen City between 2006 and 2013.	PM10 concentration measured by Aberdeen City Council at Market Street, Union Street and Wellington Road Exceed 2010 Scottish annual mean objective.	Aberdeen City Council Air Quality Progress Report 2010 Aberdeenshire Council Air Quality Updating and Screening Assessment (2009)

	• 2008-2009:23- 25 • 2009-2011:22-24 Errol Place • 2006-2009:15 – 22 • 2009-2011:13-15 King Street • 2009:17 • 2009-2011:17-19				
Air quality (Properties exposed to PM10 concentrations above the 2010 Scottish objective)	Wellington Road AQMA • 2010 - 100-1000 • 2012 -10 -100 Anderson Drive AQMA • 2010 - 100-1000 • 2012-2016 - 10-100 City Centre AQMA • 2010 - >1000 • 2012 - >1000 • 2016 - 100-1000	No issues in Aberdeenshire 2010 annual mean Scottish Objective - 18 µg/m3 2004 annual mean objective for EU - 40 µg/m3	Little change in Aberdeen City between 2006 and 2009.	PM10 concentration measured by Aberdeen City Council at Market Street, Union Street and Wellington Road Exceed 2010 Scottish annual mean objective.	Aberdeen City Council Air Quality Progress Report 2010 Aberdeenshire Council Air Quality Updating and Screening Assessment (2009)

Appendix 12.3 Water

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Ground water and river levels	Scottish Water are currently permitted to abstract up to 145 megalitres per day (MLD) from the River Dee, however, the average amount taken is around 90MLD. It is not anticipated that this license will reduce the permitted abstraction level prior to 2014. Data on ground water in Scotland was not available.	By the 2080s, summer precipitation decreases of 10-20% under the low emissions (Global Sustainability), and 20-30% under the high-emissions World Markets scenario are predicted in the north of Scotland.	• Rainfall levels are predicted to decline during the summer months, which may affect a rivers yield rate, but this will be less severe further north. • Rainfall in winter months is predicted to increase. • Increase in water consumption from industrial consumers and from increased residential development. • Increase in leakages from pipe infrastructure as it 'ages' however Scottish Water continue to make progress on leakage reduction.	There is a need to start reducing water abstraction by incorporating water efficient technologies into new development (industrial and domestic) in light of the predicted decrease in summer rainfall.	Aberdeen City (2007) State of the Environment Report http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?lID=15960&sID=883 Aberdeen City and Shire SDPA (2010) *Aberdeen City and Shire Structure Plan Monitoring Report*
Quality of water bodies (Ground	Aberdeen City high status • 2010 – No data • 2013 – 0	Aberdeenshire high status • 2010 - 0 • 2013 – 0	The Water Framework Directive states that all water bodies are of good ecological status, or similar	It is important that development does not prevent water bodies in	SEPA (09 February 2010) Data from River Basin Management Plan for the Scotland River Basin District 2009

water)	good status • 2010: No data • 2013: 7 moderate status • 2010 – No data • 2013 – 0 poor status • 2010 – No data • 2013 – 0 bad status • 2010 – No data 2013 – 0	good status • 2010: 42 • 2013: 39 moderate status • 2010 - 0 • 2013: 0 poor status • 2010: 8 • 2013: 1 bad status • 2010: 0 • 2013: 0	objective, by 2015.	the Aberdeen City area achieving at least 'good' ecological status in order for the area to reach the targets.	Downloaded from http://gis.sepa.org.uk/rbmp/Data_Download.aspx (Accessed 11 March 2013)
Quality of water bodies (Coastal)	Aberdeen City High status • 2010 – no data • 2013 - 1 good status • 2010 – no data 2013 -	2 Aberdeenshire high status • 2010 - 6 • 2013 - 6 good status • 2010 - 8 • 2013 - 7 moderate status • 2010 - 1 • 2013 - 1 poor status • 2010 - 0 • 2013 - 0 bad status • 2010 - 0 • 2013 - 0	Same as above	Same as above	Same as above

Quality of water bodies (Transitional)	Aberdeen City high status • 2010 – no data • 2013 - 1 good status • 2010 – no data 2013 - 1	Aberdeenshire high status • 2010 - 4 • 2013 - 3 good status • 2010 - 1 • 2013 - 0 moderate status • 2010 - 1 • 2013 - 1 poor status – 0 • 2010 - 0 • 2013 - 0 bad status – 0 • 2010 - 0 • 2013 - 0	Same as above	Same as above	Same as above
Quality of water bodies (Loch)	No data	high status – 0 • 2010 - 0 • 2013 - 0 good status • 2010 - 1 • 2013 - 1 moderate status – 0 • 2010 - 0 • 2013 - 0 poor status – 2 • 2010 - 2 • 2013 - 2	Same as above	Same as above	Same as above

		bad status – 1 • 2010 - 1 • 2013 - 1			
Quality of water bodies (River)	Aberdeenshire high status • 2010 - 5 • 2013 - 5 good status • 2010 - 54 • 2013 - 52 moderate status • 2010 - 87 • 2013 - 87 poor status • 2010 - 31 • 2013 - 28 bad status • 2010 - 12 2013 - 24	Aberdeen City high status • 2010 – no data • 2013 - 0 good status • 2010 - no data • 2013 - 0 moderate status • 2010 – no data • 2013 - 12 poor status • 2010: - no data • 2013: - 12 bad status • 2010 - 0 • 2013 - 0	Same as above	Same as above	Same as above
Bathing Beaches Water Quality	Aberdeenshire-water quality at Guideline or Mandatory level for 2013 to date.	Aberdeen City – water quality at Guideline or Mandatory level for 2013 to date.	2008 was the only year when Aberdeen's beach failed to meet the EU water quality Directive's standards. It has been at Guideline for the last 3	It is important that development does not affect the quality of Aberdeen beach's bathing	SEPA Scottish Bathing Water Data 2013: http://www.sepa.org.uk/water/bathing_waters/sampling_and_results.aspx?id=233616

			years.	water.	

Appendix 12.4 Land, Soil and Waste

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Land contamination	No statutorily identified contaminated sites in Aberdeen 900 potentially contaminated sites .	4 statutorily identified contaminated sites	Legal regime is in place to deal with contaminated sites therefore this position should improve in the future.	Contaminated land places financial and technological constraints on development. Contaminants may also escape from sites and cause air, land, surface water and ground water pollution and in some cases may even damage buildings and underground services, and may contaminate the food chain.	Aberdeen City Council (2001) *Contaminated Land Inspection Strategy* http://www.aberdeencity.gov.uk/web/files/Pollution/ContaminatedLandInspectionStrategy.pdf Aberdeenshire Council (2009) *Public Register of Contaminated Land* http://www.aberdeenshire.gov.uk/environmental/strategy/PublicRegisterofContaminatedLandAug2009.pdf SEPA (2009) *Dealing with Land Contamination in Scotland: A review of progress 2000-2008* http://www.sepa.org.uk/land/land_publications.aspx

Prime agricultural land (Grades 1 to 3.1)	Net loss of Scottish agriculture land from roads, housing and industry has doubled from 588ha in 1989 to 1,402ha in 2003. Aberdeen contains very little prime agricultural land (300ha).	Aberdeenshire's prime agricultural land is concentrated in central and southern Aberdeenshire.	Climate change could increase the level of prime agricultural land in Scotland, however this may cause conflicts with sites of high biodiversity value, sensitive or designated sites.	Potential impacts of climate may constrain prime agricultural land available in the future. Prime agricultural land may require further protection from development as demand for development rises and as land for food production rises.	Scottish Executive Statistics (2005): Economic Report on Scottish Agriculture http://www.scotland.gov.uk/Publications/2005/06/2290402/05121 Scottish Government (2009): The Scottish Soil Framework http://www.scotland.gov.uk/Publications/2009/05/20145602/6
Biodegradable Municipal waste landfilled (tonnes): LA Collected Bio-degradable MW	Aberdeen City: 2007/08 – 67,322 2008/09 – 63,333 2009/10 – 55,654 2010/11 - 49,277	Aberdeenshire: 2007/08 – 70,286 2008/09 – 68,355 2009/10 – 65,864 2010/11 – 68, 832	Exceeds 2008/09; 2010/2011 allowance	Are there enough sites for recycling or composting biodegradable municipal waste to help the local authority achieve recycling and landfill targets?	SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data Digest 11 SEPA (2009) Waste Data Digest 10 SEPA (2009) Waste Data Digest 9

Municipal waste landfilled (tonnes):	Aberdeen City: 2007/08 – 107,658 2008/09 – 101,136 2009/10 – 90,800 2010/11 - 80,578	Aberdeenshire: 2007/08 – 105,750 2008/09 – 101,746 2009/10 – 98,262 2010/11 - 103,771 Scotland's Zero Waste Plan (2010) aims for a recycling and composting rate of 70% by 2020.	There was not a substantial fall in municipal waste sent to landfill in Aberdeen City compared with Aberdeenshire for a number of years until 2009/10 when Aberdeen experienced a significant fall.	There has been no substantial drop in municipal waste sent to landfill which will have cost implications for the City in terms of Landfill Tax.	Scotland's Zero Waste Plan (2010) SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data Digest 11 SEPA (2009) Waste Data Digest 10 SEPA (2009) Waste Data Digest 9
Municipal waste recycled (tonnes):	Aberdeen City: 2007/08 – 19,527 2008/09 – 19,519 2009/10 – 19,728 2010/11 - 22, 278	Aberdeenshire: 2007/08 – 38,432 2008/09 – 38,941 2009/10 – 40,614 2010/11 - 40, 578	The trend shows that much has to be done to substantially increase recycling rates. There in an increase in the City compared to a fall in the Shire.	Human attitudes is very hard to change but education has to improve to increase the amount of waste sent to landfill.	SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data Digest 11 SEPA (2009) Waste Data Digest 10 SEPA (2009) Waste Data Digest 9
Municipal waste composted (tonnes):	Aberdeen City: 2007/08 – 11,274 2008/09 – 11,423 2009/10 – 13,439 2010/11 - 15, 192	Aberdeenshire: 2007/08 – 9,549 2008/09 – 9,684 2009/10 – 9,622 2010/11 – 9, 355	Composting rates has increase in the City compared to a fall recorded in the Shire over 2010/2011 figures	Same as above	SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data Digest 11 SEPA (2009) Waste Data Digest 10 SEPA (2009) Waste Data Digest 9

Total municipal waste arising (tonnes):	Aberdeen City: 2007/08 – 138,459 2008/09 – 132,078 2009/10 – 123,966 2010/11 - 118,049	Aberdeenshire: 2007/08 – 153,731 2008/09 – 150,372 2009/10 – 151,010 2010/11 - 154,167	Things are improving in the City but worsening in the Shire	Same as above	SEPA (2009) Waste Data Digest 12
% of Total waste arising recycled	Aberdeen City 2008/09 – 25.9 2009/10 – 26.9 2010/11 - 26.3	Aberdeenshire 2008/09 – 14.8 2009/10 – 15.9 2010/11 - 18.9	Things are improving in the City but worsening in the Shire	Same as above	SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data Digest 11 SEPA (2009) Waste Data Digest 10 SEPA (2009) Waste Data Digest 9
% of Total waste arising composted	Aberdeen City 2008/09 – 8.6 2009/10 – 10.8 2010/11 - 12.9	Aberdeenshire 2008/09 – 6.4 2009/10 – 6.4 2010/11 - 6.1	Things are improving in the City but worsening in the Shire	Same as above	SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data Digest 11 SEPA (2009) Waste Data Digest 10 SEPA (2009) Waste Data Digest 9
Industrial waste arisings (tonnes):	Aberdeen City: 2009/10 – 90, 087 2010/11 – 96, 040	Aberdeenshire: 2009/10 – 136, 239 2010/11 - 141, 029	Things are worsening in the City and the Shire	Same as above	SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data Digest 11
Commercial waste arisings	Aberdeen City: 2009/10 – 295, 207 2010/11 – 294, 458	Aberdeenshire: 2009/10 – 185,054 2010/11 - 183, 859	Things are improving slightly in the City and the Shire	Same as above	SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data

(tonnes):					Digest 11
Construction and demolition waste arisings (tonnes):	Aberdeen City: 2009/10 – 82, 880 2010/11 – 51, 952	Aberdeenshire: 2009/10 – 365, 722 2010/11 - 316, 729	Things are worsening in the City and the Shire	Same as above	SEPA (2009) Waste Data Digest 12 SEPA (2009) Waste Data Digest 11
Waste capacity Annual capacity (Tonnes)	North east 2007 - 3,845,306 2008 - 3,741,977 2009 - 3,500,370* 2010 - 3,516,494* * Aberdeen City and Shire total	Scotland 2007 - 39,987,613 2008 - 37,843,490 2009 - 38,022,367 2010 - 38,009,045	No substantial change	None	www.sepa.org.uk/waste/waste_data/site_capacity_infrastructure/national_capacity_report s.aspx and landfill capacity reports -
Quantity of waste accepted (tonnes)	Northeast 2007 - 3,899,260 2008 - 1,748,964 2009 - 1,464,247* 2010 - 1,409,272* * Aberdeen City and Shire total	Scotland 2007 - 16,392,335 2008 - 17,684,064 2009 - 14,023,400 2010 - 15,966,129	No substantial change	None	www.sepa.org.uk/waste/waste_data/site_capacity_infrastructure/national_capacity_report s.aspx and landfill capacity reports -
Landfill capacity	Northeast 2007 - 164,824 2008 - 77,067 2009 - 41,867* 2010 - 26,077*	Scotland 2007 - 518,899 2008 - 453,990 2009 - 295,895 2010 - 318,350	No substantial change	None	www.sepa.org.uk/waste/waste_data/site_capacity_infrastructure/national_capacity_report s.aspx and landfill capacity reports -
Inert waste Landfilled	Northeast 2007 - 2,226,950	Scotland 2007 - 9,570,931	No substantial change	None	www.sepa.org.uk/waste/waste_data/site_capacity_infrastr

	2008 - 2,597,185 2009 - 2,556,637* 2010 - 2,524,156	2008 - 10,867,340 2009 - 7,181,875 2010 - 13,609,135			ucture/national_capacity_report s.aspx and landfill capacity reports -
Inert landfill capacity	Northeast 2007 - 606,999 2008 - 552,750 2009 - 451,001** 2010 - 383,899**	Scotland 2007 - 4,894,935 2008 - 4,541,536 2009 - 4,110,480 2010 - 4,043,451	No substantial change	None	www.sepa.org.uk/waste/waste_data/site_capacity_infrastructure/national_capacity_report s.aspx and landfill capacity reports -
Non-hazardous landfilled Non hazardous landfill capacity	Northeast 2007 - 7,383,167 2008 - 6,782,674 2009 - 2,743,062 ** 2010 - 6,651,349 ** * Aberdeenshire data **Aberdeen City and Shire total	Scotland 2007 - 62,302,806 2008 - 70,192,059 2009 - 65,619,910 2010 - 63,977,097	No substantial change	None	www.sepa.org.uk/waste/waste_data/site_capacity_infrastructure/national_capacity_report s.aspx and landfill capacity reports -
Peat soils	4 types of peaty soils • Blanket peat • Peaty podsols • Peaty gleys • Organic soils rich in	With respect of the rest of Scotland Aberdeen City and Shire seem to be at the fringes of peat soils.	**Blanket peat** is moderately distributed to the southwest of Aberdeen City and Shire and with a few dots in the northeast of the region **Peaty podzol** is densely distributed to the southwest of Aberdeen City and Shire and with a few dots in the northeast of the region	Because of the relationship between peat and climate change development must be directed away from peat soils.	www.macaulay.ac.uk

	peat		**Peaty gleys** is sparsely distributed to the southwest of Aberdeen City and Shire and with a few dots in the northeast of the region Organic soils rich in peat is moderately distributed to the southwest of Aberdeen City and Shire and with a few dots in the northeast of the region		
Soil Erosion	From Berwick to Aberdeen, the coastline is eroding, but is stable where there are rocky coasts or coastal defences. From Aberdeen to Inverness the coastline is largely eroding, but parts are being replenished with sand and gravel from larger rivers.	The north of Scotland is mostly stable with little erosion, but south of Mallaig, towards Carlisle, the coastline is predominantly eroding but stable where there are rocky coasts or coastal defences. Precipitation will be greater in the west due to the west-east precipitation	The coastline is predominantly eroding along the east. Autumn/Winter rainfall is predicted to increase, giving rise to winter storms and affecting runoff and (wind and water) erosion. Upland schemes such as wind farm access roads and recreation tracks (e.g. mountain biking) on steep land can increase surface water runoff and lead to significant soil loss (e.g.	Increase in soil erosion from wind and water, bad land use practices, such as locating tracks/access roads on steep/ upland areas as well as using motorised vehicles on sand dunes.	Aberdeen City (2007) State of the Environment Report http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?lID=15960&sID=883 SEPA (2006) State of Scotland's Environment Report 2006 http://www.sepa.org.uk/science_and_research/data_and_reports/state_of_the_environment.aspx

		gradient.	gullies).		

Appendix 12.5 Biodiversity (Natural Heritage Designations)

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/ constraints	Data source(s)
International natural heritage designations (Ramsar)	Aberdeen City site – 0 hectare - 0	Aberdeenshire – sites – 3 Hectares - 1051	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
International natural heritage designations (Special Areas of Conservation (SAC))	Aberdeen City site – 1 hectare - 155	Aberdeenshire – sites – 8 Hectares - 5545	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
International natural heritage designations (Special Protection Areas (SPA)	Aberdeen City site – 0 hectare - 0	Aberdeenshire – sites – 7 Hectares - 2227	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
National natural heritage designations -	Aberdeen City site – 4 Corby Lily & Bishops Lochs	Aberdeenshire – sites – 69 Hectares - 15,655	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013)

Sites of Special Scientific Interest (SSSI)	Scotstown Mor Nigg Bay Cove hectare - 47				*Source:* SNH 2009
National natural heritage designations National Nature Reserve (NNR)	Aberdeen City site – 0 hectare - 0	Aberdeenshire – sites – 2 Hectares - 1072	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
Local Nature Conservation Sites (LNCS)	Aberdeen City Sites- 45 See Table below	See below	No Trend	New development has the potential to put pressure on sites	Aberdeen City Council Local Designated Sites Review Project: http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?lID=29764&sID=6619
Local natural heritage designations - Sites of Interest of Natural Science (SINS)	SINS and District Wildlife Sites replaced by 'Local Nature Conservation Sites'- see above.	Aberdeenshire: Sites of Interest to Natural Science sites – 79	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
Local natural heritage designations - District	DWS and SINS replaced by Local Nature Conservation	Aberdeenshire – sites – 0 Hectares – N/A	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013)

Wildlife Site	Sites				*Source:* SNH 2009
Local natural heritage designations Local Nature Reserve (LNR)	Aberdeen City site – 4 hectare - 126	Aberdeenshire – sites – 2 Hectares - 28	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
Local natural heritage designations - Scottish Wildlife Trust Reserves	Aberdeen City site – 0 hectare – N/A	Aberdeenshire – sites – 4 Hectares – N/A	No trend	New development has the potential to put pressure on sites	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
Local natural heritage designations - RSPB Reserves	Aberdeen City site – 0 hectare – N/A	Aberdeenshire – sites – 3 Hectares – N/A	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
Local natural heritage designations - Ancient Woodland	Aberdeen City site – 140 hectare – N/A	Aberdeenshire – sites – 2,584 Hectares - 45,000	No trend	New development has the potential to put pressure on sites.	SNH, *SNHi* http://gateway.snh.gov.uk/sitelink/index.jsp (Accessed 12 March 2013) *Source:* SNH 2009
Quality and availability of public open space in urban and	The Aberdeen City audit identified 3471 hectares of open space (not	Data for Aberdeenshire Councils Open Space Audit was not available.	The poorest quality parks and open spaces tend to be found within the regeneration priority	Development pressure to build on urban open spaces.	Aberdeen City Council (2010) Open Space Audit

rural areas	including private gardens or sites under 0.2 hectares). The quality of open space varies across the city with public parks and gardens rating the highest and allotments and business amenity open space scoring the lowest rating.		areas. It is more difficult to provide open space within densely populated areas.	Supplementary guidance on open space encourages the development of more useful, publicly desirable and efficient types of open space, such as natural areas, green corridors, play spaces and allotments.	
Condition of qualifying features of River Dee SAC	Qualifying features and last assessed condition: • Atlantic salmon – favourable maintained • Otter – favourable maintained • Freshwater pearl mussel- unfavourable		No changes in condition of qualifying features.	New development has the potential to put pressure on the River Dee SAC through habitat loss, recreational impact, water abstraction, pollution and disturbance	SNH Website http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8357

	no change				

Local Nature Conservation Sites In Aberdeen City	Aberdeen-Inverness- Kittybrewster Railway Line	Wet Cults Woodland	Walker Dam and Rubislaw Quarry
	Balgownie- Blackdog Links	Allan Park Pond	West Hatton
	Corby Loch	Balnagask to Cove	Baads Moss
	Cults Den	Culter Burn	Bucksburn
	Denwood- Hazelhead	Culter Quarry	Culter Compensation Dam
	Den of Mosside	Den of Leggart	Deeside Old Railway Line
	Grandholm Moss	Farburn Wood	Den of Maidencraig
	Hilton Wood	Hazelhead Park	Foggieton
	Leuchar Moss	Kinaldie Den	Hillhead Road
	Murtle Den	Loirston Loch	Kincorth Hill
	River Dee Corridor	Old Manse Wood	Moss of Auchlea
	Rubislaw	River Don Corridor	Peterculter
	Southlasts Mire	Rubislaw Quarry	Rotten of Gairn
	Tullos Hill	Stoneyhill Wood	Scotstown
	Three Hills	Westburn of Rubislaw	Woodlands Wood- Biedleston

Appendix 12.6 Human Health

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/ constraints	Data source(s)
Quality and availability of public open space	The Aberdeen City audit identified 3471 hectares of open space (not including private gardens or sites under 0.2 hectares). The quality of open space varies across the city with public parks and gardens rating the highest and allotments and business amenity open space scoring the lowest rating.	Data for Aberdeenshire Councils Open Space Audit was not available.	The poorest quality parks and open spaces in the City tend to be found within the regeneration priority areas. It is more difficult to provide open space within densely populated areas.	Development pressure to build on urban open spaces. Open Space supplementary guidance encourage the development of more useful, publicly desirable and efficient types of open space, such as natural areas, green corridors, play spaces and allotments.	Aberdeen City Council (2010) Open Space Audit
Life expectancy at birth (years)	Aberdeen Male • 1998-2000 – 73.8 • 2003-2005 – 74.9 • 2008-2010 - 76.3	Aberdeenshire: Male • 1998-2000 - 75.2 • 2003-2005 - 76.7 • 2008-2010 -78.2	Life expectancy is improving year on year in the City and the Shire compared with Scottish figures. In both	Increasing life expectancy has longer-term cost implications for local authorities	General Register Office for Scotland (2011). *Life Expectancy for areas in Scotland, 2008-2010* [Online] Available at http://www.gro-

	• 2010-2012 – 77.1 Female • 1998-2000 – 79.1 • 2003-2005 – 79.9 • 2008-2010 – 80.9 • 2010-2012 – 81.2	• 2010-2012 – 78.9 Female • 1998-2000 - 80.2 • 2003-2005 – 81.0 • 2008-2010 – 81.7 • 2010-2012 – 82.1 Scottish Men • 1998-2000 – 72.9 • 2003-2005 – 74.2 • 2008-2010 - 75.5 • 2010-2012 0 76.6 Female • 1998-2000 – 78.4 • 2003-2005 – 79.2 • 2008-2010 – 80.4 • 2010-2012 – 80.8	the City and the Shire female life expectancy is much higher, although the Shire is faring much better than the City.	for service and housing provisions for ageing population.	scotland.gov.uk/files2/stats/life-expectancy-areas-in-scotland/2008-2010/le-areas-scotland-2008-2010.pdf (Accessed 12 March 2013)
Healthy life expectancy at birth (& 65) years	Aberdeen Male • 1999-2000 -55.6 (7.4) • 2003-2005 – No data • 2008-2010 – No data Female • 1999-2000 -57.3	Aberdeenshire Male • 1999-2000 -58.2 (9.7) • 2003-2005 – No data • 2008-2010 – No data Female • 1999-2000 -60.7	Healthy Life Expectancy represents the number of years that an individual can expect to live in good health. No trend	Same as above.	Clark, D., McKeon, A., Sutton, M. and Wood, R. (2004) Healthy Life Expectancy in Scotland. *HLE Measurement in Scotland Steering Group* [online] Available from http://www.isdscotlandarchive.scot.nhs.uk/isd/files//HLE_report_2004.pdf (Accessed 12 March 2013)

	(8.5) • 2003-2005 – No data • 2008-2010 – No data	(9.9) • 2003-2005 – No data 2008-2010 – No data			
Sport and recreation facilities in areas of identified need	Aberdeen and Aberdeenshire both require sporting facilities ranging from badminton courts and golf courses to swimming pools	No trend	Positive steps have been made to ensure everyone has access to sport, leisure and recreation facilities, however limited progress has been made to provide.	Local facilities will be addressed through the Local Development Plans although if regional sporting facilities are identified these may come through the SDP.	Aberdeen City Council (2002) Active Aberdeen 2002-2007: A sport, recreation and physical activity strategy for Aberdeen City Aberdeenshire Council (2005) Sports Facility Study Updated Report
Care home place for Adults	Aberdeen 2012 -2,036	Aberdeenshire 2012- 2,061	No trend	Ageing population and disability will put pressure on resources and housing provision suitable for the elderly.	Aberdeen City Council (2013) Behind the Granite: Aberdeen Key Facts 2013 Available from http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?lID=48078&sID=332 (Accessed 14 March 2013
Children looked after by LA	Aberdeen 2009 - 701 2010 -690 2011- 642	Aberdeenshire 2009 - 458 2010 -496 2011- 498	Things are improving in the City compared with the Shire	Pressure on Government and Local Authority resources.	Same as above
Children on child	Aberdeen 2009 - 180	Aberdeenshire 2009 - 81	Things are improving in the City compared	Pressure on Government and	Same as above

protection register	2010 - 119 2011- 96	2010 -51 2011- 68	with the Shire where the situation improved in 2010 but rose again in 2011	Local Authority resources.	
All crimes recorded by police	Aberdeen 2009/10 - 18729 2010/11 -18749 2011/12- 17877	Aberdeenshire 2009/10 - 8088 2010/11 -8064 2011/12- 7513	Things are improving	Crime and fear of crime can affects people's quality of life.	Same as above
Fuel poor households private tenure	Aberdeen 2009-11- 21%	Aberdeenshire 2009-11 -38%	Things are worsening	Worsening economy, longer winters, higher fuel prices and falling value of the pound worsens the situation.	Same as above
Fuel poor households public tenure	Aberdeen 2009-11- 29%	Aberdeenshire 2009-11 -26%	Things are worsening	Worsening economy, longer winters, higher fuel prices and falling value of the pound worsens the situation.	Same as above
Fuel poor	Aberdeen 2009-11- 23%	Aberdeenshire 2009-11 -35%	Things are worsening	Worsening economy, longer winters, higher fuel prices and falling value of	Same as above

				the pounds worsens the situation	
Income support	Aberdeen Feb 2012 -4420	Aberdeenshire Feb 2012 -2980	No trend collected	Pressure on Government and LA resources.	Same as above
Drug-related deaths	Aberdeen 2008 - 27 2009 - 27 2010 - 31 2011 - 39	Aberdeenshire 2008 - 11 2009 -18 2010 - 10 2011 - 19	No substantial improvement	Pressure on NHS, Government and LA resources.	Same as above
Alcohol-related deaths	Aberdeen 2008 - 37 2009 - 52 2010 - 48 2011 - 33	Aberdeenshire 2008 - 33 2009 -29 2010 - 20 2011 - 22	No substantial improvement	Pressure on NHS, Government and LA resources.	Same as above
Population with Disability	Aberdeen 2001 – 37173 (17.0%) 2013 – No data	Aberdeenshire 2001 – 34755 (15.3%) 2013 – No data	No trend collected	Pressure on Government and LA resources.	Same as above
Unemployment	Aberdeen 2012– 22 (8%) 2013 – No data	Aberdeenshire 20012 – 5 (2%) 2013 – No data	Low unemployment in the City and Shire compared to the rest of the country	Pressure on Government and LA resources.	Same as above
Most deprived data zones - SIMD	Aberdeen 2012– 3180 (2.1%) 2013 – No data	Aberdeenshire 20012 – 1858 (1.2%) 2013 – No data	No trend collected	Pressure on Government and LA resources.	Same as above
Incapacity	Aberdeen	Aberdeenshire	No trend collected	Pressure on	Same as above

benefit	2012– 4840 2013 – No data	20012 – 3810 2013 – No data		Government and LA resources.	

Appendix 12.7 Population

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Established Population (2013)	• 2013 – 227,130	• 2013 – 257,740	There is a 1.0% increase from 2012 in Aberdeen City.	It has implications for increased provision of housing, industry and services to meet the needs of growing population and therefore the potential pressure on resources.	National Records of Scotland local authority demographic factsheet – Aberdeen City http://gro-scotland.gov.uk/statistics/at-a-glance/council-areas-map.html
Population Projection (2012 based)	Aberdeen • 2017 – 236,400 • 2022 – 249,896 • 2027 – 263,477 • 2032 – 276,397	Aberdeenshire • 2017 – 264,248 • 2022 – 273,706 • 2027- 283,104 • 2032 – 291,890	The projections show increasing population in the City and the Shire.	Same as above	General Register Office for Scotland (2012). Population Projections for Scottish Areas (2012-based) http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html

Established Households	• 2010 – 103,285 • 2011 – 103,285 • 2012 – 103,934 • 2013 – 105,047	• 2010 - 104,017 • 2011 – 105,006 • 2012 – 106,018 • 2013 – 107,128	This represents a 1.1% increase 2012-2013in the number of households for Aberdeen City, compared to 0.6% for Scotland as a whole	Same as above	
Household projections (2012 based)	Aberdeen • 2017 – 110,958 • 2022 – 117,834 • 2027 – 124,729 • 2032 – 132,326	Aberdeenshire • 2017 – 111,042 • 2022 – 116,058 • 2027 – 120,709 • 2032 – 125,014	The projections show increasing households in the City and the Shire.	Same as above	General Register Office for Scotland (2012). Household Projections for Scottish Areas (2010-based) http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html
Household size (2012)	Aberdeen • 2010 – 2.01 • 2015 – 1.99 • 2020 – 1.95	Aberdeenshire • 2010 – 2.35 • 2015 – 2.32 • 2020 – 2.27	The projections show falling household size in the City and the Shire.	Same as above	General Register Office for Scotland (2012). Household Projections for Scottish Areas (2010-based) http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html
Population Change	Aberdeen • 2001 - 211910 • 2010 – 217120 • 2011 – 220420 • 10yrs' change - 9.1%	Aberdeenshire • 2001 - 226940 • 2010 – 245780 • 2011 – 247600 • 10yrs' change – 4% • 1 yr's change -	Both areas are doing better than the Scottish average change of 0.6%. Over 10 years the City has added 8,520 persons	Potential implications of a growing population for housing provision; also highly	General Register Office for Scotland (2012) Components of population change by administrative area, mid-2010 to mid-2011. http://www.gro-

	• 1 yr's change - 1.5%	0.7%	to its population compared to the Shire's 20,660 addition	influenced by the changing age structure and lifestyle preferences of the population.	scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html Aberdeen City and Shire SDPA (2010) *Aberdeen City and Shire Structure Plan Monitoring Report*
Population Structure (2012)	Aberdeen • Under 16 -16% • Working Age - 67% • Pensionable age - 17% • Median age -37	Aberdeenshire • Under 16 -19% • Working Age -58% • Pensionable age - 20% • Median age -42	A trend exists if data is collected on the basis of male/female. But no trend exists for data collected on the basis of total persons before 2011.	A large proportion of working age population means large future pensionable and ageing population- will have implications for future housing and service provision.	General Register Office for Scotland (2012) Components of population change by administrative area, mid-2010 to mid-2011. http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html Aberdeen City and Shire SDPA (2010) *Aberdeen City and Shire Structure Plan Monitoring Report*
Population density	• Area – 186 Km2 • 2012- 1187 • 2013 - 1211	Aberdeenshire • Area – 6313km2 • 2012 – 39 • 2013 – 41	The density is higher in the city than the shire.	There will be more pressure on resources provided in the City in one sense but less pressure on burning of fossil fuel on distance travelled in the City.	General Register Office for Scotland (2012) Components of population change by administrative area, mid-2010 to mid-2011. http://www.gro-scotland.gov.uk/statistics/publications-and-data/population-estimates/index.html

				Greater opportunity to introduce sustainable mobility in the City.	Aberdeen City and Shire SDPA (2010) *Aberdeen City and Shire Structure Plan Monitoring Report*

Appendix 12.8 Cultural Heritage

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Listed buildings	Aberdeen City Listed buildings • 2013– 1,215 • 68 A Listed • 681 B Listed • 466 C Listed	Aberdeenshire • 2013– 3,715 Aberdeen City and Shire Listed buildings • 2013– 4,927	No change	New development has the potential to put pressure on, or be constrained by, built and cultural sites.	Aberdeen City and Shire SDPA (2009) *Aberdeen City and Shire Structure Plan Monitoring Report*
Listed buildings at risk	Aberdeen City • 2013 – 26	Aberdeenshire • 2013– 228 Aberdeen City and Shire • 2013 – 254	No change	Development pressures will continue to put pressure on listed buildings, especially those in a poor state of repair and considered at risk.	Buildings at Risk Register for Scotland: www.buildingsatrisk.org.uk

Conservation Areas	Aberdeen City • 2013 – 11	Aberdeenshire • 2013 – 49 Aberdeen City and Shire • 2013 – 60	No change- current Conservation Area Appraisals and Management Plans are in the process of being produced.	New development has the potential to put pressure on, or be constrained by, built and cultural sites.	Aberdeen City Council
Scheduled Ancient Monuments	Aberdeen City • 2013 – 44	Aberdeenshire • 2013– 581 Aberdeen City and Shire • 2013 – 625	No change	New development has the potential to put pressure on, or be constrained by, built and cultural sites. Damage to remains of local importance is mostly caused by vandalism, new developments, ploughing, forestry activities, wildlife and coastal erosion.	List of Scheduled Ancient Monuments http://hsewsf.sedsh.gov.uk/pls/htmldb/dmzlive.pdfsched?pid=130410132559
Archaeological Sites and Monuments Record	Aberdeen City • 2013– 699	Aberdeenshire • 2013 – 17,631 Aberdeen City and Shire • 2013 – 18,330	No change	Same as above.	Aberdeen City Council Sites and Monuments Record

Gardens and designed landscapes	Aberdeen City • 2013 – 1 Duthie Park	Aberdeenshire • 2013- 27 Aberdeen City and Shire • 2013 - 28	No change	New development has the potential to put pressure on, or be constrained by, built and cultural sites.	www.historic-scotland.gov.uk

Appendix 12.9 Landscape

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Landscape character	There are 42 landscape character areas in Aberdeenshire, including 9 within the CNP. In Aberdeen there are 27 landscape character areas.	The four Landscape Character Assessments that cover the North East provides a brief overview of past land use practices and discusses potential land uses for existing landscapes.	No trend	The inappropriate scale and insensitive siting of future new development may adversely affect landscape characteristics (e.g. changing its landscape character type, not respecting local topography/contours). New development not fitting in with the landscape's capacity to absorb further	Scottish Natural Heritage (1997) *National programme of landscape character assessment: Banff and Buchan*, Review No 37. Scottish Natural Heritage (1996) *Cairngorms landscape assessment*, Review No 75. Scottish Natural Heritage (1996) *Landscape character assessment of Aberdeen*, Review No 80 Scottish Natural Heritage (1998) *South and Central Aberdeenshire: landscape character assessment*,

				developments (e.g. design, layout and sense of place) – need to promote suitable development capacity.	Review No 102.
Landscape Devt in Energetica Framework Area (ALDP 01 Bus 5)	**Applications Received** • 06/12-10/12 - 0 • 10/12- 06/13 – 2 **No of Approvals** • 06/12-10/12 - 0 • 10/12- 06/13 - 2 **No of Refusals** • 06/12-10/12 - 0 • 10/12- 06/13 - 0	No data	No significant increase	No known constraint	Aberdeenshire Council Monitoring Statement
Landscape Layout, siting, and design of new developments ALDP 08 lsd2	**Applications Received** • 06/12-10/12 - 53 • 10/12- 06/13 - 1296 **No of Approvals** • 06/12-10/12 - 40 • 10/12- 06/13 - 1169	No data	Significant application of policy	There could be mixed effect for landscape	Aberdeenshire Council Monitoring Statement

	No of Refusals • 06/12-10/12 -13 • 10/12- 06/13 - 127				
How "Landscape character" Policy is applied to planning applications	**Applications Received** • 06/12-10/12 – 21 • 10/12- 06/13- 187 **No of Approvals** • 06/12-10/12 – 13 • 10/12- 06/13- 130 **No of Refusals** • 06/12-10/12 – 7 • 10/12- 06/13- 57	No data	Number of applications have increased	Applications with LSE are being refused while applications consistent with safeguards are being approved	Aberdeenshire Council Monitoring Statement
How "Valued views" Policy is applied to Planning Applications	**Applications Received** • 06/12-10/12 – 2 • 10/12- 06/13- 19 **No of Approvals** • 06/12-10/12 – 2 • 10/12- 06/13- 16 **No of Refusals** • 06/12-10/12 – 0 • 10/12- 06/13- 3	No data	Number of applications have increased	Applications with LSE are being refused while applications consistent with safeguards are being approved	Aberdeenshire Council Monitoring Statement
How "Public open space" Policy is applied to Planning Applications	**Applications Received** • 06/12-10/12 – 9 • 10/12- 06/13- 31	No data	Number of applications have increased	Applications with LSE are being refused while applications consistent with	Aberdeenshire Council Monitoring Statement

	No of Approvals • 06/12-10/12 – 8 • 10/12- 06/13- 21 **No of Refusals** • 06/12-10/12 – 1 • 10/12- 06/13- 10			safeguards are being approved	
Land Uses (2009)	Aberdeenshire (6313 sq km) 631300 ha	Aberdeen City (186 sq km) 18600 ha		Ongoing conflict between how maintenance and quality is open space is perceived – Maintenance, grass cutting vs. allowing some open space to develop into semi-natural vegetation so as to enhance biodiversity.	Aberdeenshire Council Open Space Audit Aberdeen City Open Space Audit
• Roads and tracks	3.90	884.57	No Trend	Same as above	Same as above
• Roadside (manmade)	0.00	307.99	No Trend	Same as above	Same as above
• Parking/loading	0.42	650.30	No Trend	Same as above	Same as above
• Roadside (unknown)	0.31	68.54	No Trend	Same as above	Same as above
• Tidal water	0.00	172.66	No Trend	Same as above	Same as above
• Foreshore/rocks	72.88	511.77	No Trend	Same as above	Same as above
• Railway	0.00	81.25	No Trend	Same as above	Same as above
• Path	4.86	92.83	No Trend	Same as above	Same as above
• Residential	6.50	688.84	No Trend	Same as above	Same as above

• Commercial/Institutional	2.53	228.28	No Trend	Same as above	Same as above
• Glasshouses	0.00	2.32	No Trend	Same as above	Same as above
• other structures	2.22	16.62	No Trend	Same as above	Same as above
• Airports	0.00	183.97	No Trend	Same as above	Same as above
• Public Park and Garden	114.34	265.01	No Trend	Same as above	Same as above
• Private Garden	41.20	1698.45	No Trend	Same as above	Same as above
• School Grounds	74.24	124.01	No Trend	Same as above	Same as above
• Institutional Grounds	14.43	77.28	No Trend	Same as above	Same as above
• Amenity Residential	125.93	483.85	No Trend	Same as above	Same as above
• Amenity Business	69.06	207.16	No Trend	Same as above	Same as above
• Amenity Transport	51.49	249.07	No Trend	Same as above	Same as above
• Play space	28.75	4.56	No Trend	Same as above	Same as above
• Playing Fields	93.63	117.69	No Trend	Same as above	Same as above
• Golf Courses	225.35	676.56	No Trend	Same as above	Same as above
• Tennis Courts	3.85	3.84	No Trend	Same as above	Same as above
• Bowling Greens	2.91	3.58	No Trend	Same as above	Same as above
• Other Sports	7.85	7.73	No Trend	Same as above	Same as above
• Green Corridors/Riparian Routes	0.14	0	No Trend	Same as above	Same as above
• Green Access Routes	4.15	24.19	No Trend	Same as above	Same as above
• Riparian Routes	35.54	28.12	No Trend	Same as above	Same as above
• Woodlands	188.85	761.69	No Trend	Same as above	Same as above
• Open Semi-natural	162.68	818.69	No Trend	Same as above	Same as above
• Open Water	0.15	281.48	No Trend	Same as above	Same as above

• Allotment	5.55	20.50	No Trend	Same as above	Same as above
• Church Yard	7.10	4.77	No Trend	Same as above	Same as above
• Cemetery	14.26	35.67	No Trend	Same as above	Same as above
• Other Functional Grounds	15.32	12.46	No Trend	Same as above	Same as above
• Civic space	10.95	0.72	No Trend	Same as above	Same as above
• Farmland	12.06	4363.81	No Trend	Same as above	Same as above
• Moorland	0.03	0.34	No Trend	Same as above	Same as above
• other e.g landfill, quarry	14.05	98.42	No Trend	Same as above	Same as above
• Area undergoing change	31.05	26.55	No Trend	Same as above	Same as above
• Total Greenspace area surveyed (ha)	1,448.51	14, 286.13	No Trend	Same as above	Same as above
• Un-surveyed Greenspace area (ha)	626,851.49	4,313.87	No Trend		Same as above

Appendix 12.10 Material Assets

SEA Indicator	Quantified information	Comparators and targets	Trends	Issues/constraints	Data source(s)
Existing flood defences	There are 2 flood prevention schemes in Aberdeen City.	There are 3 flood prevention schemes in Aberdeenshire	Flood defence schemes will progressively be affected by soil/sand erosion from	Predicted rise in sea level may result in existing flood defences being inadequate.	Office of Science and Technology (2005) Foresight report: *Future Flooding Scotland* http://www.foresight.gov.uk/Scotland/Final_Scotland.pdf

			increasing rainfall and storm events, which will affect their stability and effectiveness. As a result, there will be a need to increase the maintenance these defences, and possibly relocate them.	The predicted rise in storm events and winter precipitation is likely to increase soil/sand erosion from the wind and rain/water, which may prevent flood defence schemes functioning properly and result in their failure (e.g. collapse).	SEPA (2006) Indicative River & Coastal Flood Map (Scotland) Aberdeenshire Council (2007) *Flooding in Aberdeenshire: Sixth Biennial Report* http://www.aberdeenshire.gov.uk/flooding/report/6th_biennial_report.pdf
Council tax Band D	Aberdeen 2010/11 - £1230 2011/12 - £1230	Aberdeenshire 2010/11 - £1141 2011/12 - £1141	No change	Government policy on keeping household costs down affects how much councils can charge for Council tax.	Aberdeen City Council (2013) Behind the Granite: Aberdeen Key Facts 2013 Available from http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?lID=48078&sID=332 (Accessed 14 March 2013
Household tenure – owner occupied	Aberdeen 2009/10 – 60% 2011 – 57%	Aberdeenshire 2009/10 – 74% 2011 - 73% Scotland 2011 – 48%	Substantial owner housing in City and Shire although it is higher in the Shire	House prices for first time buyers may be a constraint as so is the general economic climate.	Same as above

Household tenure – social rent	Aberdeen 2009/10 – 24% 2011 – 24%	Aberdeenshire 2009/10 – 17% 2011 – 16% Scotland 2011 – 24%	Low compared those living in their own homes	Ability of social landlords to build more homes.	Same as above
Household tenure – private rent	Aberdeen 2009/10 – 14% 2011 – 17%	Aberdeenshire 2009/10 – 8% 2011 – 9% Scotland 2011 – 12%	Lowest tenure	Probably open market rental values will constrain choice in this sector.	Same as above
Public-sector housing stock	Aberdeen March 2012 - 22,740	Aberdeenshire March 2012 - 12,877	No trend collected	Issue is energy efficiency in this sector.	Same as above
New Dwellings – Housing Completion	Aberdeen 2007/08 -928 2008/09 - 258 2009/10 - 280 2010/11 - 607	Aberdeenshire 2007/08 - 1,528 2008/09 - 1,509 2009/10 - 1,687 2010/11 - 1,471	Fall in the latest data for the Shire but a rise in the latest data for the City. Continues to fluctuate over the medium term.	The economic climate can constrain how many new houses could be completed.	Same as above.
Economic Activity Rates,	Aberdeen 2012 - 83.0% 2013 – 79.9%	Aberdeenshire 2012 - 82.6% 2013 – 81.9%	Quite high for the City and the Shire	The oil industry is boosting performance in the North East	Same as above

Average Gross Weekly earnings	Aberdeen 2011/12 - £574.9 2013 - £586.9	Aberdeenshire 2011/12 -£456.7 2013 - £472.0 Scotland 2013- £484.9	Aberdeen City is high compared to the Shire and national averages. This difference is even higher for full-time employees.	The oil industry is boosting performance in the North East.	Same as above
Supply/delivery of Affordable Housing	Aberdeen City 2006/07- 104 2007/08- 59 2008/09- 168 2009/10- 267 2011/12- 309 5 year average – 181 (average 27% of annual completions)	Aberdeenshire 2006/07- 132 2007/08- 180 2008/09- 492 2009/10- 252 2010/11- 158 5 year average- 243 (average 16% of annual completions)	The supply of affordable homes in the North East is not meeting the demand and affordability pressures remain.	There is a need to increase the supply of housing to improve affordability.	Aberdeen City and Shire SDPA (2010) *Aberdeen City and Shire Structure Plan Monitoring Report* *Aberdeen City and Shire Housing Need and Demand Assessment*- Data on Local Authority new building are provided quarterly by NB1 returns from Councils and data on housing subsidised through AHIP are drawn by the Scottish Government from data on the administration of housing support grants.
Employment Land supply (see tables below)	The supply of marketable employment land in Aberdeenshire currently stands at 211ha, however only 46ha of this is immediately	The supply of marketable employment land in Aberdeen City currently stands at 87ha, however only 27ha of this is immediately	Aberdeen City has shown a trend of diminishing established supply of land for business use as previous allocations are developed. However,	Uneven supply of employment land has impacts on ability to work and live within a close proximity thus increasing the likelihood of	Aberdeen City and Shire Employment Land Audit 2007, 2009, 2010, 2011.

	available. Constrained supply in the Shire currently stands at 130ha.	available (2011 Employment Land Audit). Constrained supply currently stands as 103ha.	we might expect the marketable supply to recover with the adoption of the Local Development Plan in February 2012, which allocated significant new sites for employment uses. For Aberdeenshire, (within the strategic growth areas), there has been a trend of diminishing established supply of land for business use. The marketable supply has remained around a consistent level.	people travelling to work by private means. Economic growth will be constrained without a reasonable supply of land which is immediately available.	

Appendix 12.11 Employment Land Supply

	Established	Constrained	Marketable	Immediately Available	Under Construction
2006	239	181	40	34	1
2007	235	171	53	27	7
2008	225	171	42	24	10
2009	217	103	91	31	2
2010	211	103	88	28	-
2011	210	103	87	60	-
2012	298	147	125	58	-
2013	272	89	375	116	-

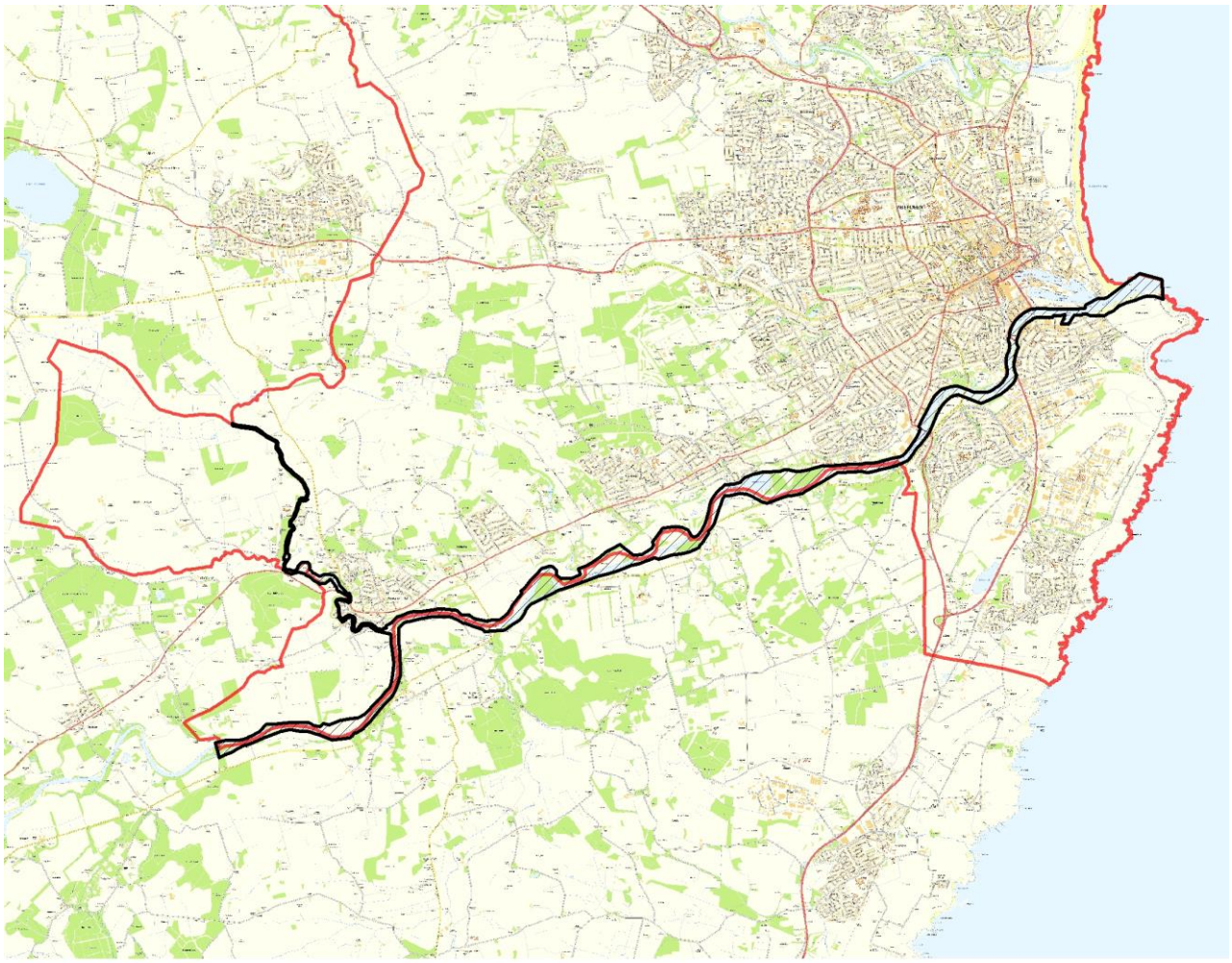
Appendix 12.12 Climate Change and Potentially Vulnerable Areas in Aberdeen City and Aberdeenshire

	No of PVAs	Annual Average Damage	River Flooding	Coastal Flooding	Surface Water Flooding	Total Area (Km 2)	Property in PVA (Resid.	Property in PVA (Non-Resid.)	Land Cover in PVA (Urban)	Land Cover in PVA (Agric)	Land Cover in PVA (Forestry)
Aberdeen City	**9**										
Buchan Coastal (Bridge of Don)		£390,000	3%	0%	97%	5	27(1.1%)	8 (4.6%)	70%	30%	0%
Aberdeen North Coastal (Seaton)		£920,000	30%	11%	59%	31	137 (1.2%)	7 (1.3%)	100%	0%	0%
River Don (Danestone)		£3,600,000	63%	4%	33%	47	407 (2.7%)	29 (5.9%)	85%	15%	0%
River Don (Dyce)		£1,070,000	43%	0%	57%	11	75 (1.9%)	23 (4.3%)	25%	58%	17%
Aberdeen South Central (Kincorth)		£1,000,000	52%	19%	29%	166	64(1.3%)	24 (6.1%)	95%	0%	4%
Aberdeen South Central (Rosemount)		£13,020,000	48%	22%	30%	63	918 (2.2%)	260 (7%)	76%	21%	2%
River Dee (Cults)		£1,020,000	35%	9%	56%	4	96 (0.9%)	22 (4.9%)	22%	62%	16%
River Dee (Peterculter)		£1,370,000	67%	0%	33%	17	219 (13.8%)	2 (2.9%)	20%	67%	13%
		£22,390,000				344					

Aberdeenshire	**18**										
Banff Coastal (Banff)		£2,900,000	15%	25%	60%	39km2	286 (6.2%)	52(14%)	9%	85%	5%
River Devron (Huntly)		£1,330,000	66%	0%	34%	20km2	163 (6.8%)	17 (6.9%)	11%	86%	3%
River Devron (Turrff)		£390,000	48%	0%	52%	32km2	25 (1.3%)	12 (6.3%)	19%	78%	3%
Buchan Coastal (Ellon)		£460,000	64%	3%	33%	75km2	32 (1.9%)	12 (5.3%)	15%	85%	0%
Buchan Coastal (Peterhead)		£870,000	11%	50%	39%	32km2	58 (.6%)	19(2.6%)	24%	73%	0%
Buchan Coastal (Fraserburgh)		£540,000.	8%	49%	43%	40km2	37 (0.6%)	12 (2.3%)	10%	83%	7%
Buchan Coastal (Newmachar)		£290,000.00	19%	0%	81%	10km2	42 (2.5%)	1 (1.9%)	32%	55%	9%
River Ythan (Ellon)		£700,000.00	67%	0%	33%	53km2	99(3.6%)	3 (3.1%)	17%	83%	0%
River Ythan (Methlick)		£610,000.00	44%	0%	56%	8km2	41 (12.3%)	15 ((38.5%)	0%	92%	8%
River Don (Strathdon)		£300,000.00	55%	0%	45%	28km2	12 (15%)	8 (34.8%)	0%	32%	68%
River Don (Port Elphinstone/Kintore/Inverurie)		£1,930,000.00	60%	0%	40%	4km2	239 (3.6%)	20 (3.4%)	7%	86%	7%
River Dee (Ballater)		£1,310,000.00	77%	0%	23%	54km2	181 (18.6%)	13 (8.9%)	14%	23%	63%

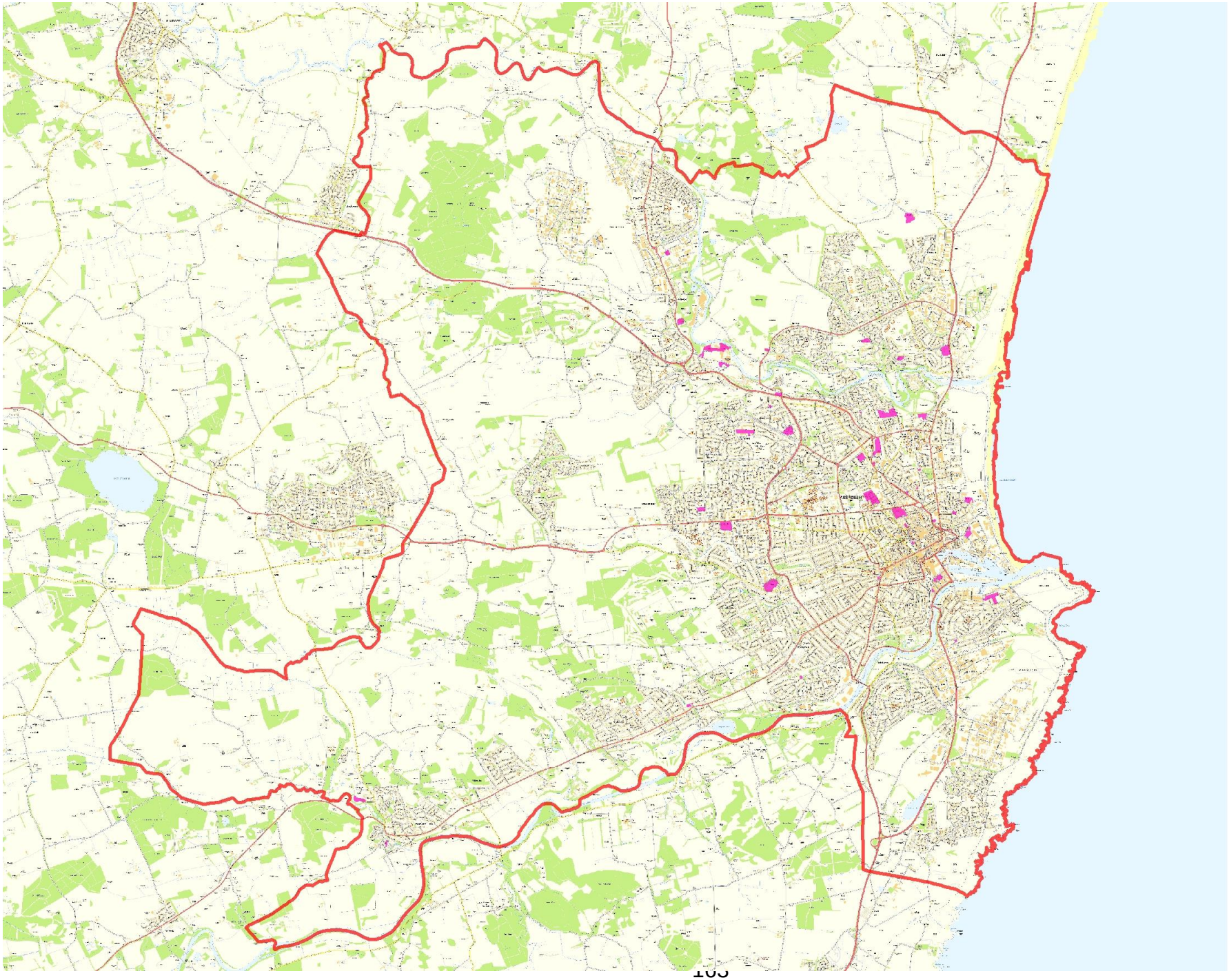
River Dee (Westhill)		£350,000.00	16%	0%	84%	36km2	42 (1.4%)	4 (1.7%)	11%	80%	9%
River Dee (Aboyne)		£1,020,000.00	33%	0%	67%	77km2	107 (7.8%)	19 (10.3%)	1%	49%	49%
Kinkandine and Angus Coastal (Stonehaven)		£4,080,000.00	0.36	0.55	0.09	21km2	456 (8.6%)	65 (15.2%)	4%	77%	16%

Map 1: Areas in Aberdeen at 0.5% risk of annual flooding from river (light blue) and coastal (dark blue hatched) sources.

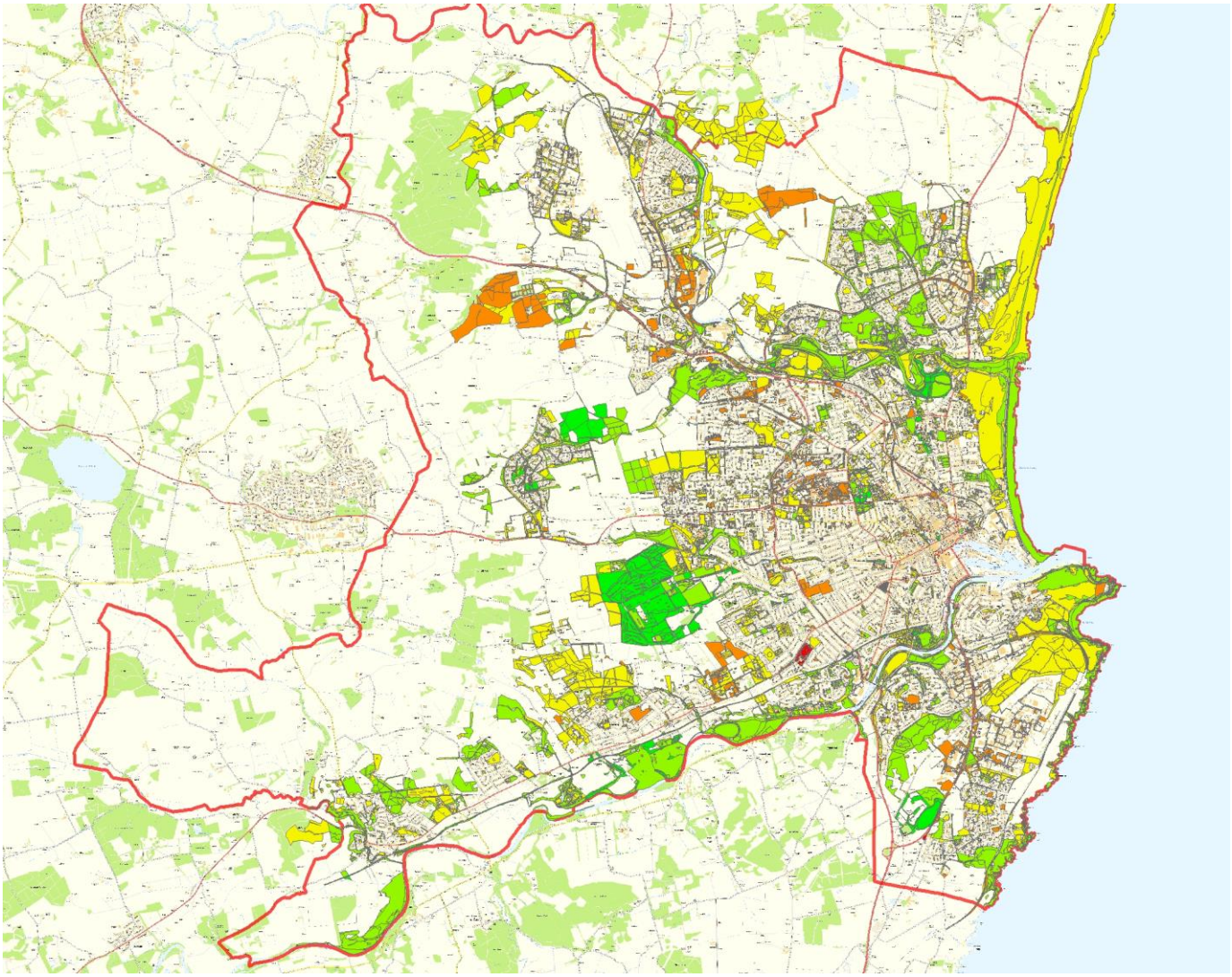


Map 2: River Dee Special Conservation Area in Aberdeen City

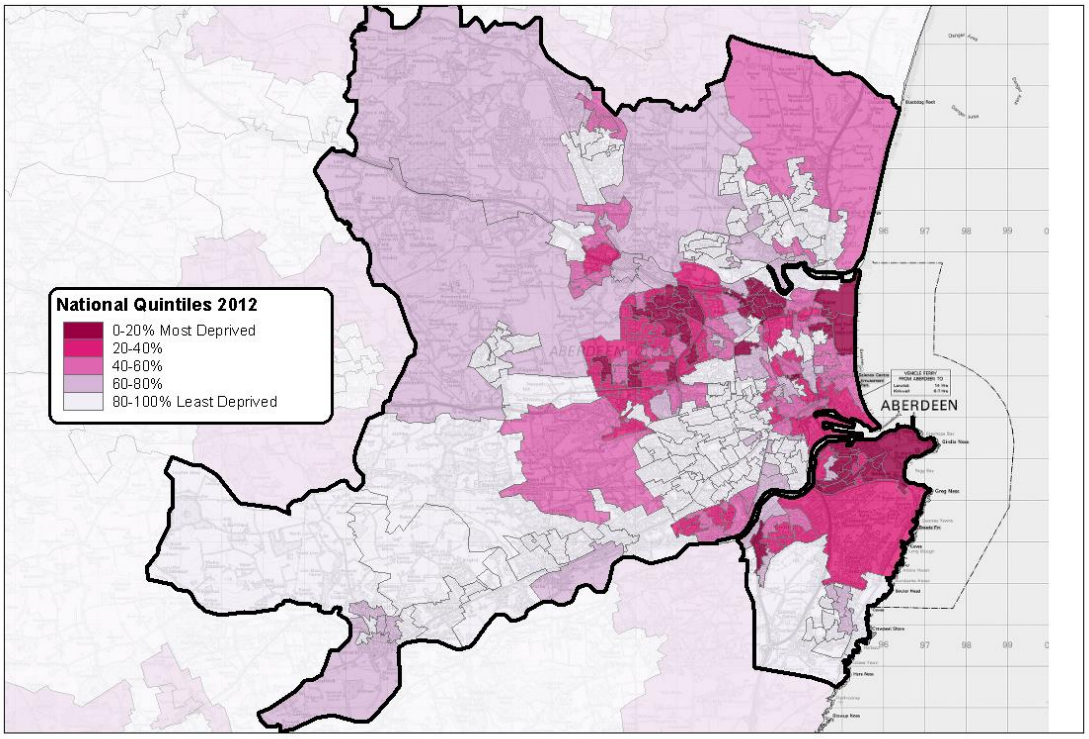
Map 3: Local Nature Conservation Sites (purple) and Local Nature Reserves (brown outline) in Aberdeen



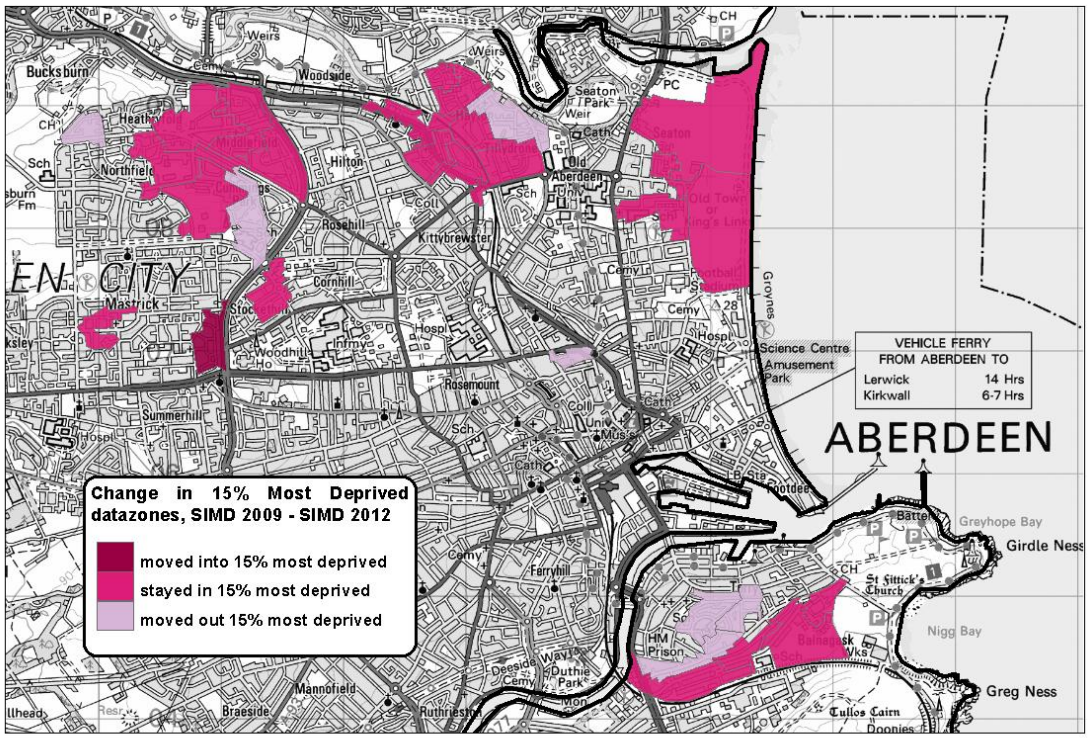
Map 4: Vacant and Derelict Land Survey Sites 2012



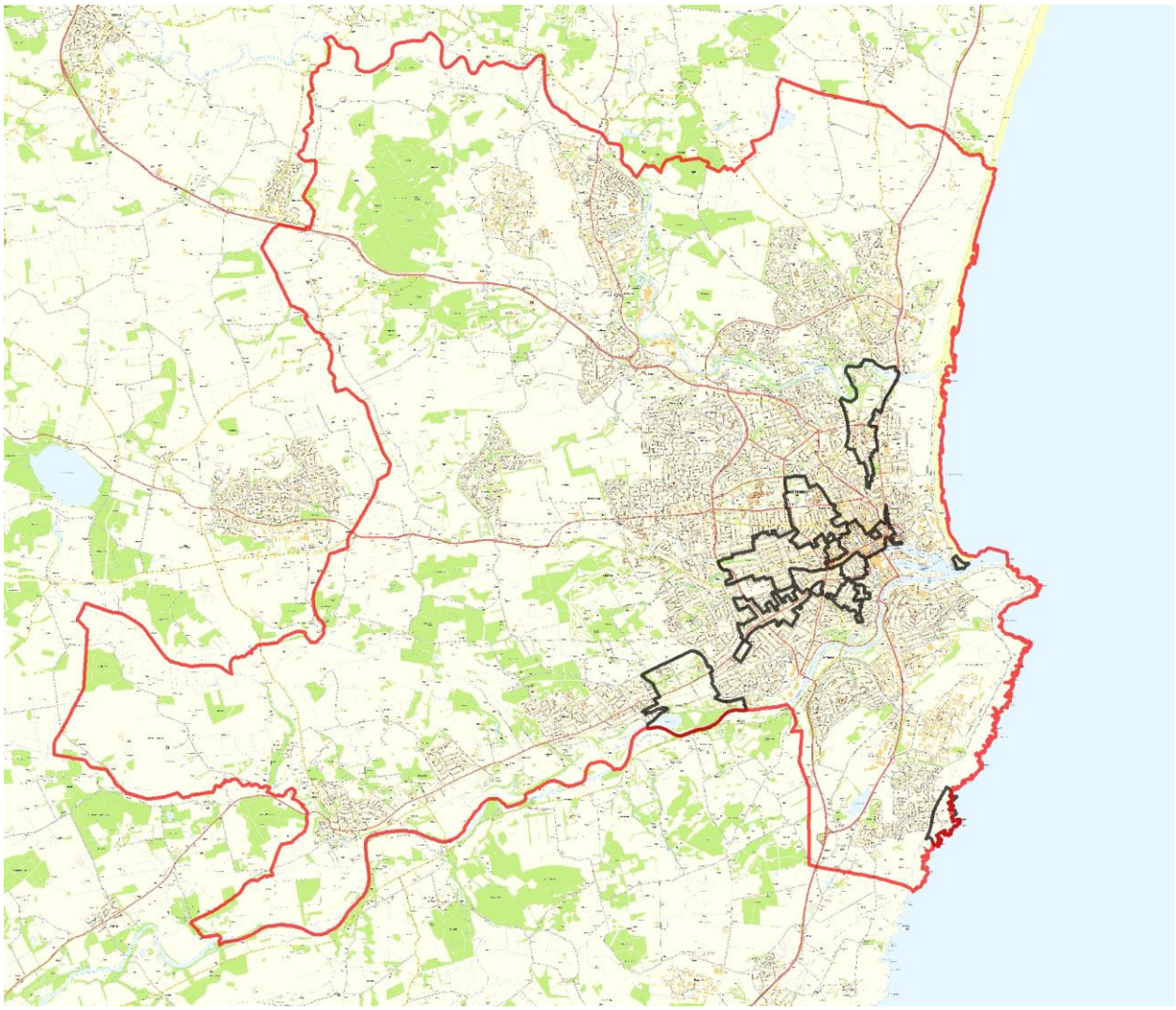
Map 5: Open Space Audit 2012- Quality of Open Spaces (Green= highest quality; red= lowest quality)



Map 6: Scottish Index of Multiple Deprivation: Aberdeen City datazones by national quintile. Source: SIMD 2012



Map 7: Change in 15% Most Deprived Datazones between SIMD 2009 and SIMD 2012 in Aberdeen. Source: SIMD 2012



Map 8: Conservation Areas in Aberdeen