

SEA Environmental Report Cover Note

To:

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or

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Scottish Executive
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An Environmental Report is attached for:

The Orkney Local Development Plan Proposed Plan Environmental Report (March 2016)

The Responsible Authority is:

Orkney Islands Council

PART 3

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Date

11 May 2017

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NON-TECHNICAL SUMMARY

Purpose of this Environmental Report

This non-technical summary summarises the process, methods, outcomes and future stages of the Strategic Environmental Assessment (SEA) which has been undertaken of the Orkney Islands Council's Local Development Plan Proposed Plan (2016).

SEA is an environmental assessment of plans, programmes and strategies (PPS) and is undertaken in parallel with the preparation of the PPS to ensure that any environmental effects are considered during its preparation and adoption. It is required under the EC SEA directive (2001/42/EC), which has been transposed into Scottish law via the Environmental Assessment (Scotland) Act 2005.

The aim of the non-technical summary is to assist the reader in understanding what the potential environmental effects of implementation of the Local Development Plan are likely to be, if it is adopted by Orkney Islands Council.

The Environmental Report is the main consultation document in the SEA and it provides a description of the environment of Orkney in terms of an environmental baseline and the assessment of potential significant environmental effects, alongside proposed measures to mitigate and monitor environmental effects during the lifetime of the Local Development Plan.

Consultation

Public consultation on the Environmental Report and the Proposed Plan will take place for a 6 week period between Thursday 5th May and Thursday 16th June 2016. Comments on the Environmental Report may be made by letter or email to:

Development & Marine Planning
Development and Infrastructure Services
Orkney Islands Council
School Place
Kirkwall KW15 1NY
Email: devplan@orkney.gov.uk

Key Stages of Environmental Assessment

SEA is a systematic method for considering the likely environmental effects of the programme and aims to integrate environmental factors into policy preparation and decision-making. It also has an important role to play in increasing public participation and enabling openness and transparency in decision-making.

The key steps of the SEA that have been undertaken so far are:

- A **Scoping Report** was prepared which set out sufficient information on the Local Development Plan Main Issues Report to enable the Consultation Authorities (Scottish Natural Heritage, Scottish Environment Protection Agency and Historic Environment Scotland) to form a view on the appropriate scope, level of detail and consultation period. A set of SEA environmental objectives was identified, against which the policies and proposals of the Plan would be assessed.
- **Environmental Assessment:** was undertaken of the policy and land allocation options proposed by the Main Issues Report.
- **Environmental Assessment** was undertaken of minor changes to the boundaries of three settlements that were proposed following consultation on the Main Issues Report. These were Burnside in Harray, Finstown, and Pierowall,

Westray. These changes and the associated assessment underwent a period of focused consultation from 7th January until 4th February 2016.

- **Environmental Assessment** has been undertaken of the final policies and land allocations that are presented in the Orkney Local Development Plan Proposed Plan (2016). The findings of this assessment are included in this Environmental Report.

Context of the Plan

The Proposed Orkney Local Development Plan (the Plan) sets out a vision and spatial strategy for the development of land in Orkney over the next ten to twenty years. The Plan contains the land use planning policies which Orkney Islands Council will use for determining applications. It also contains development proposals for our towns, villages and rural settlements, and establishes settlement boundaries for each of these areas where the principle of development will be accepted.

The Plan replaces the 2014 Orkney Local Development Plan, and will provide the planning framework for the whole of Orkney. The Plan will be kept under review and will be replaced every 5 years.

This Plan is the outcome of extensive research and engagement with the Mainland and Isles communities which has been undertaken since the adoption of the 2014 Local Development Plan. Key agencies including Scottish Natural Heritage, Historic Environment Scotland, the Scottish Environment Protection Agency and Scottish Water have also been widely involved in its preparation. In particular, it takes into account the views expressed in response to the Main Issues Report 2015.

Summary of the Proposed Plan Contents

The Proposed Plan consists of an introduction; a section explaining how to use the Plan; The Vision; The Spatial Strategy; a set of fifteen policies; a suite of Settlement Statements for the mainland and linked South Isles settlements; and a suite of Isles Statements for the non-linked Isles. There are also two appendices – Appendix 1 Key for the Settlement Statements and Appendix 2 List of Land Owned by Orkney Islands Council.

All of the policies in the Plan will be afforded equal weight in the determination of planning applications; if a proposal is contrary to any single policy, then it does not accord with the Plan. When considering an application planning, officers will not balance specific policies against each other to determine the appropriateness or otherwise of a proposal; rather the potential benefits of the development will be balanced against the impacts on known constraints, policies and other material considerations.

The proposals Map highlights land use allocations, national and international designations and other spatial considerations in Orkney and the detailed proposals for each settlement are contained within the settlement statements. The settlement statements identify sites where particular types of development will be supported. In considering options for these sites, proposals must comply with all relevant policies, as well as any relevant associated supporting planning guidance or advice.

Current Environmental conditions and SEA Objectives

To enable the assessment to evaluate the environmental effects that could result from implementation of the Proposed Plan, an environmental baseline was prepared along with the Main Issues Report. This baseline describes the environment of Orkney in the

context of each of the each of the SEA environmental topics / receptors that are considered by the assessment. The environmental baseline is presented as Appendix B to the Environmental Report. The set of SEA objectives which was identified during the Scoping stage relates closely to the baseline and these objectives were used to assess the potential environmental effects of implementing the policies of the Plan and developing its land allocations.

Environmental Assessment Findings

Assessment has been undertaken of the constituent parts of the Plan and these are presented as Appendix C to the Environmental Report. The overall predicted environmental effect of the Proposed Plan is that the effects of its policies and proposals are likely to be broadly neutral or moderately positive, and that the promotion of increased sustainability lies at its heart. The following paragraphs outline how implementation of the Plan is likely to affect the range of environmental issues / receptors that are considered in this report.

Climatic factors

Overall, the effects of the Proposed Plan are likely to be moderately beneficial in terms of climatic factors. The spatial strategy continues to focus major development towards the towns, villages and rural settlements where there is ready access to services and facilities and the option to use public transport is generally available, reducing dependency on the private car. With policies that make provision for renewable energy generation and the incorporation of low and zero carbon energy generating technology, as well as design principles to reduce energy usage, it seeks to reduce energy usage and support the change to a low carbon economy. A number of its policies make provision for development that can help increase Orkney's resilience to the effects of climate change, in particular its policy on flood risk and Sustainable Drainage Systems. However Policy 10 *Green Infrastructure* makes provision for the creation of green networks in the larger settlements; these have potential to enhance flood risk management. However flood risk continues to be an issue, particularly in parts of Kirkwall and Policy 13 also notes that future Sustainable Drainage Systems will have to ensure that there is a neutral or better risk of flooding from surface water both on and off site.

Biodiversity, flora and fauna

Although the effects on biodiversity, flora and fauna are mainly neutral, policies 9 *Natural Environment & Landscape*, 10 *Green Infrastructure* and 13 *Flood Risk, SuDS Waste Water* all make provision for biodiversity enhancement, for example in the creation of green networks and natural flood management projects. However there are also risks of localised loss of biodiversity, for example where Policy 4 *Housing* continues to support infill development; in some instances this is achieved through the subdivision of garden ground and can lead to the loss of mature trees as well as flowering shrubs and herbaceous plants which collectively represent important sources of forage and shelter for certain bird and invertebrate species.

Water

Policies which make provision for the creation of green networks and natural flood risk management schemes have potential to improve the water environment and contribute to River Basin Management Planning objectives.

Soils

Moderate benefits are likely for peat and soils where policy 9 seeks to minimise the loss of and disturbance to peat and carbon rich soils. This policy also benefits climatic factors by seeking to minimise the release to atmosphere of carbon that is stored in these soils and minerals.

Geology

Effects on geology are broadly neutral as the relevant policies are generally protective rather than making provision for enhancement. It should be noted that Policies 9 and 12 recognise that certain natural features and processes provide services to communities. Examples include geomorphological features such as shingle banks, spits and coastal sand dunes which provide protection from coastal flooding.

Landscape

The effects on landscape are mainly protective and neutral; however there is potential for moderate benefit through improved design in new development as well as the creation of green networks..

Cultural heritage

The effects on cultural heritage are also anticipated to be broadly neutral; however Policy 8 *Historic Environment and Cultural Heritage* makes provision for enhancement.

Population and human health

Moderate benefit is likely for the population and human health receptors from a number of policy areas, not least increased options for housing provision. Design guidance and the requirement for increased energy efficiency in new housing will also help reduce the cost of heating homes. A continued focus on improving permeability and pedestrian access in new development will enable and encourage active travel and the associated health benefits; the provision of green networks will improve the built environment and offer potential to incorporate shelter, e.g. through woodland planting or new water features which help mitigate flood risk and provide more attractive places in which to live and work. Support for digital connectivity through Policy 15 is important in enabling increased social inclusion, in particular in more remote areas. Better connectivity also has potential to improve access to health, social and recreational facilities.

Material assets

Moderate benefit is possible where Policy 5 *Business, Industry and Employment* makes provision for energy from waste development. This would replace the current waste management arrangement whereby Orkney's waste is shipped to Shetland for incineration in an energy from waste plant.

Areas where environmental effects remain uncertain

In terms of Policy 4 *Housing*, landscape effects will depend largely on the interpretation and application of Policy 4E *Single Houses and Housing Clusters in the Countryside*. Supplementary Guidance *Housing in the Countryside* will provide further guidance on these aspects of the policy.

In terms of Policy 7 *Energy*, the locations and extent of Strategic Wind Energy Development Areas have yet to be confirmed. A number of potential SWEDAs were included in the Main Issues Report and an initial assessment was undertaken; however these areas were selected on the basis of landscape effects alone and will require further consideration and refinement before a final suite of SWEDAs can be identified. Once finalised and adopted these will be included in Supplementary Guidance *Energy*.

Potential for significant adverse effects and requirement for mitigation measures

The SEA process is being undertaken in parallel with the Plan making process and, in this way, recommended mitigation is built into the Plan as it is prepared. However, it must be noted that where major development projects are proposed, it is outwith the remit of this SEA to identify specific mitigation measures to address potential adverse environmental effects. Rather, the assessments identify where adverse effects are likely, and highlight the requirement for the proposed development projects to undergo further determination in the form of Environmental Impact Assessment and, where necessary, Habitats Regulations Assessment.

Policy assessments – SEA recommendations

Policy	SEA recommendation	How incorporated into policy
1 Criteria for All Development	Criterion A - townscape, landscape or seascape character . Add a further criterion: <i>It protects, and where appropriate enhances the natural environment and cultural heritage resources.</i>	In criterion A character was accepted; coastal was inserted in preference to seascape . The remaining recommendations are addressed in Policy 8 <i>Historic Environment & Cultural Heritage</i> and Policy 9 <i>Natural Environment</i> .
2 Design	Criterion A v. It minimises use of energy and materials at all stages of the development and maximises opportunities for shelter in the landscape or through the use of building forms to create shelter and microclimates.	Criterion A v. was amended to: <i>It promotes sustainable design, minimising use of energy and materials at all stages of the development, and maximising opportunities for shelter.</i> This version promotes development which benefits from shelter from either landscape features or other built form.
3 Settlements, Town Centres and Primary Retail Frontages	No further recommendations.	N/A
4 Housing	Part C The Isles Approach for Housing – policy promotes a presumption in favour of new housing on the non-linked isles. Suggested inserting <i>subject to other policies in the Plan.</i>	Part C was amended to include reference to “ <i>The Isles Approach</i> ” which is set out in the Spatial Strategy. This clarifies that development in the Isles must accord with the relevant Plan policies.
5 Business, Industry and Employment	Part D Waste management facilities: policy should avoid impact on the environment and public amenity. Policy should also make provision for the development of new landfill facilities. These would	Part D amended: The provision of new waste management facilities, <i>including landfill sites for inert waste</i> , will be supported on business and industrial

	<p>be unlikely to be accommodated in areas such as Hatston and Garson industrial estates which are used for handling recyclate and municipal waste, and instead would require a rural location.</p> <p>Part E Minerals (i) A buffer distance that takes into account the specific circumstances of the proposal that will include the location and surroundings, size, expected duration, method of working, local topography, the characteristics of the environmental effects likely to arise and the mitigation that can be achieved.</p> <p>Part ii Details of the secondary materials and wastes arising from the process.</p>	<p>allocations or other sites where a locational justification has been provided and where there are no unacceptable adverse impacts.</p> <p>Part I has been amended: A buffer distance that takes into account the specific circumstances of the proposal, including information on the location and its surroundings, size, expected duration, methods of working, local topography and environment;</p> <p>Part ii has been amended: Details of the secondary materials and waste arising from the process (extraction and processing) and how these will be stored and used in the site restoration;</p>
6 Advertisements and Signage	No further recommendations.	N/A
7 Energy	Part iii d Suggest - Wind farm developments will be supported in principle within Strategic Wind Energy Development Areas.	Recommendation declined.
8 Historic Environment and Cultural Heritage	No further recommendations.	N/A
9 Natural Heritage and Landscape	No further recommendations.	N/A
10 Green Infrastructure	<p>Allotment land should be safeguarded.</p> <p>The policy should make provision for the temporary use of unused or underused land as green infrastructure.</p>	<p>The introduction to Policy 10 confirms that allotments are identified as Open Space through the Plan and will be retained where there is a recognised demand.</p> <p>It also confirms that the temporary greening of underused sites in settlements is encouraged, for example as community growing areas or locations for informal play.</p>
11 Sports, Recreation and Community Facilities	No further recommendations.	N/A
12 Coastal and Marine Planning	A Criteria for all coastal development:	A Criteria for all coastal development:

	<p>Part i the scale, location, siting and design of the development will not have a significant adverse effect, either individually or cumulatively on the landscape, seascape or townscape....;</p> <p>Part ii the integrity of coastal and marine ecosystems, as well as geomorphological features, have been safeguarded.....</p> <p>B Coastal change is rather ambiguous and needs to state that new development new development generally will not be supported in areas that are vulnerable to adverse effects of coastal erosion and/or wider coastal change as identified in the National Coastal Change Assessment. However, when there is clear justification for a departure from the general policy.....,</p> <p>D Aquaculture Part i suggest:</p> <ul style="list-style-type: none"> • landscape / seascape character and visual amenity; • wider biodiversity interests, including wild salmonids and other Priority Marine Features. <p>Part ii</p> <ul style="list-style-type: none"> • tourism, recreational and leisure activities.. 	<p>Part i the scale, location, siting and design of the development will not have a significant adverse effect, either individually or cumulatively on the landscape, coastal or townscape....;</p> <p>Part ii the integrity of coastal and marine ecosystems, as well as geomorphological features, have been safeguarded.....</p> <p>B Coastal change New development will not generally be supported in areas that are vulnerable to</p> <p>When there is clear justification for a departure from the general policy to avoid new development in areas that are vulnerable to</p> <p>D Aquaculture Proposals for finfish and shellfish farming developments will be supported where it can be demonstrated that there will be no significant adverse effects, directly, indirectly or cumulatively on:</p> <p>i. the interests of the natural, built and cultural environment including:</p> <ul style="list-style-type: none"> • landscape / seascape character and visual amenity, taking account • historic environment resources; • habitats and species, including designated sites and protected species; • wider biodiversity interests, including wild salmonids and other Priority Marine Features; and • biological carrying capacity
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		<p>and seabed impacts.</p> <p>ii existing users of the marine environment including:</p> <ul style="list-style-type: none"> • existing and consented aquaculture sites; • Disease Management Areas; • commercial inshore fishing grounds and activities; • established ports and harbours, anchorages and defined navigational routes; • tourism, recreational and leisure activities.
13 Flood Risk, SuDS and Waste Water Drainage	No further recommendations.	N/A
14 Transport, Travel & Vehicle Access	No further recommendations.	N/A
15 Digital Connectivity	No further recommendations.	N/A

Monitoring Programme

The purpose of monitoring is to ensure that the proposed mitigation is effective and that any unexpected effects can be detected at an early stage, so that appropriate remedial action can be put in place. Over time it is expected that environmental benefits will become apparent through the trends in the monitoring indicators. Monitoring will be used to provide essential information upon which to base future development policies. The following monitoring programme includes a set of indicators which relate closely to the SEA objectives.

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
Climatic factors.	Support patterns of development which provide safe and convenient opportunities for walking and cycling and facilitate travel by public transport.	Annual passenger numbers on subsidised bus routes.	OIC Transport Section.	Environmental Policy Officer. Annual.
	Reduce Scottish greenhouse gas emissions, in line with Government targets.	Annual CO ₂ estimates for Orkney.	Local and Regional CO ₂ Emissions Estimates (Ricardo-AEA).	Environmental Policy Officer. Annual.
	Promote a precautionary approach to flood risk from all sources.	Number of proposals approved to develop residential accommodation within areas that are at significant risk of flooding.	OIC Development Management Section.	Environmental Policy Officer. Annual.
Biodiversity.	Safeguard valuable habitat from loss and fragmentation through development.	Number of proposals approved where mitigative or compensatory measures have been incorporated to safeguard habitats from loss and fragmentation.	OIC Development & Marine Planning Section	Environmental Policy Officer. Annual.
		Number of proposals approved where it has not been possible to incorporate appropriate mitigative or compensatory measures to safeguard habitats from loss and fragmentation.	OIC Development & Marine Planning Section.	Environmental Policy Officer. Annual.

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
	Conserve protected sites and species.	Condition of internationally & nationally designated biological natural heritage sites.	SNH website - sitelink http://gateway.snh.gov.uk/sitelink/index.jsp	Environmental Policy Officer. Annual.
		Number of proposals approved where it has not been possible to incorporate appropriate mitigative or compensatory measures to safeguard protected species.	OIC Development & Marine Planning Section.	Environmental Policy Officer.
Water.	Promote the protection and improvement of the water environment, including burns, lochs, estuaries, wetlands, coastal waters and groundwaters.	Water quality and overall status of monitored watercourses.	Scotland's Environment Web http://www.environment.scotland.gov.uk/get-interactive/data/water-body-classification/	Environmental Policy Officer. Annual.
		Number of approved development briefs requiring the establishment of a development-free buffer zone.	OIC Development & Marine Planning Section.	Environmental Policy Officer. Annual.
Soil.	Promote the viable use of vacant and derelict land, alleviating pressure on greenfield sites.	Number of sites removed from the Derelict and Urban Vacant Land Register.	Scottish Vacant and Derelict Land Survey http://www.gov.scot/Publications	Environmental Policy Officer. Annual.
Soil &	Recognise the	Number of proposals approved	OIC Development	Environmental Policy

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
Climatic factors.	environmental benefits provided by soils and protect their quality and quantity.	to develop on areas of peat identified in the national peatland map.	Management Section.	Officer. Annual.
Geology.	Protect designated and undesignated sites which are recognised and valued for their geological or geomorphological importance.	Condition of nationally designated geological / geomorphological natural heritage sites.	SNH website - sitelink http://gateway.snh.gov.uk/sitelink/index.jsp	Environmental Policy Officer. Annual.
Landscape.	Facilitate positive change while maintaining and enhancing distinctive landscape character.	Development of a suite of Local Landscape Areas, following completion of the SNH commissioned review of the Orkney Landscape Character Assessment (1998).	OIC Development & Marine Planning Section.	Environmental Policy Officer. Annual.
		Number of proposals approved which do not align with the guidance provided in the Orkney Wind Energy Capacity Study.	OIC Development & Marine Planning Section.	Environmental Policy Officer. Annual.
Cultural heritage.	Safeguard cultural heritage features and their settings through responsible design and siting of development.	Number of demolitions of listed buildings and listed or unlisted buildings within a Conservation Area.	OIC Development Management Section.	Historic Environment Officer. Annual.
		Number of proposals approved affecting an Inventory Garden and Designed Landscape.	OIC Development Management Section.	Historic Environment Officer. Annual.

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
		Number of proposals approved affecting a scheduled monument and / or its settings.	OIC Development Management Section.	Historic Environment Officer. Annual.
	Enable positive change in the historic environment which is informed by a clear understanding of the importance of Orkney's heritage assets and ensures their future use.	Number of buildings removed from the Buildings at Risk Register due to restoration.	Buildings at Risk Register http://www.buildingsatrisk.org.uk/	Historic Environment Officer. Annual.
	Protect the integrity and Outstanding Universal Value of the Heart of Neolithic Orkney World Heritage Site.	Number of proposals approved where the integrity and OUV of the WHS is substantially affected.	OIC Development & Marine Planning Section.	Historic Environment Officer. Annual.
Population.	Retain and, where appropriate, improve quality and quantity of publicly accessible open space.	Number of Open Space Strategy actions completed.	Open Space Strategy Action Plan.	Environmental Policy Officer. Annual.
Human health.	Promote increased availability of affordable housing.	Numbers of affordable homes built.	OIC Strategic Housing Improvement Programme.	OIC Housing Section. Annual.
Material Assets.	Promote the efficient use of resources and the minimisation of wastes through their re-use or	Annual household waste data.	SEPA website https://www.sepa.org.uk/environment/waste/waste-	Environmental Policy Officer. Annual.

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
	their recovery through recycling, composting or energy recovery, in line with 2020 national targets.		data/waste-data-reporting/household-waste-data/	

Next Steps

Expected date	Milestone
12 April 2016	Meeting of Development & Infrastructure Committee to consider the Proposed Plan and the Environmental Report.
28 April 2016	Meeting of all Elected Members to approve the Proposed Plan and the Environmental Report.
5 th May 2016	Proposed Plan and Environmental Report released for consultation with the Consultation Authorities and members of the public
16 th June 2016	Deadline for Consultation Authorities' responses to the Plan and the Environmental Report.
June - July	Evaluation of the consultation responses and preparation for the examination process
September 2016	Submit Plan to the Scottish Ministers for examination
March 2017	Report Scottish Government's examination report to Full Council
April 2017	Formally adopt the Plan and prepare the Post Adoption Statement.

1 INTRODUCTION

Purpose of this Environmental Report and key facts

As part of the preparation of the Orkney Local Development Plan, Orkney Islands Council is carrying out a Strategic Environmental Assessment (SEA). SEA is a systematic method for considering the likely environmental effects of certain Plans Programmes and Strategies (PPS). SEA aims to:

- integrate environmental factors into PPS preparation and decision-making;
- improve PPS and enhance environmental protection;
- increase public participation in decision making; and
- facilitate openness and transparency of decision-making.

SEA is required by the Environmental Assessment (Scotland) Act 2005. The key SEA stages are:

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

The purpose of this Environmental Report is to:

- provide information on the Orkney Local Development Plan Proposed Plan;
- identify, describe and evaluate the likely significant effects of the proposed policies and future development of the identified land allocations;
- provide an opportunity for the Consultation Authorities and members of the public to offer views on any aspect of this Environmental Report.

The key facts relating to the Orkney Local Development Plan are set out in **Table 1** below.

Table1: Key facts relating to the Orkney Local Development Plan

Name of Responsible Authority	Orkney Islands Council
Title of Plan, Programme or Strategy	Orkney Local Development Plan
What prompted the Plan	Orkney Islands Council is required by law to produce a Local Development Plan to set out the Council's policy for assessing planning applications and its proposals for the allocation of land for development across Orkney.
Subject	Town and Country Planning
Period covered by Plan	The Orkney Local Development Plan will cover the period 2017 until 2022.
Frequency of updates	The Plan will be updated on a five-yearly basis.
Area covered by Plan [The administrative area of the Orkney Islands
Purpose and/or objectives of Plan	Land use and planning
Contact point	The Planning Manager Development & Marine Planning Development & Infrastructure Orkney Islands Council School Place Kirkwall Orkney KW15 1NY Tel: 01856 873535 ext.2531 Email: devplan@orkney.gov.uk

SEA activities to date

Table 2 summarises the SEA activities to date in relation to the Orkney Local Development Plan

Table 2: SEA activities to date

SEA Action/Activity	When carried out
Screening to determine whether the Orkney LDP is likely to have significant environmental effects	Screening was not necessary as the LDP qualifies for SEA under Section 5 (3) of the Environmental Assessment (Scotland) Act 2005.
Scoping the consultation periods and the level of detail to be included in the Environmental Report	Scoping report submitted to the SEA Gateway on 17 Nov 2014
Publication of the Development Plan Scheme	February 2015
Outline and objectives of the Orkney LDP	January 2015
Relationship with other PPS and environmental objectives	November 2014
Environmental baseline established	January 2015
Environmental problems identified	January 2015
Assessment of future of area without the Orkney LDP	June 2015
Alternatives considered	May 2015
Environmental assessment methods established	November 2014
Selection of LDP alternatives to be included in the environmental assessment	April 2015
Identification of environmental problems that may persist after implementation and measures envisaged to prevent, reduce and offset any significant adverse effects	May – June 2015
Monitoring methods proposed	June 2015
Consultation timescales <ul style="list-style-type: none"> • Timescale for Consultation Authorities • Timescale for public 	08 July – 16 September 2015
Notification/publicity action	July 2015
Addressing responses received to consultation on the Main Issues Report Environmental Report.	October 2015
Assessment of minor changes to the settlement boundaries of Burnside (Harray), Finstown and Pierowall.	November - December 2015
Updating settlement assessments to incorporate further information received during	January – February 2016
Assessment of the policies of the Plan	January – March 2016

2.1 Outline and objectives of the Orkney Local Development Plan

Schedule 3 of the Environmental Assessment (Scotland) Act 2005 requires that the Environmental Report includes “*an outline of the contents and main objectives of the plan or programme*”. The purpose of this section is to explain the nature, contents, objectives and timescale of the Proposed Plan.

The Proposed Plan

The Proposed Plan is the third step in the process of preparing the Orkney Local Development Plan which sets out the Council’s policy on planning matters for the next five years and beyond.

Introduction

The introductory passages explain that Orkney Islands Council is required by law to produce a Local Development Plan to set out the Council’s policy for assessing planning applications as well as its proposals for the allocation of land for development across Orkney.

The Planning etc (Scotland) Act 2006 has replaced the previous system of a Structure Plan and a Local Plan with a single Local Development Plan (LDP). At the heart of the change is an emphasis on improving engagement and consultation with the public and stakeholders at all stages of the process. The new Plan establishes a vision for how Orkney will look in 20 years’ time and it will identify an effective land supply for the first five years of the Plan, as well as further sites which are capable of becoming effective by the end of year 10 after adoption of the Plan (2026).

The main stages of the Local Development Planning process are set out:

- Stage 1 The Development Plan Scheme is an important first stage which sets out the timetable and commitment to engaging with the community to develop and deliver the LDP. The Development Plan Scheme (DPS) is reviewed and updated annually. It sets out the programme for the preparation and review of the LDP. In addition to explaining what is likely to be involved at each stage in the review and raising awareness of the planning process, the main elements of the DPS are:
 - The Development Plan Scheme Programme which specifies when the Main Issues Report will be published, when the Proposed Plan will be published and when we aim to submit the LDP to the Scottish Government; and
 - The Participation Statement which sets out the Council’s approach to engaging stakeholders in the planning process, including an account of when, how and with whom it will involve in the process.
- Stage 2 The Main Issues Report (published July 2015)
- Stage 3 The Proposed Local Development Plan for Orkney (published May 2016)
- Stage 4 Submission to and examination of the proposed Local Development Plan by the Scottish Government (Target autumn 2016)
- Stage 5 Adoption of the Orkney Local Development Plan (Target April 2017)
- Stage 6 The Action Programme (Monitoring and Implementation)

What is the Proposed Plan?

The Proposed Plan is the first full draft of the Orkney Local Development Plan and sets out the absolute decisions on the direction of the Council's future policy and proposals. The Proposed Plan has been informed by responses received from members of the public and other stakeholders during the MIR consultation phase, along with the results of supporting technical background exercises.

The Plan consists of:

- an introduction;
- a section explaining how to use the Plan;
- The Vision;
- The Spatial Strategy;
- a set of fifteen policies;

There are also two appendices – Appendix 1 Key for the Settlement Statements and Appendix 2 List of Land Owned by Orkney Islands Council.

Settlement Statements have been prepared which highlight issues that should be considered in relation to future development within the towns, villages and rural settlements of the Mainland and Linked South Isles. Likewise a suite of Isles Statements has been prepared for the Non-Linked Isles. The statements are included as Supplementary Guidance and are addressed through the SEA as part of the Plan.

All of the policies in the Plan will be afforded equal weight in the determination of planning applications; if a proposal is contrary to any single policy, then it does not accord with the Plan. When considering an application planning, officers will not balance specific policies against each other to determine the appropriateness or otherwise of a proposal; rather the potential benefits of the development will be balanced against the impacts on known constraints, policies and other material considerations.

The proposals Map highlights land use allocations, national and international designations and other spatial considerations in Orkney and the detailed proposals for each settlement are contained within the settlement statements. The settlement statements identify sites where particular types of development will be supported. In considering options for these sites, proposals must comply with all relevant policies, as well as any relevant associated supporting planning guidance or advice.

A Vision for the next Local Development Plan

The Vision Statement sets out the Council's aspirations, focusing on sustainable economic growth. In defining this vision, the strategic policy direction and priorities established by Orkney's community planning partners and the Council in the following documents have been taken into account:

- The Orkney Community Plan 2013-2017
- The Council Plan, Our Plan 2013-2018

The Orkney Community Planning Partnership and Orkney Islands Council have six key values which guide the way they work, both together and independently. These values influence everything they do, and how they do it:

1. **Promoting survival** to support communities.
2. **Promoting sustainability** to make sure economic, environmental and social factors are balanced.

3. **Promoting equality** to encourage services to provide equal opportunities for everyone.
4. **Working together** to overcome issues more effectively through partnership working.
5. **Working with communities** to involve community councils, community groups, voluntary groups and individuals in the process.
6. **Working to provide better services** to improve the planning and delivery of services.

The six priorities of the Council Plan are:

1. Care and support for those who need it
2. Promote successful, thriving communities
3. Housing to meet the needs of Orkney's people
4. A low carbon Orkney – renewables, energy and opportunity
5. Orkney's economic development
6. Orkney's transport networks

Together these values and priorities have helped shaped the Vision:

- *The Local Development Plan for Orkney seeks to ensure that effective planning policies are in place to strengthen and support Orkney's communities by enabling those developments which will have a positive and sustainable socio-economic impact, and utilise locally-available resources, whilst striving to preserve the rich natural and cultural heritage assets upon which Orkney's economy and society depends.*
- *Orkney's settlements will act as a focus for growth in order to support existing facilities and services such as shops, schools and public transport links. Facilitating active travel will be an integral part of development planning across the county with a commitment to include well-integrated footpaths and cycleways within new developments and to connect any fragmented sections of the existing network to encourage active and healthy living.*
- *The Development Plan supports 'positive aging' with the ambition that environments and places are tailored to allow individuals to retain their independence and quality of life as they grow older. Equally important is the need to attract and retain young families and individuals by creating high-quality settlements and vibrant communities.*
- *The planning process supports the delivery of affordable housing developments in a variety of locations in order that opportunities exist for as many individuals as possible to live in a safe and comfortable home. Adequate land has been identified to allow business and industry to grow and sufficient housing land, which is free from constraint, has been designated to exceed future demand. The Development Plan supports Orkney's strong maritime links and guides relevant developments to key land around ports and harbours.*
- *Policy support has been established to ensure that all appropriate energy generation schemes will be supported in the county and that local solutions to storing energy for alternative uses are encouraged where there is not an opportunity to distribute energy through more traditional routes. Locally-important agricultural land will be safeguarded against unnecessary development to ensure*

that this important facet of Orkney's economy is protected and there is policy support for delivering new houses for farmers, crofters and agricultural workers where they are needed.

2.2 Relationship of the Local Development Plan with other Plans, Programmes and Strategies (PPS) and environmental protection objectives

Schedule 3 of the Environmental Assessment (Scotland) Act 2005 requires that the Environmental Report includes an outline of the Orkney Local Development Plan's relationships with other relevant PPS, and how environmental protection objectives have been taken into account in preparation of the Plan. This section covers these issues and describes the policy context within which the Plan operates, and the constraints and targets that this context imposes on the Plan.

Appendix A to this Report highlights how the Orkney Local Development Plan affects, and is affected by, other relevant Plans, Programmes and Strategy (PPS), including national planning policy. Analysis of these PPS identifies the environmental objectives that the LDP should contribute towards and these are summarised in **Table 3** below.

Table 3: Environmental objectives of other PPS and how these should be taken into account in the Plan

CLIMATE CHANGE
Contribute to national climate change targets by enabling Orkney to achieve its full potential for renewable energy generation, subject to relevant environmental and community effects, including cumulative effects.
Include a spatial framework, identifying areas most appropriate for onshore wind farms, setting out the criteria that will be used to determine wind energy applications, including extensions and re-powering.
Explain the factors that will be taken account of in determining renewable energy generation applications.
Support new build developments, infrastructure or retrofit projects which deliver energy efficiency and energy recovery; and aim to ensure the environmental impact of buildings is minimised.
Use heat mapping to identify potential for co-locating developments with high heat demand with sources of supply and support the development of heat networks.
Promote sustainable alternatives to car transport as well as settlement patterns which encourage sustainable transport options.
Align with Orkney's Sustainable Energy Strategy and Carbon Management Programme
Promote policies which increase community resilience and preparedness to the effects of climate change.
Plan to take account of flood risk and coastal erosion, identifying vulnerable land and infrastructure and making space for habitats.
Take a precautionary approach to flood risk, confirming that new developments requiring new coastal flooding defences will not be supported without clear justification for a

departure from the general policy.
Take account of flooding from all sources – coastal, fluvial, pluvial, groundwaters, sewers and blocked culverts. The potential additional influence of climate change should also be borne in mind.
Use the Orkney Strategic Flood Risk Assessment and SEPA flood maps to inform choices about the location of development as well as policies for flood risk management and should be compatible with the emerging Orkney Flood Risk Management Plan.
Protect land with potential to contribute to managing flood risk, e.g. through natural flood risk management, managed coastal realignment, wash-land or green infrastructure creation or as part of a scheme to manage flood risk.
BIODIVERSITY
Reflect the Council’s duty to “further the conservation of biodiversity” in exercising its functions.
Identify all international, national and local natural heritage designations on the Proposals Maps and/or the relevant Supplementary Guidance.
Include planning policy for areas identified as being of international, national or local natural heritage importance and safeguard areas identified as being of major importance for nature conservation, indicating the criteria against which development affecting a natural heritage designation will be assessed and making clear the requirement to protect the integrity and qualifying interests of Natura 2000 sites.
Make appropriate provision for Local Nature Reserves and the protection and appropriate enhancement of open space of natural heritage value.
Include planning policy for protected species, indicating the criteria against which development affecting a protected species will be assessed.
Provide for the conservation of the wider biodiversity out with designated sites.
Assist in reversing the decline of important species and habitats by seeking to prevent or minimise further fragmentation or isolation of habitats and enable opportunities to restore links which have been broken.
Seek to maximise habitat linkage in urban and rural areas and recognise the positive role of planning in achieving appropriate biodiversity enhancement in addition to more protective measures where required.
Include planning policy to protect trees and woodland, and enhance their condition and resilience to climate change, identifying woodlands of high nature conservation value. Supplementary Guidance may also include information to guide the development of further woodland in Orkney.
Clearly identify and protect local designations. The reasons for designation should be clearly explained and their on-going relevance and function should be considered when the plan is prepared.
Reinforce and promote the role of planning in relation to biodiversity, including in terms

of raising awareness and appreciation of natural heritage.
Contribute towards fulfilment of the objectives and actions of the Orkney LBAP.
Apply the Principles for Sustainable Land Use as set out in Scotland's Land Use Strategy, ensuring that due regard is given to the public benefits and services provided by ecosystems.
GEOLOGY
Identify all national and local geodiversity designations on the Proposals Maps and/or the relevant Supplementary Guidance.
Include planning policy for the protection of nationally and locally important geological and geomorphological sites and safeguard areas being identified as being of major importance for geodiversity, indicating the criteria against which development affecting a geodiversity designation will be assessed.
Provide for the conservation of the wider geodiversity outwith designated sites.
WATER
Include policies to protect and where appropriate improve the water environment.
Support River Basin Management Planning objectives by ensuring that adverse impacts on the water environment are appropriately mitigated, and contribute towards improving the overall status of water bodies in and around Orkney.
Take account of the Controlled Activities Regulations (CAR).
Take account of the value of groundwater and protect it from pollution or over abstraction.
Ensure consistency with SEPA's policy in relation to the provision of strategic foul water drainage, allocating sites that can be serviced and identifying where new waste water treatment should be provided.
Bear in mind the principles of collaboration with Scottish Water and consideration of water and waste water infrastructure capacity.
Incorporate the legal requirement for Sustainable Drainage Systems (SuDS), promoting a coordinated approach to SuDS between new developments and set out expectations in relation to the long-term maintenance of SuDS.
Include policy which addresses the environmental damage that culverting can cause and encourage developers to protect, restore or enhance the natural heritage value of the aquatic environment.
Identify and seek to minimise the cumulative effects of developments on the coastal and marine environment and its ecosystems.
Contribute towards the requirements of the Marine (Scotland) Act 2010, by supporting an integrated approach to coastal planning to ensure that development plans and regional marine plans are complementary.
Ensure compatibility with the objectives of Scotland's National Marine Plan and the

Pentland Firth and Orkney Waters Marine Spatial Plan.
Make positive provision for aquaculture developments, taking account of Marine Scotland's locational policies when identifying areas potentially suitable for new development and sensitive areas which are unlikely to be appropriate. Set out the issues that will be considered when assessing specific proposals.
SOIL
Recognise that, as well as providing a platform for construction, soils have other important roles to play and promote the sustainable management and protection of soils, consistent with the county's economic, social and environmental needs.
Safeguard existing and potential allotment sites to ensure meeting the statutory duty to provide allotments where there is proven demand.
Identify mapped nationally important areas of carbon-rich soils, deep peat and priority peatland habitat as Areas of Significant Protection within the Spatial Framework for Wind Energy.
Protect areas of peatland and only permit commercial extraction in areas suffering historic damage through human activity and where the conservation value is low and restoration is impossible.
Encourage and promote the re-use of brownfield land, including contaminated sites.
LANDSCAPE
Address the potential effects, including the cumulative effects of incremental changes, of development on landscapes.
Support development that is sensitive to, and does not harm, the quality and distinctiveness of Orkney's landscape.
Identify the Hoy and West Mainland National Scenic Area (NSA) on the Proposals Maps and afford this area the appropriate level of protection.
Reasons for any local designation should be clearly explained and their function and continued relevance considered when preparing the Plan.
Set out the factors which will be taken into account in development management.
The Plan's Spatial Framework for wind energy development should make clear that wind farms will not be acceptable in NSAs.
Identify areas of largely developed coast that are a major focus of economic or recreational activity that are likely to be suitable for further development.
Identify coastal areas that are subject to significant constraints.
Identify largely unspoiled areas of the coast that are generally unsuitable for development. Safeguard unspoiled sections of coast which possess special environmental or cultural qualities, such as wild land.
Identify and safeguard the character of the Hoy Wild Land Area.

Set out design standards, e.g. through Supplementary Guidance, to enable applicants to comply with the key principles of PAN 72 New Housing in the Countryside.
Set out the council's policies on design and the physical form of development, explaining how its priorities are distinctly different from those of other places.
Support development that is designed to a high quality which demonstrated the six qualities of successful place – distinctive, safe & pleasant, welcoming, adaptable, resource efficient, easy to move around & beyond.
CULTURAL HERITAGE
Provide a framework for protecting and, where appropriate, enhancing all elements of the historic environment where, as well as addressing the cultural heritage value of individual buildings, links with the wider landscapes and natural heritage should be considered.
Provide policies for the protection of the following aspects of the cultural heritage: <ul style="list-style-type: none"> • Listed buildings and their settings • Conservation Areas • Scheduled Monumentss and their settings • The Heart of Neolithic Orkney World Heritage Site and its Outstanding Universal Value • Gardens and Designed Landscapes • Unscheduled and/or as yet undiscovered archaeology and other historic environment assets.
Designate and review existing and potential conservation areas and identify existing and proposed Article 4 Directions, supporting these by Conservation Area Appraisals and Management Plans.
Promote positive development in order to preserve the character and appearance of Conservation Areas, identifying sites of opportunity and areas where the Council and other stakeholders will be taking action.
Take account of the long-term aims and objectives of the WHS Management Plan and be compatible with their achievement.
Reconcile the need for development with the interests of archaeology.
POPULATION & HUMAN HEALTH
Review the need for housing through the settlement strategy, which should be informed by the Housing Land Audit.
Address the supply of land for all housing needs and provide for a minimum of 5 years effective land supply. Beyond year 10 and up to year 20 the Plan should provide an indication of the possible scale and location of the housing land requirement.
Support the creation of sustainable mixed communities and successful places.
Seek to address the issues identified in the Local Housing Strategy.

Consider the need for specialist provision that covers accessible and adapted housing, wheelchair housing and supported accommodation, including care homes and sheltered housing.
Set out the scale and distribution of the affordable housing requirement for Orkney and identify any expected developer contributions towards delivery.
Contribute towards addressing the issues identified in the Homelessness Strategy.
Address issues relating to disability, equality and social inclusion.
Ensure full accessibility of the LDP and associated documents to members of the public.
Consider both positive and negative effects that a broader right of access to land and waterways may have on biodiversity.
Safeguard access rights and core paths, encouraging new and enhanced opportunities for access linked to wider networks and ensuring consistency between the LDP, open space strategy, core paths plan, local transport strategy and outdoor access strategy.
Ensure the Plan takes a holistic, integrated and cross-sectoral approach to areas of green infrastructure, reflecting their multiple functions, priorities and spatial implications.
Safeguard existing and potential allotment sites and encourage opportunities for a range of community growing spaces.
Set out requirements for the provision of open space as part of new development, ensuring open space and other facilities are accessible on foot and bicycle.
Encourage the temporary use of unused or under-used land as green infrastructure.
Identify sites for new indoor or outdoor sports recreation or play facilities where a need has been identified.
Aim to maintain or form networks of green and civic spaces which contribute to the framework for development; maintain and enhance environmental qualities; provide a range of opportunities for recreation and leisure; link and create wildlife habitats; encourage walking and cycling and reduce car use.
MATERIAL ASSETS – TELECOMMUNICATIONS
Provide a consistent basis for decision making by setting out the criteria which will be applied when determining planning applications for communications equipment.
Encourage developers to explore opportunities for provision of digital infrastructure to new homes and business premises as an integral part of development.
MATERIAL ASSETS – MINERALS
Safeguard all workable mineral resources which are of economic or conservation value and ensure that these are not sterilised by other development.
Set out criteria against which new mineral extraction proposals will be assessed.
Support the maintenance of a land bank of permitted reserves for construction

aggregates of at least 10 years at all times.
Protect areas of peatland and only permit commercial extraction in areas suffering historic, significant damage through human activity and where the conservation value is low and restoration is impossible.
MATERIAL ASSETS – WASTE
Give effect to the aims of the Zero Waste Plan and promote the waste hierarchy, encouraging opportunities for re-use, refurbishment, remanufacturing and reprocessing or high value materials and products.
For new developments promote resource efficiency and the minimisation of waste during construction and operation.
Enable investment opportunities in a range of technologies and industries to maximise the value of secondary resources and waste, including composting facilities, transfer stations, materials recycling facilities and anaerobic digestion, as well as mechanical, biological and thermal treatment plants.
Safeguard existing waste management installations and ensure that the allocation of land on adjacent sites does not compromise waste handling operations.
Set out spatial strategies which make provision for new infrastructure, identifying appropriate locations and allocating specific sites where possible, and provide a policy framework which facilitates delivery, identifying where masterplans or development briefs will be necessary.
Address any requirements relevant to development planning with regard to the disposal of non-hazardous and inert waste disposal.
Require waste management to be incorporated into masterplans or development briefs guiding the development of major sites.
Consider the need for buffer zones between sensitive receptors and some waste management facilities.
Identify suitable sites for the processing of construction and demolition wastes.
Consider requiring the preparation of Site Waste Management Plans as a condition of planning permission.
Policies should focus on whether the development itself is acceptable rather than on control of the processes or waste streams; consider aspects of operations enforceable under planning control to minimise impacts on the environment, transport network and local communities; and secure decommissioning or restoration to agreed standards.
MATERIAL ASSETS - TRANSPORT
Support the policies of the National and Local Transport Strategies and ensure consistency with regional transport strategy.
Take account of the relationship between land use and transport and in particular the capacity of the existing transport network, environmental and operational constraints and proposed or committed transport projects.

Support development in locations where amenities are accessible by walking, cycling or public transport.
Identify any required new transport infrastructure or public transport services, including cycle and pedestrian routes and indicate how new infrastructure or services are to be delivered and phased, by whom and whether any developer contributions will be made.
Support the provision of infrastructure necessary to support positive changes in transport technologies, e.g. charging points for electric vehicles.
Encourage significant travel-generating uses to be sited at locations which are well served by public transport.
In rural areas small-scale park and ride facilities at nodes on rural bus routes should be considered.
Encourage development of significant travel-generating proposals at locations which are key nodes on the public transport route that have potential for higher density development as well as potential for mixed-use development.
Work with port authorities to address the planning and transport needs of ports.
OTHER / CROSS-SECTORAL POLICIES
Identify town centres which display a diverse mix of uses, including shopping; a high level of accessibility; qualities of character and identity which create a sense of place and wellbeing; wider economic and social activity; and integration with residential areas.
Adopt a sequential town centre first approach when planning for uses which generate significant footfall.
Community, education and healthcare facilities should be located where they are easily accessible.
Protect against an unsustainable growth in car-based communitung and the suburbanisation of the countryside.
Make provision for most urban development to take place within or in planned extensions to existing settlements. In remote, fragile and island areas the emphasis should be on maintaining and growing communities by encouraging development that provides sustainable economic activity whilst preserving important environmental assets.
Set out a spatial strategy which reflects the development pressures, environmental assets and economic needs of the area, with the overall aim of supporting diversification and growth of the rural economy. It should consider the services provided by the natural environment, safeguarding land which is highly suitable for particular uses such as food production or flood management.
Permit development on locally important agricultural land only where it is essential as a component of the settlement strategy or necessary to meet an established need; or for small-scale development directly linked to a rural business; or for renewable energy generation or minerals extraction subject to other policy objectives and where there is secure provision for restoration.

Set out the circumstances in which new housing outwith settlements may be appropriate, avoiding the use of occupancy restrictions.
<p>Reflect the National Planning Framework 3 strategy as well as the following projects that are designated locally as national developments:</p> <ul style="list-style-type: none"> • Establishment of Enterprise Areas at Hatston and Lyness; • Establishment of an Energy Hub in the Pentland Firth and Orkney Waters area; • A new energy interconnector linking Orkney with the Scottish mainland; • Establishment of a deep-sea transshipment terminal within Scapa Flow.
A Habitats Regulations Appraisal will be undertaken of the Proposed Local Development Plan.
The Strategic Environmental Assessment of the LDP should be consistent with guidance provided in PAN 1 (2010) SEA of Development Plans.
Highlight in the LDP any special locational environmental protection concerns and illustrate these, as appropriate, on the Proposals Maps.
Help deliver the Scottish Government's strategic priorities for sustainable economic growth by providing land for housing and employment; better designed homes; adequate provision of infrastructure and services to meet community needs; and access to open space.
Be guided by the principles of sustainable development.
<p>Assist in development under the priority themes of the Orkney 2020, the Orkney Community Planning Partnership's Community Plan, taking guidance from its six values:</p> <ul style="list-style-type: none"> • Promoting survival • Promoting sustainability • Promoting equality • Working together • Working with communities • Working to provide better services <p>The policies and proposals of the LDP should also complement the structure and themes of the Corporate Strategic Plan and contribute towards achievement of its targets.</p>

3 ENVIRONMENTAL BASELINE AND LOCAL ISSUES

3.1 Background

This section aims to describe the environmental context within which the Proposed Plan operates and the constraints and targets that this context imposes on the Plan. A full environmental baseline is included as **Appendix B** of this report. **Table 4** below summarises the data collected and their source.

Table 4: Summary of data collected in compiling the environmental baseline

DATA	SOURCE
Area and population of Orkney	General Register Office for Scotland
CO ₂ emissions within the scope of influence of Orkney Islands Council	Ricardo-AEA May 2014 Local and Regional CO ₂ Emissions Estimates for 2005-2012 (Ricardo-AEA/R/3374)
Types of central heating used in Orkney	Scotland's Census 2011 http://www.scotlandscensus.gov.uk/r2-downloadable-files
Average number of cars or vans in Orkney	http://www.scotlandscensus.gov.uk/documents/censusresults/release2a/rel2asbfigure21.pdf
Passenger numbers for subsidised bus services in Orkney	Transport Service, Orkney Islands Council 2014
Operational grid-connected wind turbines in Orkney December 2012 (0.5MW and over)	Orkney Islands Council Development Management Service
Information on lease arrangements for wave and tidal energy development	www.thecrownestate.co.uk
Average rainfall in Orkney	SNIFFER, 'A handbook of climate trends across Scotland', 2006 www.sniffer.org.uk
Information on current climate trends	http://www.scotlandscensus.gov.uk/documents/censusresults/release2a/rel2asbfigure21.pdf
	SNIFFER, 'A handbook of climate trends across Scotland', 2006 www.sniffer.org.uk
North of Scotland future climate change scenarios	UK Climate Impacts Programme www.ukcip.org.uk
Passenger numbers at Kirkwall Airport	Transportation Service, Orkney Islands Council 2007/08.
Discharges to air from major industrial processes	Scottish Pollutant Release Inventory (SEAP), www.sepa.org.uk
Air quality in Orkney	Local Air Quality Management Progress Reports

DATA	SOURCE
Legislation relating to European Protected Species	SNH website: www.snh.gov.uk
List of statutory and non-statutory designated natural heritage sites	Scottish Natural Heritage (SNH) www.snh.gov.uk Orkney Islands Council Local Plan
Lists of Priority habitats in Orkney	Orkney Islands Council Local Biodiversity Action Plan
Information on bat sightings in Orkney	Orkney Wildlife Information and Records Centre
Information on cetacean presence in Orkney	Booth, C. & J. Sillocks, Skarfies & Selkies, (2005)
Information on basking shark presence in Orkney	Orkney Wildlife Information and Records Centre
Measures to protect species outwith designated areas	SNH website: www.snh.gov.uk
Information relating to RSPB reserves in Orkney	RSPB website: www.rspb.org.uk
Climate change and natural heritage	Scottish Natural Heritage http://www.snh.gov.uk/climate-change/impacts-in-scotland/effects/habitats/
Water quality data (freshwater and coastal) and Groundwater quality data	Scottish Environment Protection Agency (SEPA)
Information relating to Orkney soil types	Soil and land capability for agriculture maps (Orkney and Shetland) mapsales@macaulay.ac.uk Scottish Natural Heritage Review No 100, Orkney Landscape Character Assessment. Land Use Consultants, Glasgow (1998)
Plans to establish a soil monitoring system	Changing Our Ways, Scotland's Climate Change Programme, Scottish Executive 2006
Data on Agricultural Land Use in Orkney between 2005-2012	Scottish Agricultural Census 2005 – 2012
Contaminated Land Inspection Strategy 2003	Orkney Islands Council Department of Environmental Health
Derelict and Urban Vacant Land in	Scottish Vacant and Derelict Land Survey 2013

DATA	SOURCE
Orkney	http://www.gov.scot/Publications/2014/02/7170
Geology of Orkney	www.fettes.com/orkney/geology
Orkney and Shetland a Landscape Fashioned by Geology	www.snh.org.uk
Orkney geological sites	JNCC website The Orkney Local Development Plan 2014
Information on Landscape Character Assessment	Scottish Natural Heritage Review No 100, Orkney Landscape Character Assessment
Hoy and West Mainland NSA	Scottish Natural heritage www.snh.org.uk
Landscape capacity for wind energy development	Landscape Capacity Assessment for Wind Energy in Orkney, Ironside Farrer (2014)
Definition of the historic environment	SHEP 2011 (Historic Environment Scotland's policy for the sustainable management of the historic environment)
Overview of Orkney's history and pre-history	www.orkneyjar.com
Lists of Scheduled Monumentss and Listed Buildings Information on Conservation Areas and Gardens and Designed Landscapes	PASTMAP, www.historic-scotland.gov.uk/index/ancientmonuments/searchmonuments.htm Scottish Natural Heritage, www.snh.org.uk
Population trends in Orkney	Orkney Economic Review 2012-13 (source General Register Office for Scotland (GROS))
Population estimates for Orkney 2015-2035	General Register Office for Scotland (GROS) estimates http://www.gro-scotland.gov.uk/mwq-internal/de5fs23hu73ds/progress?id=ntGhk25ubu
Population trends in the Orkney Islands over the period 1961 – 2011	Scotland's Census Results Online
Life expectancy at birth of residents of the Orkney Islands over the period 2000 – 2010	General Register Office for Scotland
Age and sex structure of the population of the Orkney Islands (2011)	General Register Office for Scotland

DATA	SOURCE
Summary of Orkney health statistics	www.scotpho.org.uk/comparative-health/profiles/2010-chp-profiles
Treatment of waste produced in Orkney	www.SEPA.org.uk
Scottish waste recycling targets	SEPA, www.sepa.org.uk
Source of aggregates used in Orkney	Orkney Islands Council Roads Department
Road Planings and Aggregate recycled by Orkney Islands Council	Orkney Islands Council Development & Infrastructure
National policy guidance	Scottish Planning Policy 2014

A brief description of the Orkney Islands

The following paragraphs give a brief overview of the main characteristics of Orkney. A more comprehensive environmental baseline for Orkney is provided in **Appendix B** to this Environmental Report.

Orkney comprises a group of islands which is located approximately 20 miles off the north coast of Scotland. The largest and most highly populated of the group is the Mainland. The principle centres of population on the Mainland are the towns of Kirkwall and Stromness, and in the rural areas the villages of Dounby, Finstown, St Mary's and St Margaret's Hope represent smaller residential and service centres. Outwith these towns and villages the settlement pattern is more dispersed. The smaller inhabited North and South Isles are less densely populated and in certain Isles depopulation is an issue. The dispersed pattern of settlement poses considerable challenges to the provision of transport services within and from the islands.

Historically, agriculture has played a principal role in the economy of Orkney and, although it continues to do so, recent years have witnessed further diversification into areas such as tourism, including related industries such as jewellery manufacture and specialist food production. The establishment in the 1970s of an oil terminal in the island of Flotta brought a significant boost to the islands' economy, providing employment for many young people who may otherwise have left the County to find jobs elsewhere.

Orkney's geographic location and cool maritime climate mean that for much of the year the islands experience cool, damp and windy weather and, whereas this has often in the past been regarded as a disbenefit, with the emergence of a rapidly developing renewable energy industry, the advantages are now appreciated of Orkney's brisk winds, and marine environment which is characterised by Atlantic swell waves and strong tidal currents.

Orkney was at the forefront of the early stages of onshore wind energy development with test turbines located for a number of years on Burgar Hill in Evie. More recently the establishment in Stromness of the European Centre for Marine Energy, which provides testing facilities for both wave and tidal devices, means that Orkney is now at the centre of research and development of the emerging marine renewables industry. A number of Areas for Lease have been awarded by Crown Estate for wave and tidal energy

development in the Pentland Firth and Orkney Waters area and the first of these, the MayGen tidal project, off the coast of Caithness, is underway. Other projects in the area are at earlier stages of planning.

Orkney's natural and cultural heritages list amongst its finest assets, providing an attractive and stimulating environment in which to live and work - or indeed to visit for a holiday. Although much of the land areas are used for agriculture, many areas are also designated for their natural heritage value. The built environment of the islands portrays a rich and colourful history of human settlement and includes many Scheduled Monuments with many more archaeological records listed in the Sites and Monuments Record. However, probably the most prominent feature of the islands' past is the Heart of Neolithic Orkney World Heritage Site which includes the remains of settlements dating from 3000BC and plays a major role in the success of the islands' tourism industry.

Orkney's distinctive landscapes and seascapes also add to the value of the local environment. A result of the area's geological past and the effects of human settlement and the physical forces of the weather, the landscapes of Orkney are generally characterised by an undulating profile with moderately low and rounded hills and green fertile lowland areas. Although the County has no large scale rivers, its countryside is crossed by numerous burns which drain either to the sea or into relatively shallow and productive lochs.

With such outstanding local surroundings, The Local Development Plan plays a pivotal role in ensuring that development can take place without adversely affecting the various features of the environment. It must inform the siting and design of development which will address the housing and business/industry needs of the County whilst at the same time, protecting and where appropriate enhancing the valuable natural assets of the Orkney Islands.

Environmental issues

The purpose of this section is to identify existing environmental issues that could affect, or be affected by, the Orkney Local Development Plan.

Environmental issues that are relevant to Orkney have been identified through previous discussions with SEPA, SNH and Historic Environment Scotland, as well as analysis of the environmental baseline data that is presented in **Appendix B** of this report. Experience gained from the preparation of other SEA reports also assisted in highlighting the main environmental issues that are likely to affect Orkney during the lifetime of the new Orkney Local Development Plan.

This information, along with analysis of the environmental objectives of other Plans, Programmes and Strategies that are relevant to the LDP, was used to identify a set of SEA Objectives which are presented in **Table 5** below.

The SEA objectives represent the criteria against which the policy and proposal options of the Main issues Report were assessed and have also been used to assess the constituent parts of the Proposed Plan. Table 5 includes a range of questions that have been used to interrogate the policies and proposals of the Plan in order to assess how well they are likely to address the environmental issues.

The SEA objectives were included in the Scoping Report which was submitted to the Consultation Authorities on 17 November 2014. The consultation responses received confirmed that these were appropriate objectives.

Table 5: Establishment of the SEA objectives through analysis of environmental issues that are relevant to the Plan

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
<p>Climatic factors</p>	<p>Orkney has a relatively high carbon footprint which is due a number of contributing factors, some of which are relevant to the Local Development Plan.</p> <p>Although the major centres of population are Kirkwall and Stromness, many people live in rural areas and require transport to get to their work or to access services and facilities in the towns.</p> <p>Orkney is heavily dependent on fossil fuels for transport and there is a high level of car ownership in the county.</p>	<p>The LDP can encourage a future pattern of development which would encourage more sustainable forms of transport, e.g. by bus, car sharing or by active travel.</p> <p>By focusing further larger scale development towards the rural settlements, the LDP can contribute to the sustainability of existing services in the general area. These may include shops, schools, churches and health, social and recreational facilities. The continued provision of these services and facilities in the countryside reduces the need to travel into town.</p>	<p>Reduce Scottish greenhouse gas emissions, in line with Government targets.</p>	<p>Does the policy / proposal provide an opportunity for planning gain in terms of encouraging more sustainable planning patterns?</p> <p>Is the policy / proposal likely to reduce the need to travel or increase the potential to use public transport or to adopt active means of travel?</p> <p>Is the policy / proposal likely to contribute towards a reduction in CO₂ emissions and other greenhouse gases?</p>
			<p>Support patterns of development which provide safe and convenient opportunities for walking and cycling and facilitate travel by public transport.</p>	
			<p>Reduce the need to travel.</p>	

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
	<p>Orkney's geographical location means that its climate is cool, damp and windy and space heating is required for much of the year. Fuel poverty is an issue which is anticipated to grow with increased fuel costs.</p>	<p>The policies of the LDP can provide guidance on the design and siting of development which will contribute towards energy efficiency.</p> <p>It can also encourage the sustainable use of building materials, incorporation of renewable energy technologies into new buildings and enable walking and cycling to be an achievable alternative to motorised travel.</p>	<p>Reduce the need to use energy.</p> <hr/> <p>Increase the use of sustainable techniques in development.</p>	<p>Do the proposed land allocations offer opportunities for shelter from prevailing winds and for solar gain?</p> <p>Do the policies / proposals of the LDP promote the use of sustainable techniques in development?</p>
	<p>Renewable energy development, both on land and in the marine environment, is a growing economic sector in Orkney and makes a significant contribution towards national climate change and carbon reduction targets. However such development has potential to impact upon other environmental receptors.</p>	<p>The LDP has an important role to play in promoting policies which would enable further development of the renewable energy sector, whilst safeguarding environmental receptors.</p>	<p>Support the transformational change to a low carbon economy, consistent with national objectives and targets.</p>	<p>Does the LDP propose a policy framework which will enable the development of renewable energy projects whilst safeguarding the environment?</p>

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
	<p>A number of areas in Orkney are at increased risk of flooding.</p>	<p>In its proposed land allocations the LDP should direct future development away from areas which are at significant risk of flooding, building in a greater degree of resilience to the effects of climate change which are likely to include extreme weather events and flooding.</p>	<p>Promote a precautionary approach to flood risk from all sources.</p>	<p>Does the policy / proposal avoid, reduce or manage flood risk through the appropriate siting of development?</p>
	<p>A number of locations are at increased risk of coastal erosion. Recently released climate projections indicate the potential for changes to our climate which could in turn influence the rate of coastal erosion.</p>	<p>It should also take account of finalized and approved Flood Risk Management Strategies and Plans.</p>	<p>Address vulnerability in the County to the likely effects of climate change.</p>	<p>Would development of any allocation increase flood risk elsewhere?</p> <p>Would the proposal promote development that incorporates increased resilience to the effects of climate change in their design and siting?</p>
Biodiversity, fauna & flora	<p>Orkney has a rich diversity of wildlife and features many sites which are designated at the international, national and local level for their natural heritage value.</p>	<p>The LDP should ensure a policy framework that will seek to maintain and, where appropriate enhance Orkney's high quality natural heritage which includes its protected and priority habitats.</p> <p>A Habitats Regulations Assessment will be carried out of the likely significant effects on the Natura sites</p>	<p>Conserve protected sites and species.</p>	<p>Will the proposal or policy affect any protected species or area which is subject to international or national natural heritage designation or area identified for its importance to nature conservation?</p>

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
		of the policies and land allocation proposals of the LDP.		
	Increased development may result in loss and fragmentation of natural habitat with further impacts on protected and priority species and habitats.	National strategies for conservation should be supported with particular attention given to Local Biodiversity Action Plan targets. Biodiversity interests should be considered in the design and proposed siting of new development. Where possible, appropriate means of habitat enhancement should be factored into development.	Safeguard valuable habitat from loss and fragmentation through development.	Will the proposal affect any species or habitat identified as a priority in national or Local Biodiversity Action Plans? Will the proposal offer any potential for habitat protection or enhancement?
	Orkney Islands Council <i>“has a duty to further the conservation of biodiversity”</i>		Protect trees and woodland that have high nature conservation or landscape value.	
	Certain habitats and landscape features provide society with		Protect biodiversity, enabling and encouraging habitat enhancement or restoration where appropriate, and contributing towards achievement of the Orkney LBAP actions and targets.	
			Maintain healthy ecosystems and work with the natural	Do the policies and proposals of the LDP pay due regard to existing

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
	valuable services, often described as ecosystem services. Their ongoing effectiveness can be threatened by inappropriately designed or sited development.		processes which provide important services to communities.	ecosystem services and benefits?
Water	<p>Certain watercourses in and around Orkney are classed as moderate, poor or bad.</p> <p>Development can lead to negative impact upon water quality.</p> <p>In a number of rural settlements foul water drainage facilities are at, or close to, capacity. In others there is no strategic provision for foul water drainage and</p>	<p>Planning authorities have a duty under the Water Environment & Water Services Act to protect and improve Scotland's water environment.</p> <p>Future development should support sustainable water management practices.</p> <p>The policies and proposals of the LDP should seek to maintain or enhance the quality and overall status of Orkney's coastal waters, lochs and burns.</p>	<p>Promote the protection and improvement of the water environment, including burns, lochs, estuaries, wetlands, coastal waters and groundwater.</p> <p>Maintain water abstraction, run-off and recharge within carrying capacity.</p>	<p>Could the policies and proposals of the LDP impact upon the water environment, e.g. burns, drainage ditches, groundwater dependent terrestrial ecosystems, lochs or the marine environment?</p> <p>Do the policies and proposals of the LDP protect the water environment and enable its improvement?</p> <p>Can the land allocation options connect into public sewerage</p>

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
	<p>properties are reliant on private systems, e.g. septic tanks. Proliferation of septic tank systems can lead to adverse impacts on the water environment.</p> <p>Inappropriately designed or sited aquaculture development can have a negative impact in the marine environment.</p>			<p>systems?</p> <p>Could development of any land allocation options impact upon ground water or surface water drainage in the area?</p> <p>Could development of any land allocation options impact on private water supplies?</p> <p>Do the policies/proposals of the LDP address potential for development to lead to increased water abstraction, or to impact upon the ecological status or morphology of water bodies?</p>
Soil	<p>Loss of agricultural land to new housing development.</p> <p>Several areas of vacant and derelict are located in</p>	<p>The LDP should encourage development on suitable brownfield sites, where it is compliant with other policies.</p>	<p>Promote the viable use of vacant and derelict land, alleviating pressure on greenfield sites.</p>	<p>Is the proposal on derelict, vacant or other brownfield land?</p> <p>Will the proposal result in loss of agricultural land?</p>

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
	Orkney.			
	Potential effect of identified contaminated land.	Any contaminated land issues should be taken into consideration when proposing new land allocations.	Reduce the threat of contamination and seek to protect soils from damage such as erosion or compaction.	Are there any contaminated land issues affecting the proposal?
	Loss of peatland cover. Inappropriate development and site drainage may lead to increased soil erosion.	The value of Orkney's areas of peat should be recognised in the LDP and appropriate measures included to protect this valuable resource. The LDP should ensure that any development does not degrade the quality of soil and should not increase the risk of soil erosion.	Recognise the environmental benefits provided by soils and protect their quality and quantity.	Does the LDP include policy to protect soil resources, including peat and carbon-rich soils? Does the proposal threaten any deposits of peat?
Geology	A number of sites throughout Orkney are designated at international, national and local level for their value in illustrating Orkney's geological history and the physical processes which have contributed to its many and varied geomorphological	There is a need to protect the designated natural heritage sites, including sites of geological and geomorphological interest, from the possible adverse effects of new development.	Protect designated and undesignated sites which are recognised and valued for their geological or geomorphological importance.	Does the LDP ensure a policy framework that will seek to maintain and protect sites which are designated for their geological or geomorphological value? Is the proposal likely to affect any sites designated for their geological interest?

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
	features.			
Landscape	There is a need to protect and enhance the quality and distinctiveness of Orkney's landscapes and townscapes.	The policies and proposals of the LDP should encourage the appropriate siting, design and scale of development in relation to the surrounding landscape, including nationally or locally designated landscape areas.	Facilitate positive change while maintaining and enhancing distinctive landscape character.	Does the LDP ensure a policy framework that will seek to maintain and where appropriate enhance the character of Orkney's landscapes, townscapes and seascapes? Will the proposal affect any landscape designation, either national or local?
	New development and changes to existing structures leads to changes within the landscape; these have potential to be detrimental to landscape character and visual amenity.	New development should be sympathetic to urban form and the traditional pattern and identity of existing settlements.	Respect urban form, settlement pattern and identity.	Is development of the proposal likely to respect the settlement pattern and identity of this area?
		Through its policies the LDP should promote improvements to quality and design in future development.	Improve the quality and design of the built environment.	Does the LDP promote policy to improve the quality and design of the built environment?
Cultural Heritage	Orkney's rich cultural heritage is displayed in its many archaeological sites	The LDP should ensure a policy framework that will seek to maintain and, where appropriate, enhance Orkney's high quality cultural heritage which includes the Outstanding	Promote the care and protection of the designated and non-designated historic environment.	Does the LDP ensure a policy framework that will seek to maintain and where appropriate enhance Orkney's

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
	<p>and historic buildings</p> <p>Development can result in the loss of or damage to, historic environment features or may affect their setting.</p>	<p>Universal Value of the Heart of Neolithic Orkney World Heritage Site.</p>	<p>Enable positive change in the historic environment which is informed by a clear understanding of the importance of Orkney's heritage assets and ensures their future use.</p>	<p>cultural heritage?</p> <p>Will the proposal impact on the following cultural heritage resources and/or their setting:</p> <ul style="list-style-type: none"> • Scheduled Monuments • Locally important archaeological sites identified in the Sites and Monuments Record • Listed buildings • Sites identified in the Inventory of Gardens and Designed Landscapes <p>Will the proposal affect a Conservation Area?</p>
			<p>Safeguard cultural heritage features and their settings through responsible design and siting of development.</p>	
			<p>Protect the integrity and Outstanding Universal Value of the Heart of Neolithic Orkney World Heritage Site.</p>	<p>Will the proposal impact on the Heart of Neolithic Orkney World Heritage Site?</p>

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
Population and Human Health	Lack of provision of affordable housing.	The LDP should promote the development of well designed, efficiently heated and affordable homes and should provide sufficient allocation of land to meet the demand for housing in the County until 2020.	<p>Promote increased availability of affordable housing.</p> <p>Improve community environments and quality of life.</p> <p>Protect and enhance human health and promote access to health, social and recreational facilities.</p>	Is the proposal likely to fulfil requirements for affordable housing in the area?
	Depopulation is a problem in the smaller islands of Orkney and geographical isolation is a major contributory factor.	<p>The policies and proposals of the LDP should seek to address social and economic factors which lead to geographic isolation.</p> <p>During the lifetime of the LDP a number of developments are proposed in the education, healthcare and recreation sectors. These should be well designed, attractive buildings which demonstrate the sustainable use of materials and renewable energy technology and will fulfill the projected requirements of Orkney's communities for the foreseeable future.</p>		Is it likely to fulfil wider housing requirements in the area?
	Need to protect and, where appropriate, enhance areas of open / green space in urban settings.	The LDP should protect the quantity and quality of publicly accessible greenspace in Orkney, recognising its value in terms of its benefit both to the wellbeing of communities and to biodiversity.		Retain and, where appropriate, improve the quality and quantity of publicly accessible open space.
	Physical Activity Levels in Children and Adults can	The availability of open space, safe accessible routes for walking and	Provide for easy and safe access to and within green	Is the proposal likely to affect the provision of open space within the area?
				Could it affect any Core

SEA Topic	Environmental Issues	Implications for LDP Policy	SEA OBJECTIVE	Questions
	<p>cause or exacerbate a range of illnesses and health conditions.</p> <p>Accessibility can be an issue, especially for people with disabilities or mobility issues.</p>	<p>cycling in and around settlements encourages physical activity and contributes significant benefits to health and general wellbeing.</p> <p>The policies of the LDP should promote equality of opportunity to people of all abilities. Development should address and eliminate barriers that disabled people experience in their daily lives.</p>	<p>infrastructure, including core paths and other important routes.</p> <p>Support opportunities for enjoying and learning about Orkney's natural and cultural environments.</p> <p>Improve social inclusion.</p>	<p>Path or Rights of Way?</p> <p>Will the policies and proposals of the LDP improve social inclusion within Orkney?</p>
Material Assets	<p>There is a need to stabilise or reverse the trend of growth in waste produced in Orkney and to continue to increase rates of re-use and re-cycling of waste.</p>	<p>The LDP should promote sustainable means of waste management with the aim of reducing the quantities of wastes produced in the County and increasing the quantities of waste that are recycled or re-used.</p>	<p>Promote the efficient use of resources and the minimisation of wastes through their re-use or their recovery through recycling, composting or energy recovery, in line with 2020 national targets.</p>	<p>Will the policies and proposals of the LDP promote sustainable waste management?</p>
	<p>Development requires the use of natural resources such as stone, gravel and sand.</p>	<p>It can also encourage the sustainable use of building materials, such as mineral resources including, where appropriate, the re-use of stone and secondary aggregate.</p>	<p>Promote sustainable and efficient use of natural resources.</p> <p>Optimise the use of existing infrastructure and buildings.</p>	<p>Will the proposal offer opportunities for re-use or redevelopment of existing infrastructure or buildings or the re-use of stone or aggregate?</p>

Likely evolution of the environment without the new Orkney Local Development Plan

Without preparation of the new Orkney Local Development Plan, the policies of the existing Plan would be retained and used to guide and determine future development in Orkney. Whilst these policies have generally performed well and will be used to inform the new Plan, it is accepted that a degree of revision is necessary. Issues which the new Plan seeks to address more fully include the design quality of new developments, integration of terrestrial planning with the emerging marine planning system, flood risk and coastal erosion. In particular, the new Plan will have an important role in encouraging a greater level of sustainability in new development, helping Orkney meet the anticipated challenges relating to climate change and supporting the move to a low carbon economy. The new Plan will contribute towards future renewable energy developments in Orkney waters.

Assessment of environmental effects and measures envisaged for prevention, reduction and offset of any significant adverse effects

Components of the Local Development Plan to which SEA was applied

SEA has been applied to:

- The Vision;
- The Policies;
- The Town, Village and Rural Settlement land allocations;

This chapter sets out the method used for the environmental assessments.

The SEA process is carried out in parallel with preparation of the Local Development Plan and its purpose is to ensure that natural, historic and social environmental issues are fully considered at all stages of decision making. Evaluation of the likely significant environmental effects of the Plan is undertaken in line with good practice, as set out in the following documents:

- Scottish Executive (2006) Strategic Environmental Assessment Tool Kit (and templates) ;
- Scottish Executive (2003) 'Environmental Assessment of Development Plans';
- OPDM (2005) A practical Guide to the Strategic Environmental Assessment Directive';
- Environmental Agency (2007) 'Strategic Environmental Assessment and Climate Change';
- SNIFFER (2008) 'Air, Water and Soil Strategic Environmental Assessment Guidance'.
- Scottish Government (2013) Strategic Environmental Assessment Guidance

Environmental topics scoped in for assessment

The Scoping Report which was submitted to the Consultation Authorities on 17 November 2015 indicated that all SEA topics should be scoped in for consideration within the environmental assessment. However following consideration of the scoping responses we have opted to scope out Local Air Quality as this is generally not considered to be an issue in Orkney.

Assessment methods

The Environmental Report which was prepared alongside the MIR 2015 included assessments of the land allocation options which were under consideration. The options which were taken forward have now been updated to take account of further information that was provided during consultation on the MIR. In addition the assessments have also been updated to include the existing allocations that were carried forward from the existing Orkney Local Development Plan. In many of these nothing has changed since they were originally assessed during SEA of the existing Plan; however for a few allocations, additional information has become available, for example in relation to flood risk; it was therefore considered useful to include this information at this stage.

Where adverse or uncertain adverse effects were identified, mitigation measures were suggested. Re-assessment of the options was then undertaken, taking into consideration any accepted suggestions for mitigation.

The methodology for assessments included the identification of the type of effect (beneficial, adverse or uncertain) and their significance (minor, moderate major or uncertain)

Significance is a function of impact magnitude (the degree to which it affects a receptor) and receptor sensitivity or importance. In judging the significance, consideration is given to the probability, duration frequency and reversibility of the predicted effects and a commentary of key findings is provided.

When considering significance, a cautionary approach is taken. Where an effect has two differing magnitudes recorded, the overall assessment of that effect will be considered to be the greater of the two. However where both positive and negative effects are identified, both have been indicated.

Table 6 sets out the methodology used for assessing the level of significance.

Table 6: The assessment methodology

Significance	Description
++ Significantly positive effect	The change is beneficial and extremely noticeable in comparison to baseline variations and could have far reaching consequences.
+ Positive effect	Change is moderately beneficial in scale in comparison to the baseline and could have locally or regionally important consequences.
0 Minor or neutral effect	Little or no change from baseline conditions
? Uncertain effect	There is insufficient information available to inform an assessment; or limited understanding of the likely effects; or the effect would largely depend on the location.

Significance	Description
- Adverse effect	The change is limited in scale in comparison to the baseline variations, e.g. the Plan could cause minor or moderate effects to a locally or regionally important site or issue.
-- Significantly adverse effect	The change is adverse and extremely noticeable in comparison to the baseline variations and could have far reaching consequences, e.g. the Plan could adversely affect the integrity of an internationally or nationally designated site or the setting of an internationally important site.

The assessment also considers and describes effects in terms of the period over which they could occur (i.e. short- or long-term), the spatial scale (i.e. international, national, regional and local) and whether the effect will have a direct or indirect influence (for example a direct adverse effect on water quality could also represent an indirect effect on public health).

Temporality – Short term effects are identified where they are transient in nature. Long-term effects are those that are expected to last over the life-span of the Local Development Plan.

Spatial scale – Effects can act over a range of spatial scales from small scale localised effects to large-scale national effects. In terms of this assessment, local effects have been considered to be those that would affect the local community or town; regional effects would be those that would have potential to affect all of Orkney. National effects in terms of this SEA would cover Scotland.

In some instances there will be an element of uncertainty, either because there is insufficient information available, there is limited understanding about the likely effects or environmental resource, or because the effect largely depends on the detailed design issues.

The Local Development Plan will set out the policy which will guide development throughout Orkney for the next five years. For this reason, the effects identified in this SEA are assumed to be long term and regional unless otherwise stated.

The assessments of potential effects of the Local Development Plan have been undertaken by applying informed professional judgement. For ease of understanding, a matrix is used to display the results of the assessment.

Alternatives, Mitigation and Residual Effects

In the Main Issues Report, a preferred option and, in many instances, an alternative option was identified for the issues and land allocations under consideration. These options were assessed, allowing the relative merits of each to be evaluated. Where necessary and appropriate, the assessments sought to make recommendations (mitigation) that would fully integrate environmental considerations into the LDP, to reduce potential adverse effects and to enhance those of a beneficial nature. This has informed the nature of the LDP policy issues to be taken forward for development, refinement and further assessment. Any residual adverse effects on the environment (after accepted mitigation) from the implementation of the proposed policy direction of the Main Issues Report were documented in the MIR Environmental Report.

Assessment of the policies of the Proposed Plan

The policies of the proposed Plan underwent assessment as they were formulated, in order to gauge their compatibility with the SEA objectives, and the findings are

presented in **Appendix C.6 Assessment of the Policies**. A matrix approach was taken using the following key:

++	Fully compatible with the SEA Objectives which are <u>relevant to the policy</u>
+	Broadly compatible with SEA Objectives which are <u>relevant to the policy</u>
-	Incompatible with the SEA Objectives <u>relevant to the policy</u>
0	No link
?	Compatibility with SEA Objectives is uncertain

For a number of the policies, recommendations were made which would improve compatibility with the SEA objectives.

Strategic Flood Risk Assessment

A Strategic Flood risk Assessment which is specific to Orkney was prepared alongside the Proposed Plan stage of the Orkney Local Development Plan 2014. In the meantime the SEPA Flood Maps have been updated and the SFRA has yet to be revised to take account of changes to the national maps.

SEPA's Flood Maps were therefore used to assess flood risk to the proposed settlement allocations. Considering flood risk early in the development of the LDP will ensure that inappropriate development can be directed away from locations at risk of flooding, and development will not materially increase the risk of flooding in other areas.

Cumulative Effects Assessment

The aim of cumulative effects assessment is to identify, describe and evaluate cumulative (including synergistic) residual effects in order that they may be avoided, minimised or enhanced as appropriate. The potential for cumulative effects needs to be identified in the early stages of the SEA. Schedule 3 of the SEA Act refers to secondary, cumulative and synergistic effects and these are described in more detail below.

Secondary: Effects that are not a direct result of the PPS but occur away from the original effect, or as a result of a complex pathway. An example of a secondary cumulative effect would be the unsustainable planning of roads in sensitive wetland areas causing secondary development activities and increased pressure on the aquatic environment.

Additive: Effects arise, for instance, where several developments each have insignificant effects, but together have a significant effect. For example, incremental soil sealing in urban and rural areas due to development pressures; and

Synergistic: effects interact to produce a total effect which is greater than the sum of the individual effects, so that the nature of the final impact is different to the nature of the individual impacts. An example of a synergistic effect is vegetation removal, soil sealing and soil compaction which may all cause an increase in surface water runoff and erosion of soils which could have an adverse synergistic effect on aquatic ecosystems. This would be due to increased sediment loading or silting and possible nutrient enrichment.

The cumulative assessment will include the likely significant residual effects on the environment, including those on climatic factors, air quality, biodiversity, water, soil, geology, landscape, cultural heritage, population, human health and material assets and the interrelationship between these environmental receptors.

Cumulative effects will be reported on a media by media basis and a matrix will be used for the evaluation and comparison of variables to present and compare in a clear manner, considering both beneficial and adverse residual effects.

Assessment of the Proposed Plan - summary

The policies and proposals of the Proposed Plan were assessed using the framework shown above. A summary of the assessment findings is provided below.

Assessment of The Vision for the Orkney Local Development Plan

The findings of the assessment of the Vision are included as **Appendix C.1 Assessment of the Vision**. The conclusion reached by this assessment was that the objectives of the Vision would be likely to result in moderately positive environmental effects with no adverse effects anticipated.

Assessment of the Settlements identified through the Spatial Strategy

The Spatial Strategy proposes a 3-tier settlement hierarchy which is outlined in **Table 7** below.

Table 7: Settlement hierarchy

Settlement Type	Settlement
Towns	Kirkwall, Stromness
Villages	Balfour, Burray Village, Dounby, Evie Village, Finstown, Orphir Village, Pierowall, Quoyloo, St. Margaret's Hope, St Mary's, Stenness, The Palace, Toab, Whitehall.
Rural Settlements	Brinyan, Burnside, Harray, Burnside, Flotta, Evie School, Hamar, Hillhead, Houton, Kettletoft, Lady, Longhope, Lyness, Lyron, Madras, Moaness, Norseman, Scapa, Scapa Brae, Tingwall
New proposed Rural Settlements	Dalespot, Herston, Lighthouse Corner, Scorradale

The proposed hierarchy was developed by assessing the level of service provision in each of the settlements:

- Towns feature a wide range of services, such as shops, health services, a church, a hotel, school and hairdresser.
- Villages are settlements which include a shop and some also feature additional services, e.g. a school, a church or a pub.
- The Rural Settlements may include a shop, e.g. Hillhead and Madras; a school, e.g. Evie School; or a community hall, e.g. Lyron and Burnside. Scapa Brae includes a garage and car showroom and a restaurant.

The following new rural settlements have been identified following consultation on the Main Issues Report:

- Herston is a small cluster of houses which originally developed during the 19th century to support the herring fishing industry.

- Scorradale is a loose cluster of houses surrounding the site of the former Orphir School.
- Dalespot is a cluster of houses adjacent to a car repair garage and a horticulture business.
- Lighthouse Corner is an existing loose cluster of housing.

All settlements apart from Herston are located on a scheduled bus route.

Assessment was undertaken of the likely environmental effects of future development within the settlements and the findings are reported in the following appendices:

Appendix C.2: Assessment of the Stromness allocations

Appendix C.3: Assessment of the Kirkwall allocations

Appendix C.4: Assessment of the East Mainland & Linked South Isles allocations

Appendix C.5: Assessment of the West Mainland allocations

The assessments which were undertaken of the settlements of the non-linked Isles during SEA of the Orkney LDP 2014 have not been updated and are not included in this report. As no formal land allocations have been identified in any of these, it was considered unnecessary to revisit them. Any development proposed in these settlements would be undertaken on infill sites; however the policy on new housing development in these Isles is more open to development in the countryside and there is therefore less focus on directing development towards the settlements.

The settlement assessments highlighted a number of issues or constraints to development and these are summarised in **table 8** below along with the relevant mitigation measures.

Table 8: Potential constraints to development identified through assessment of the Settlement land allocations options

CONSTRAINT / ISSUE	SETTLEMENT	MITIGATION
LAND OWNERSHIP		
Land which has been included for development in the draft plan but which has currently not been submitted by the land owner.	Various	Housing Land Audit and Land submission exercise opened dialogue with most landowners. Where contact was not made there contact with landowners was achieved through telephone contact, liaison with Elected Members and Community Councillors and written correspondence as required. These allocations have been identified within the 20-year land supply.
CLIMATIC FACTORS		
Flood risk– either within the allocation option or to properties downstream.	Various	Flood risk is noted in the relevant Settlement Statements, along with the requirement to undertake a Flood Risk Assessment where necessary.
BIODIVERSITY, FAUNA & FLORA		

CONSTRAINT / ISSUE	SETTLEMENT	MITIGATION
Proximity to designated natural heritage sites.	Stenness	The Stenness Settlement Statement notes that Loch of Stenness is a Special Area of Conservation (SAC) and is vulnerable to the effects of nutrient enrichment. The Stenness reedbed will require investment to improve the quality of discharged water, in order to allow further development to connect to the Waste Water Treatment Works.
Possible presence of protected species, e.g. otters.	Multiple settlements	The potential for otters to be present in areas close to waterbodies and drainage ditches is highlighted in the introduction to the settlement statements. Further mitigation will be achieved through Development Briefs if necessary.
Possible presence of protected species, e.g. bats.	St Margaret's Hope, Finstown, Kirkwall, Stromness	Bats are less widespread in Orkney; therefore their potential presence is noted in the relevant Settlement Statements. Further mitigation will be achieved through Development Briefs if necessary.
WATER		
No existing public sewerage infrastructure or upgrade of existing infrastructure not possible.	Various rural settlements	Private foul water drainage systems will be deemed acceptable for small scale developments, provided that they comply with the current LDP policy on waste water drainage which forms part of Policy 13 Flood Risk, SuDS and Waste Water Drainage.
Existing sewerage infrastructure not adequate for forecast scale of development	Various	Should demand exceed available capacity, Scottish Water will initiate a Growth Project once one development meets the 5 Growth Criteria.
Private or public water supplies within 250m of the allocation option would be vulnerable to large-scale development.	Stromness, Kirkwall, Burnside Evie School	Future development in the vicinity of private water supplies in Stromness and Kirkwall will connect to the public sewer. At Burnside and Evie School only small scale development is planned.
CULTURAL HERITAGE		
Proximity to Scheduled Monuments, unscheduled	Burnside, Burray Village, Dounby, Evie Village,	Cultural heritage sites are noted in the relevant Settlement Statement along with the requirement for development to avoid impact on their setting.

CONSTRAINT / ISSUE	SETTLEMENT	MITIGATION
archaeology or listed buildings	Hillhead, St Mary's Stenness	Further mitigation will be achieved through Development Briefs if necessary.
Potential to affect the World Heritage Site	Stenness Village Burnside	This is highlighted in the relevant Settlement Statements. Further mitigation will be achieved through Development Briefs if necessary.

Assessment of the Cumulative Impact of development of the Preferred Settlement Land Allocations

The results of assessment of the preferred settlement land allocation are summarised in **table 9** below, allowing the cumulative effects of the proposed scale of development in these areas to be illustrated.

Table 9: Cumulative significant effects (after mitigation) of development of the Sustainable Settlements

SEA receptor	Sustainable Settlements																	Cumulative impact of development in the settlements
	Burnside	Burray	Dalespot	Dounby	Evie School	Evie Village	Finstown	Herston	Lighthouse Corner	Linnadale	Madras	Scapa Beach	Stenness	St Margaret's Head	St Mary's	Tingwall	Toab	
Climatic factors	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	Minor/moderate benefit is anticipated due to a settlement strategy which will encourage greater use of public transport instead of the private car.
Biodiversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Broadly neutral. Where assessment has identified potential for adverse effects this is highlighted in the Settlement Statements and will be further addressed through Development Briefs.
Water	0	0	0	0	0	0	0	0	0	0	0	0	?	0	0	0	0	Broadly neutral. A number of settlements have no or limited capacity to connect to public sewerage systems. New development will be required to fulfil the requirements of Policy 9C Waste Water Drainage. Consult with Scottish Water regarding timescale for improvements to Stenness reed bed system.
Soil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Broadly neutral. Whilst further development of the settlements cannot proceed without loss of agricultural land, this is considered justifiable in terms of addressing the requirement for further housing in the County.
Geology	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Neutral effects.
Landscape	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Broadly neutral. Where there is potential for adverse effects this is highlighted in settlement statements and will be addressed through the relevant Development Briefs.
Cultural heritage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Broadly neutral. Where there is potential for

SEA receptor	Sustainable Settlements																Cumulative impact of development in the settlements	
	Burnside	Burray	Dalespot	Dounby	Evie School	Evie Village	Finstown	Herston	Lighthouse Corner	Linnadale	Madras	Scapa Beach	Stenness	St Margaret's House	St Mary's	Tingwall		Toab
																		adverse effects this is highlighted in settlement statements and will be addressed through the relevant Development Briefs.
Population & Human health	+	+	+	+	+	+	+	0	+	+	+	+	+	+	+	+	+	Moderate additive benefit is expected by encouraging larger scale development in areas with easy access to existing services; this will contribute to the quality of life and sustainability of rural communities and the wider countryside. New development will be encouraged to link into existing path networks.
Material assets	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Moderate benefit is likely from a policy approach which will direct larger scale developments towards settlements where they would be close to existing road infrastructure and where services such as water, electricity and telecoms are easily accessible.
Interrelationships	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	Overall, cumulative moderate benefit is likely from a policy approach which will direct larger scale development towards existing settlements where services such as water, electricity and telecoms are already in place. This approach will also help reduce landscape impact, protect environmental interests in the wider countryside and promote increased sustainability within rural communities.

Assessment of the Policies

Assessment was undertaken of the policies for their compatibility with the SEA objectives and the findings are reported in **Appendix C.6 Assessment of the Policies of the Proposed Plan**. The assessment process resulted in a small number of recommendations these are set out in Table 10 below.

Table 10: Policy assessments – SEA recommendations

Policy	SEA recommendation	How incorporated into policy
1 Criteria for All Development	Criterion A - townscape, landscape or seascape character . Add a further criterion: <i>It protects, and where appropriate enhances the natural environment and cultural heritage resources.</i>	In criterion A character was accepted; coastal was inserted in preference to seascape . The remaining recommendations are addressed in Policy 8 <i>Historic Environment & Cultural Heritage</i> and Policy 9 <i>Natural Environment</i> .
2 Design	Criterion A v. It minimises use of energy and materials at all stages of the development and maximises opportunities for shelter in the landscape or through the use of building forms to create shelter and microclimates .	Criterion A v. was amended to: <i>It promotes sustainable design, minimising use of energy and materials at all stages of the development, and maximising opportunities for shelter.</i> This version promotes development which benefits from shelter from either landscape features or other built form.
3 Settlements, Town Centres and Primary Retail Frontages	No further recommendations.	N/A
4 Housing	Part C The Isles Approach for Housing – policy promotes a presumption in favour of new housing on the non-linked isles. Suggested inserting <i>subject to other policies in the Plan.</i>	Part C was amended to include reference to “The Isles Approach” which is set out in the Spatial Strategy. This clarifies that development in the Isles must accord with the relevant Plan policies.
5 Business, Industry and Employment	Part D Waste management facilities: policy should avoid impact on the environment and public amenity. Policy should also make provision for the development of new landfill facilities. These would be unlikely to be accommodated in areas such	Part D amended: The provision of new waste management facilities, <i>including landfill sites for inert waste</i> , will be supported on business and industrial allocations or other sites where a locational justification

	<p>as Hatston and Garson industrial estates which are used for handling recyclate and municipal waste, and instead would require a rural location.</p> <p>Part E Minerals (i) A buffer distance that takes into account the specific circumstances of the proposal that will include the location and surroundings, size, expected duration, method of working, local topography, the characteristics of the environmental effects likely to arise and the mitigation that can be achieved.</p> <p>Part ii Details of the secondary materials and wastes arising from the process.</p>	<p>has been provided and where there are no unacceptable adverse impacts.</p> <p>Part I has been amended: A buffer distance that takes into account the specific circumstances of the proposal, including information on the location and its surroundings, size, expected duration, methods of working, local topography and environment;</p> <p>Part ii has been amended: Details of the secondary materials and waste arising from the process (extraction and processing) and how these will be stored and used in the site restoration;</p>
6 Advertisements and Signage	No further recommendations.	N/A
7 Energy	Part iii d Suggest - Wind farm developments will be supported in principle within Strategic Wind Energy Development Areas.	Recommendation declined.
8 Historic Environment and Cultural Heritage	No further recommendations.	N/A
9 Natural Heritage and Landscape	No further recommendations.	N/A
10 Green Infrastructure	Allotment land should be safeguarded. The policy should make provision for the temporary use of unused or underused land as green infrastructure.	<p>The introduction to Policy 10 confirms that allotments are identified as Open Space through the Plan and will be retained where there is a recognised demand.</p> <p>It also confirms that the temporary greening of underused sites in settlements is encouraged, for example as community growing areas or locations for informal play.</p>
11 Sports, Recreation and Community Facilities	No further recommendations.	N/A
12 Coastal Development	C Criteria for all coastal development: Part i the scale, location, siting and design of the	A Criteria for all coastal development: Part i the scale, location, siting and design of the

	<p>development will not have a significant adverse effect, either individually or cumulatively on the landscape, seascape or townscape.....;</p> <p>Part ii the integrity of coastal and marine ecosystems, as well as geomorphological features, have been safeguarded.....</p> <p>B Coastal change is rather ambiguous and needs to state that new development new development generally will not be supported in areas that are vulnerable to adverse effects of coastal erosion and/or wider coastal change as identified in the National Coastal Change Assessment. However, when there is clear justification for a departure from the general policy.....,</p> <p>D Aquaculture Part i suggest:</p> <ul style="list-style-type: none"> • landscape / seascape character and visual amenity; • wider biodiversity interests, including wild salmonids and other Priority Marine Features. <p>Part ii</p> <ul style="list-style-type: none"> • tourism, recreational and leisure activities.. 	<p>development will not have a significant adverse effect, either individually or cumulatively on the landscape, coastal or townscape.....;</p> <p>Part ii the integrity of coastal and marine ecosystems, as well as geomorphological features, have been safeguarded.....</p> <p>B Coastal change New development will not generally be supported in areas that are vulnerable to</p> <p>When there is clear justification for a departure from the general policy to avoid new development in areas that are vulnerable to</p> <p>D Aquaculture Proposals for finfish and shellfish farming developments will be supported where it can be demonstrated that there will be no significant adverse effects, directly, indirectly or cumulatively on:</p> <p>i. the interests of the natural, built and cultural environment including:</p> <ul style="list-style-type: none"> • landscape / seascape character and visual amenity, taking account • historic environment resources; • habitats and species, including designated sites and protected species; • wider biodiversity interests, including wild salmonids and other Priority Marine Features; and • biological carrying capacity and seabed impacts. <p>ii existing users of the marine</p>
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		environment including: <ul style="list-style-type: none"> • existing and consented aquaculture sites; • Disease Management Areas; • commercial inshore fishing grounds and activities; • established ports and harbours, anchorages and defined navigational routes; • tourism, recreational and leisure activities.
13 Flood Risk, SuDS and Waste Water Drainage	No further recommendations.	N/A
14 Transport, Travel & Road Network Infrastructure	No further recommendations.	N/A
15 Digital Connectivity	No further recommendations.	N/A

The likely environmental effects of implementing the policies of the Proposed Plan have been assessed and the findings are included in **Appendix C.7 Assessment of the environmental effects of implementation of the Proposed Plan policies** and summarised below.

Summary of the likely environmental effects of implementing the Proposed Plan

Climatic factors

Overall, the effects of the Proposed Plan are likely to be moderately beneficial in terms of climatic factors. The spatial strategy continues to focus major development towards the towns, villages and rural settlements where there is ready access to services and facilities and the option to use public transport is generally available, reducing dependency on the private car. With policies that make provision for renewable energy generation and the incorporation of low and zero carbon energy generating technology, as well as design principles to reduce energy usage, it seeks to reduce energy usage and support the change to a low carbon economy. A number of its policies make provision for development that can help increase Orkney's resilience to the effects of climate change, in particular its policy on flood risk and Sustainable Drainage Systems. However Policy 10 *Green Infrastructure* makes provision for the creation of green networks in the larger settlements; these have potential to enhance flood risk management. However flood risk continues to be an issue, particularly in parts of Kirkwall and Policy 13 also notes that future Sustainable Drainage Systems will have to ensure that there is a neutral or better risk of flooding from surface water both on and off site.

Biodiversity, flora and fauna

Although the effects on biodiversity, flora and fauna are mainly neutral, policies 9 *Natural Environment & Landscape*, 10 *Green Infrastructure* and 13 *Flood Risk, SuDS Waste Water* all make provision for biodiversity enhancement, for example in the creation of green networks and natural flood management projects. However there are also risks of localised loss of biodiversity, for example where Policy 4 *Housing* continues to support infill development; in some instances this is achieved through the subdivision of garden ground and can lead to the loss of mature trees as well as flowering shrubs and

herbaceous plants which collectively represent important sources of forage and shelter for certain bird and invertebrate species.

Water

Policies which make provision for the creation of green networks and natural flood risk management schemes have potential to improve the water environment and contribute to River Basin Management Planning objectives.

Soils

Moderate benefits are likely for peat and soils where policy 9 seeks to minimise the loss of and disturbance to peat and carbon rich soils. This policy also benefits climatic factors by seeking to minimise the release to atmosphere of carbon that is stored in these soils and minerals.

Geology

Effects on geology are broadly neutral as the relevant policies are generally protective rather than making provision for enhancement. However it should be noted that Policies 9 and 12 recognise that certain natural features and processes provide services to communities. Examples include geomorphological features such as shingle banks, spits and coastal sand dunes which provide protection from coastal flooding.

Landscape

The effects on landscape are mainly protective and neutral; however there is potential for moderate benefit through improved design in new development as well as the creation of green networks.

Cultural heritage

The effects on cultural heritage are also anticipated to be broadly neutral; however Policy 8 *Historic Environment and Cultural Heritage* makes provision for enhancement.

Population and human health

Moderate benefit is likely for the population and human health receptors from a number of policy areas, not least increased options for housing provision. Design guidance and the requirement for increased energy efficiency in new housing will also help reduce the cost of heating homes. A continued focus on improving permeability and pedestrian access in new development will enable and encourage active travel and the associated health benefits; the provision of green networks will improve the built environment and offer potential to incorporate shelter, e.g. through woodland planting or new water features which help mitigate flood risk and provide more attractive places in which to live and work. Support for digital connectivity through Policy 15 is important in enabling increased social inclusion, in particular in more remote areas. Better connectivity also has potential to improve access to health, social and recreational facilities.

Materials assets

Moderate benefit is possible where Policy 5 *Business, Industry and Employment* makes provision for energy from waste development. This would replace the current waste management arrangement whereby Orkney's waste is shipped to Shetland for incineration in an energy from waste plant.

Areas where environmental effects remain uncertain

In terms of Policy 4 *Housing*, landscape effects will depend largely on the interpretation and application of Policy 4E *Single Houses and Housing Clusters in the Countryside*. Supplementary

Guidance *Housing in the Countryside* will provide further guidance on these aspects of the policy.

In terms of Policy 7 *Energy*, the locations and extent of Strategic Wind Energy Development Areas have yet to be confirmed. A number of potential SWEDAs were included in the Main Issues Report and an initial assessment was undertaken; however these areas were selected on the basis of landscape effects alone and will require further consideration and refinement before a final suite of SWEDAs can be identified. Once finalised and adopted these will be included in Supplementary Guidance *Energy*.

Measures envisaged for the prevention, reduction and offsetting of significant adverse effects

Assessment of the Main Issues Report (2015) highlighted a number of environmental issues to be addressed in the Proposed Plan. **Table 11** details how these have been taken into account in the new Plan.

Table 11: Environmental issues identified through assessment of the Main Issues and how these are addressed in the Proposed Plan

Main Issue	Environmental issue	How addressed in Plan
Issue 2 Housing	The energy efficiency of developments influences levels of carbon emissions produced. Increasing energy efficiency in the built environment is important in terms of reducing carbon emissions, as well as addressing fuel poverty.	Addressed through Policy 2 <i>Design</i> .
	The siting of private waste water treatment facilities is a major factor in determining their operational effectiveness and preventing environmental pollution, especially in development clusters.	Addressed through Policy 13 <i>Flood Risk, SuDS and Waste Water Drainage</i> .
	In the towns and villages landscape issues may be addressed through the preparation of development briefs; however briefs are less likely to be prepared	General guidance is provided in Policy 2 <i>Design</i> and the settlement statements. Where site specific guidance is necessary this will be

	for developments in the rural settlements. In these areas there is therefore potential for new housing to be developed in a piecemeal manner without an overall vision of how the completed development could best be laid out to address local issues and to be successfully integrated within the wider landscape.	provided in the relevant Development Briefs.
Issue 3.3 Coastal Erosion and Coastal Inundation	A number of designated natural heritage sites, e.g. Central Sanday SSSI and East Sanday Coast SPA, are in locations which experience coastal erosion and these would be vulnerable to the effects of inappropriately designed and sited coastal defence structures.	Addressed through Policy 9 <i>Natural Environment and Landscape</i> and Policy 12 <i>Coastal Development</i> . Further guidance will be provided in Supplementary Guidance <i>Natural Environment</i> .
	Certain natural coastal features, such as sand dunes, saltmarshes and banks of coastal vegetated shingle already provide protection to inland areas – and are vulnerable to development.	Addressed through Policy 9 <i>Natural Environment and Landscape</i> and Policy 12 <i>Coastal Development</i> . Further guidance will be provided in Supplementary Guidance <i>Natural Environment</i> .
	There is potential for inappropriately sited or designed coastal defences to impact on the water environment, e.g. by altering the distribution of wave energy along the coast.	Addressed through Policy 12 <i>Coastal Development</i> .
Issue 4.1 Strategic Areas for Onshore Wind Energy Development	The Landscape Assessment for Potential Strategic Wind Energy Development in Orkney has identified measures to mitigate the landscape and visual effects of development; these include recommended limits to the height and number of turbines in each area, as	Further assessment will be required to inform the identification of a suite of Strategic Wind Energy Development Areas.

	<p>well as guidance on siting and layout. However these measures focus on the landscape and visual effects of wind energy development; other environmental receptors including features of the natural and historic environments would also be impacted and there would be potential for significant adverse effects.</p>	
	<p>In some of the potential Strategic Areas there is potential to affect public amenity, e.g. through noise and shadow flicker impacts.</p>	<p>Further assessment will be required to inform the identification of a suite of Strategic Wind Energy Development Areas.</p>

Possible areas of conflict and how these have been resolved within the Plan

Assessment of the policies and proposals of the MIR highlighted the following potential areas of conflict in terms of environmental protection. Identification of these potential conflicts does not necessarily mean that one pattern of development is better than another. Rather it highlights their respective strengths and weaknesses and has allowed the development of planning policy which addresses these environmental issues.

Issue: In terms of encouraging more sustainable transport solutions, more concentrated patterns of development are an advantage. However, in many rural settlements there is currently no option to connect to a public sewer and this can give rise to a concentration of waste water discharges which in turn increases the risk of water pollution. Conversely, the waste water from a more dispersed pattern of development, in which individual houses are widely separated can usually be accommodated without significant effects to the water environment; however, widespread dispersed development in the countryside can lead to adverse landscape effects, as well as increased risk of damage to natural heritage interests or cultural heritage assets in the wider countryside.

How addressed in the Plan: The settlement statements identify the approximate capacity of each allocation to accommodate housing development and confirms that private foul water drainage systems will be deemed acceptable for small scale developments, provided that they comply with the current LDP policy on waste water drainage which forms part of Policy 13 *Flood Risk, SuDS and Waste Water Drainage*.

Issue: In terms of the sustainable use of building materials, significant benefit can be gained from recycling stone and rubble from the renovation or redevelopment of existing properties; however, this can lead to the loss of valuable examples of our built heritage.

How addressed in the Plan: In Policy 4 *Housing, Part E Single Houses and Housing Clusters in the Countryside* sets out the circumstances under which the consolidation and retention of a building or structure of architectural and/or historic merit will be required by planning condition. In addition, where a building or structure of architectural and/or historic merit is already present within a housing allocation, the Settlement Statement highlights that it should be retained.

Monitoring Programme

The purpose of monitoring is to ensure that the proposed mitigation is effective and that any unexpected effects can be detected at an early stage, so that appropriate remedial action can be put in place. Over time it is expected that environmental benefits will become apparent through the trends in the monitoring indicators. Monitoring will be used to provide essential information upon which to base future development policies. The following monitoring programme includes a set of indicators which relate closely to the SEA objectives.

The proposed SEA monitoring activities are set out in **Table 12** and it should be noted that the indicators identified will be monitored for the duration of the Local Development Plan 2017.

Table 12: Proposed SEA monitoring programme

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
Climatic factors.	Support patterns of development which provide safe and convenient opportunities for walking and cycling and facilitate travel by public transport.	Annual passenger numbers on subsidised bus routes.	OIC Transport Section.	Environmental Policy Officer. Annual.
	Reduce Scottish greenhouse gas emissions, in line with Government targets.	Annual CO ₂ estimates for Orkney.	Local and Regional CO ₂ Emissions Estimates (Ricardo-AEA).	Environmental Policy Officer. Annual.
	Promote a precautionary approach to flood risk from all sources.	Number of proposals approved to develop residential accommodation within areas that are at significant risk of flooding.	OIC Development Management Section.	Environmental Policy Officer. Annual.
Biodiversity.	Safeguard valuable habitat from loss and fragmentation through development.	Number of proposals approved where mitigative or compensatory measures have been incorporated to safeguard habitats from loss and fragmentation.	OIC Development & Marine Planning Section	Environmental Policy Officer. Annual.
		Number of proposals approved where it has not been possible to incorporate appropriate mitigative or compensatory	OIC Development & Marine Planning Section.	Environmental Policy Officer. Annual.

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
		measures to safeguard habitats from loss and fragmentation.		
	Conserve protected sites and species.	Condition of internationally & nationally designated biological natural heritage sites.	SNH website - sitelink http://gateway.snh.gov.uk/sitelink/index.jsp	Environmental Policy Officer. Annual.
		Number of proposals approved where it has not been possible to incorporate appropriate mitigative or compensatory measures to safeguard protected species.	OIC Development & Marine Planning Section.	Environmental Policy Officer.
Water.	Promote the protection and improvement of the water environment, including burns, lochs, estuaries, wetlands, coastal waters and groundwaters.	Water quality and overall status of monitored watercourses.	Scotland's Environment Web http://www.environment.scotland.gov.uk/get-interactive/data/water-body-classification/	Environmental Policy Officer. Annual.
		Number of approved development briefs requiring the establishment of a development-free buffer zone.	OIC Development & Marine Planning Section.	Environmental Policy Officer. Annual.
Soil.	Promote the viable use of vacant and derelict land, alleviating pressure on	Number of sites removed from the Derelict and Urban Vacant Land Register.	Scottish Vacant and Derelict Land Survey	Environmental Policy Officer.

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
	greenfield sites.		http://www.gov.scot/Publications	Annual.
Soil & Climatic factors.	Recognise the environmental benefits provided by soils and protect their quality and quantity.	Number of proposals approved to develop on areas of peat identified in the national peatland map.	OIC Development Management Section.	Environmental Policy Officer. Annual.
Geology.	Protect designated and undesignated sites which are recognised and valued for their geological or geomorphological importance.	Condition of nationally designated geological / geomorphological natural heritage sites.	SNH website - sitelink http://gateway.snh.gov.uk/sitelink/index.jsp	Environmental Policy Officer. Annual.
Landscape.	Facilitate positive change while maintaining and enhancing distinctive landscape character.	Development of a suite of Local Landscape Areas, following completion of the SNH commissioned review of the Orkney Landscape Character Assessment (1998).	OIC Development & Marine Planning Section.	Environmental Policy Officer. Annual.
		Number of proposals approved which do not align with the guidance provided in the Orkney Wind Energy Capacity Study.	OIC Development & Marine Planning Section.	Environmental Policy Officer. Annual.
Cultural heritage.	Safeguard cultural heritage features and their settings through	Number of demolitions of listed buildings and listed or unlisted buildings within a Conservation Area.	OIC Development Management Section.	Historic Environment Officer. Annual.
		Number of proposals approved	OIC Development	Historic Environment

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
	responsible design and siting of development.	affecting an Inventory Garden and Designed Landscape.	Management Section.	Officer. Annual.
		Number of proposals approved affecting a scheduled monument and / or its settings.	OIC Development Management Section.	Historic Environment Officer. Annual.
	Enable positive change in the historic environment which is informed by a clear understanding of the importance of Orkney's heritage assets and ensures their future use.	Number of buildings removed from the Buildings at Risk Register due to restoration.	Buildings at Risk Register http://www.buildingsatrisk.org.uk/	Historic Environment Officer. Annual.
	Protect the integrity and Outstanding Universal Value of the Heart of Neolithic Orkney World Heritage Site.	Number of proposals approved where the integrity and OUV of the WHS is substantially affected.	OIC Development & Marine Planning Section.	Historic Environment Officer. Annual.
Population.	Retain and, where appropriate, improve quality and quantity of publicly accessible open space.	Number of Open Space Strategy actions completed.	Open Space Strategy Action Plan.	Environmental Policy Officer. Annual.
Human health.	Promote increased availability of affordable housing.	Numbers of affordable homes built.	OIC Strategic Housing Improvement Programme.	OIC Housing Section. Annual.
Material	Promote the efficient use	Annual household waste data.	SEPA website	Environmental Policy

SEA receptor	SEA Objective	Indicator	Data source	Monitored by & frequency
Assets.	of resources and the minimisation of wastes through their re-use or their recovery through recycling, composting or energy recovery, in line with 2020 national targets.		https://www.sepa.org.uk/environment/waste/waste-data/waste-data-reporting/household-waste-data/	Officer. Annual.

Next steps

Table 13 lists future milestones in the development of the PPS and its SEA, and the dates when these are expected to be completed.

Table 13: Anticipated plan-making and SEA milestones

Expected date	Milestone
12 April 2016	Meeting of Development & Infrastructure Committee to consider the Proposed Plan and the Environmental Report.
28 April 2016	Meeting of all Elected Members to approve the Proposed Plan and the Environmental Report.
5 th May 2016	Proposed Plan and Environmental Report released for consultation with the Consultation Authorities and members of the public
16 th June 2016	Deadline for Consultation Authorities' responses to the Plan and the Environmental Report.
June - July	Evaluation of the consultation responses and preparation for the examination process
September 2016	Submit Plan to the Scottish Ministers for examination
March 2017	Report Scottish Government's examination report to Full Council
April 2017	Formally adopt the Plan
April 2017	Prepare the Post Adoption Statement

Table 14: Summary and analysis of responses to the Environmental Report of the Main Issues Report

Consultation Body	Environmental Report Ref.	Consultation Body Comment	Response and Action
Historic Environment Scotland (HS)	General comments	The interim Environmental Report is well set out, clear and concise. HS comments at scoping stage have been largely taken into account. I am generally content with the assessment approach and its findings.	Noted.
HS		Throughout the document, it is often assumed that cultural heritage is protected by the policies of the LDP. While we consider that this is appropriate, as this is fundamental to a lot of the assessment, we would welcome the opportunity to comment on the draft policies as early as possible. This will allow us to contribute to the process of ensuring that they are worded to provide the level of protection expected by the assessment.	Noted – HS will be consulted at an early stage in drafting the policies.
S		On a minor note, scheduled monuments are often referred to as scheduled ancient monuments, or SAMs, in the document. We would recommend that this is updated to say simply scheduled monuments or SMS, to reflect current legislation and acknowledge the fact that not all such sites can be classed as ‘ancient’.	Noted, the MIR Environmental Report and its appendices have been updated accordingly.
HS	Issue 1 The Spatial Strategy	Proposed new settlement hierarchy – there appears to be some confusion over the new proposed Rural Settlements, as Scorradale is identified in Table 9 and the following summary whereas, later in the report and in Appendix D.4, Linnadale is identified as the fourth proposed Rural Settlement. We note that Linnadale was identified as the proposed settlement in the Main Issues Report itself and we are content with the assessment and its conclusions other than this.	This settlement was originally named Scorradale and was subsequently re-named Linnadale.
HS	Issue 4.1 Potential Strategic Areas	We welcome that a detailed assessment has been carried out for the preferred option. We note that the mitigation	Noted.

	for Wind Energy Development	measures which have been recommended in the Landscape Assessment Study relate only to landscape and visual impacts and that the ER assessment recognises this. We agree with the assessment that there is the potential for significant adverse impacts on cultural heritage and that it may not prove possible to address these through mitigation.	
HS		<p>We note that the suggested mitigation recommends additional studies to refine further the boundaries of the Strategic Development Areas (SDAs) and gives examples of some of the studies to be undertaken. We welcome the inclusion of an assessment of the likely effects on nationally important cultural heritage resources such as scheduled monuments.</p> <p>We would also suggest that an assessment of the likely effects on the internationally important Heart of Neolithic Orkney World Heritage Site would be useful to ensure that any SDAs do not impact on the Outstanding Universal Value (OUV) of the World Heritage Site.</p> <p>In addition it may be useful to highlight that developers may be required to undertake a cultural heritage assessment at project level or to highlight siting and design options that minimise cultural heritage impacts.</p>	Noted – Appendix E <i>Assessment of Potential SDAs</i> and Appendix F <i>Assessment of the Main Issues Options</i> have been updated accordingly.
HS	Assessment of the Settlement land allocation options	We note that Table 11 (Potential constraints to development identified through assessment of the Settlement land allocation options) identifies proximity to scheduled monuments and unscheduled archaeology as a constraint/issue but does not identify proximity to listed buildings although Appendix D assesses a number of allocations as being in close proximity to listed buildings with similar mitigation proposed. You may wish to consider amending this in the revised Environmental Report.	Noted – Table 11 has been updated accordingly.
HS	Measures for the prevention,	We welcome that mitigation will be built into the relevant policies and proposals during the production of the plan and	Noted.

	reduction and offsetting of significant adverse effects	as noted above, we would welcome the opportunity to comment on the draft policies to ensure that the mitigation proposed is robust.	
HS		We note that Table 13 (Potential for environmental impact identified through assessment of the Main Issues and Suggested Mitigation) does not specifically identify any potential impacts to the historic environment despite identification of potential impacts in the assessments of the Main Issues. However, we recognise that this would be covered by the 'other environmental receptors' in Issue 4.1. It is not clear why public amenity has been specifically mentioned in this section of the table when others have not.	Table 13 has been amended to include a clearer reference to both the natural and historic environments and recommends that further surveys and assessments should be undertaken, with the findings being used to inform and refine the boundaries of the potential Strategic Areas.
HS	Monitoring	We note that the suggested monitoring indicators for cultural heritage relate only to buildings and the Heart of Neolithic Orkney World Heritage Site. We would recommend that monitoring indicators should also be provided for other elements of the historic environment such as scheduled monuments, unscheduled archaeology and Inventory gardens and designed landscapes (GDLs).	Noted – further indicators have been identified.
		The suggested monitoring indicators for listed buildings and conservation areas relate only to the number of buildings demolished and the number of buildings removed from the Buildings at Risk register. While these statistics can contribute to an understanding of the state of the historic environment, they focus only on one element of the historic environment and can also be affected by factors, such as economic and social, which are outside the influence of the Local Development Plan. Indicators which focus on the baseline only are not likely to be closely enough linked with the predicted effects and objectives of the plan to fully reflect its actual effects.	Noted – further indicators have been identified.

HS		<p>In order to achieve effective monitoring, we recommend the use of indicators linked to the SEA objective to measure change. For example:</p> <ul style="list-style-type: none"> • SEA objective: safeguard cultural heritage features and their settings through responsible design and siting of development. • Indicator: to monitor the number and outcome of planning applications where scheduled monuments and/or their settings are affected. • Target: 0 planning applications consented where adverse impacts on scheduled monuments and/or their settings are predicted. <p>We suggest that there should be a range of indicators to cover the different types of heritage asset which may be affected by the Plan.</p>	
HS	Appendix D: Assessment of land allocation options	<p>We welcome the detailed assessments which have been carried out and consider that this provides a thorough environmental assessment of the land allocations assessed, however, we note that not all sites for land allocations included in the Main Issues Report have been included in the assessments in the Environmental Report and that there does not appear to be an explanation for omitting sites from the assessment in the ER.</p> <p>It appears that some sites ‘carried forward’ from the adopted local plan have not been included in the assessment. We would advise that if this is the case a rationale for omitting carried forward sites from the assessment should be set out clearly in the ER.</p> <p>In reference to advice in Scottish Government’s SEA Guidance, this is a matter of clarification for Orkney as</p>	<p>The settlement statements for the mainland and south linked isles have been updated to include allocations assessed in the SEA of the OLDP 2014.</p> <p>The settlement statements for the non-linked isles have not been included as no allocations are proposed in these settlements.</p>

		Responsible Authority to consider in the context of demonstrating that assessment of allocations is evidence-based and meaningful. As it stands, we are unclear on the reasoning for departing from advice on site assessment in PAN 1/2010 and on how this accords with the overall assessment of the development strategy.	
HS	Appendix D.4: Assessment of the West Mainland land allocation options	Dounby – we note that the ER assessment recommends that site 8 should be removed from the allocations due to the adverse impact on the scheduled monument within the site, however this recommendation does not appear to have been carried over to the Main Issues Report as site 8 is still included as an allocation in the preferred option. No rationale or justification for this has been included in either the ER or the MIR and we would recommend that if this site is to be included as a preferred option against the recommendation of the ER then a robust justification should be provided.	Dounby Site 8 has been removed from the allocations.
		We also note that this site has been given a pre-mitigation scoring of adverse effect. Given the presence of the scheduled area within a significant area of the site and the potential, therefore, for direct impacts as well as indirect impacts we would have expected to see this as a significantly adverse effect following the assessment methodology given in Table 7. No explanation of why an adverse rather than a significant adverse effect has been identified is given and we would recommend that consideration is given to amending this in the revised Environmental Report.	Noted - Appendix D <i>West Mainland Settlement Assessments</i> (Dounby) has been updated accordingly.
Scottish Environment Protection Agency (SEPA)	General comments	We generally found the document easy to follow and it demonstrates a considerable commitment from the council to the process. We welcome that the comments we made on your scoping report have been included in the document. The assessment methodology is simple and clear. We are	Noted. The settlement statement assessments have been updated to include additional

		<p>generally supportive of many of the mitigation measures identified.</p> <p>You may wish to consider colour coding any changes you make to subsequent versions of the ER to allow consultees to easily follow the amendments and additions.</p>	<p>flood risk information provided by SEPA during consultation on the MIR.</p>
SEPA	<p>Relationship of the Local Development Plan with other Plans, Programmes and Strategies (PPS) and environmental protection objectives</p>	<p>As per our Scoping response (PCS/137100, 22 December 2014) we generally consider that the PPS listed in Appendix A provides a good background framework to the development of the Plan.</p>	<p>Noted.</p>
SEPA		<p>We note that the section on Air Quality which was included at the scoping stage is no longer included within Appendix A. We assume this is because you have opted to scope out Local Air Quality 'as this is generally not considered to be an issue in Orkney'</p>	<p>Following consideration of the scoping responses we opted to scope out Local Air Quality as this is generally not considered to be an issue in Orkney. This was explained on page 48 of the Environmental Report.</p>
SEPA		<p>We welcome the reference to latest version of The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended), which we referred to within our scoping response.</p>	<p>Noted.</p>
SEPA		<p>We would also take this opportunity to highlight the following:</p>	<p>Noted - Appendix A has been updated accordingly.</p>

		<ul style="list-style-type: none"> • PAN 69 (Planning and building Standards Advice on Flooding) has been superseded within 'Online planning Advice on Flood Risk'. • Reference to our 'Indicative River and Coastal Flood Risk map' has been included. These were updated in last year. Information on the new SEPA Flood Maps can be found at: http://www.sepa.org.uk/environment/water/flooding/flood-maps/. • The Water Environment (Shellfish Water Protected Areas: Environmental Objectives etc.) (Scotland) Regulations 2013 replaces the repealed EC Directive 2006/113/EC and subsidiary Scottish legislation. 	
SEPA	Environmental baseline, local issues and SEA objectives	We note that the baseline information has been updated since the scoping report was submitted for review and generally covers topics within our remit. In particular, we are pleased to note that reference is made to Groundwater Dependant Terrestrial Ecosystems (GWDTE) as this is an issue which has moved on since the last plan. GWDTE, which are types of wetland, are specifically protected under the Water Framework Directive.	Noted.
SEPA		We also welcome the reference to the dataset of 'carbon rich soil, deep peat and priority peatland habitats' which has been produced by Scottish Natural Heritage (SNH). We understand that the final version is due to be published in the near future. We recommend that you discuss the use of these maps with SNH.	Noted.
SEPA		In addition, we wish to make you aware that updated water body data in relation to River Basin Management Planning is now available on our website via a temporary spotfire tool	Noted.

		that has been developed specifically for planning purposes. Please note that this is an interim measure until updated information is published as part of RMBP2. We are also currently reviewing our 'areas of potential cumulative drainage impacts'. We may therefore be able to provide further advice on this issue at a later stage.	
SEPA		In respect of the environmental issues set out within Table 5 of the ER, we are pleased to note the inclusion of foul drainage within the water section, as recommended within our scoping response and also the associated question asking whether it is possible for the land allocation to connect into a public sewerage system. It needs to be ensured that the plan directs development to areas which either already have public waste water drainage infrastructure, or to where such infrastructure can easily be added.	Noted. Foul water drainage is addressed in Policy 13.
SEPA		In terms of the SEA objectives and associated questions set out in Table 5, we note that the question relating to flood risk has been amended to include the need for avoidance of flood risk as requested in our scoping response and that a question has been added relating to the need to ensure that development does not increase flood risk elsewhere. We also note that questions have been included relating to potential impacts on water quantity from abstraction and potential impact on ecological status or morphology of water bodies, that Groundwater Dependant Terrestrial Ecosystems have also been specifically referred to and that references have been made to enhancing/improving the water environment as well as protecting it and also to peat. These were issues highlighted in our scoping response and we welcome their inclusion.	Noted.

SEPA	Assessment of environmental effects and measures envisaged for prevention, reduction and offset of any significant adverse effects	We welcome the thorough assessment of MIR options. We understand the policy areas that are not specifically discussed in your MIR will be updated and will follow the approach in national planning policy and from your ER, we understand that the revised policies will also be environmentally assessed. It should also be ensured that the ER supporting the Proposed Plan includes a clear assessment of all aspects of the plan that are likely to result in significant environmental effects. This may include the plans themes, objectives, policies and allocations.	Noted.
SEPA		We welcome that the ER has highlighted many of the issues within our remit relating to the MIR options, for example potential issues arising from the proliferation of septic tanks, and has suggested mitigation. We particularly welcome the inclusion of potential issues/constraints such as peat and GWDTE relating to the 'potential strategic areas for wind energy development'. However, the mitigation relates to the provision of relevant assessments, for example a peat management plan. We consider that such areas should be <u>avoided</u> in the first instance.	Noted.
SEPA		In relation to your assessment of site allocations, we note that sites within Kirkwall and Stromness have been individually assessed, whereas sites within the remaining settlements have been included in an overall settlement assessment which appears to discuss constraints relating to specific sites where necessary. The beginning of each settlement assessment confirms which sites have been assessed. Provided that all constraints are raised where relevant to individual sites, we have no concerns regarding	Noted.

		<p>this 'settlement' approach which we note was also taken in the ER supporting the previous plan.</p>	
SEPA		<p>However, it would appear in relation to your site allocations that <u>many of the sites have not been included in the assessment</u>, including a large number in the towns of Kirkwall and Stromness. It is unclear from the information in your ER why some sites have not been assessed. For some settlements, for example Dounby, it appears that only new sites have been assessed. However for other settlements, for example Evie School, only sites which have been carried forward from the current plan appear to have been assessed. Some settlement assessments (for example Burray and Madras) also indicate that certain allocations have been assessed whilst referring to others in the assessment. In addition, none of the site allocations for the settlements of Orphir, Quoyloo, The Palace, Hillhead, Houton, Lyron, Norseman, Scapa Brae have been included in the ER.</p> <p>In relation to the settlement of Dounby the assessment appears to include a 'site 13' which is not included in the MIR consultation and it also appears that there may be an error in numbering of the remaining sites.</p>	<p>The settlement statements for the mainland and south linked isles have been updated to include allocations assessed in the SEA of the OLDP 2014.</p> <p>The settlement statements for the non-linked isles have not been included as no allocations are proposed in these settlements.</p>
SEPA		<p>In addition to the above, for the sites that have been assessed, although we welcome that the ER has picked up a lot of the issues within our remit, there are some environmental issues included within our MIR response and site allocation table (see our ref: PCS/141053) that have not been included in your ER. One example would be that we consider flood risk to be an issue for Toab site 6 and St</p>	<p>Noted - the assessments for St Margaret's Hope and Toab have been updated accordingly.</p>

		Margaret's Hope site 8 which is not reflected in your ER.	
SEPA		In light of the above, although we welcome the considerable amount of work that has been undertaken to date, <u>it has not been possible to conclude that all sites have been assessed or that all constraints have been included.</u>	The settlement statements for the mainland and south linked isles have been updated to include allocations assessed in the SEA of the OLDP 2014.
SEPA		In addition, <u>it should be ensured that the ER supporting the proposed plan fully reflects the comments/constraints raised by consultees including those set out within our MIR consultation response and associated site allocation table (our ref: PCS/141053).</u> <u>We would particularly highlight the flood risk advice that we have provided.</u>	The settlement statements have been updated to include flood risk advice provided by SEPA.
SEPA		For ease, we also recommend that the settlements are considered in the same order in both the ER and proposed plan documents to allow easier comparison.	Noted.
SEPA	Monitoring	We are pleased to see the monitoring programme as Table 14 of the ER. However, the ER should identify who is responsible for carrying out each monitoring objective and the timescales, intensity and duration of the monitoring. With regards to the indicator for flood risk we suggest that this should include applications received and also applications approved in flood risk areas.	The monitoring table has been updated in the Proposed Plan ER and includes the recommended information.
Scottish Natural Heritage (SNH)	General Comments	We consider that the ER provides a comprehensive assessment on the Main Issues Report (MIR) and for this you are to be commended. We consider that there are lots of aspects of the ER which are good, and we have highlighted many of them below.	Noted.

		<p>There are no specific overarching issue to bring to your attention here, except to highlight the requirement to ensure that the mitigation you propose is firmly embedded in the Plan.</p> <p>We welcome that the Environmental Report includes preliminary assessments of the likely effects of the MIR policies and proposals on Orkney's internationally designated natural heritage sites (Natura 2000 sites), and that you state a full Habitats Regulations Assessment (HRA) will be undertaken alongside preparation of the Proposed Plan. We are happy to input to the HRA as you progress with it.</p>	
SNH	Assessments - general comments	<p>We welcome that you have gone to significant effort to assess all aspects of the MIR in some detail and we found the main body of text in the ER provided a very useful summary and interpretation of your assessment results. Your tables are clear and easy to follow. It is especially helpful that you have actually included the options themselves at the top of each assessment table. We agree with the comparable assessments of preferred and alternative options.</p>	Noted.
SNH	Assessment of preferred option in more detail	<p>We welcome the approach you have taken in providing a more detailed assessment of the preferred option for each main issue, proposing mitigation and then providing an assessment of the likely effects when mitigation is applied. Generally we welcome the proposed mitigation measures and look forward to seeing them clearly included in the Plan. We provide some detailed comments below.</p>	Noted.
SNH	Assessment of Land Allocations	<p>We welcome the detailed assessment which has been carried out this provides a very detailed and thorough environmental assessment of all the preferred and alternative land allocation. We are generally in agreement with the assessment presented and look forward to seeing</p>	Noted.

		the proposed mitigation included in the Plan.	
SNH	Assessment of the Potential Strategic Development Areas (SDA) for Wind Energy Development	We welcome the detailed assessment which has been carried. We are generally in agreement with the assessment presented and agree that even with mitigation there is likely to still be adverse effects.	Noted.
Royal Society for the Protection of Birds (RSPB)		We welcome the acknowledgement within the SEA (p74) that the majority of the identified PSAs for wind development are likely to lead to significant adverse impacts on biodiversity, flora and fauna amongst other SEA receptors. However, as stated above we disagree with the approach taken to identifying these areas in the first place and believe that the approach is contrary to the SPP. Therefore, rather than suggesting that 'further surveys and assessments are required to inform boundaries of these sites' we suggest that the whole approach to identifying PSAs should be revised as suggested in our response to the Main Issues Report..	Noted.
RSPB		We suggest that the initial table in Appendix E (Table 6.1) is misleading and it needs to be made clearer that this table represents only the Landscape Limits to acceptable development.	This is noted below Table 6.1.
Crown Estate (CE)		Page 59, Issue 3.1 sets out the adoption of the PFOWMSP as Planning Policy Advice with no alternative option. However, this plan is non-statutory in nature, therefore a possible alternative would be to consult on Orkney's Regional Marine Plan as PPA rather than to use the PFOW in a manner in which it has been drafted.	Policy 12 confirms that the PFOWMSP and any subsequent Regional Marine Plan will be adopted as Planning Policy Advice.

CE		Page 62. It is unclear how the proposed onshore wind Strategic Development Areas (SDAs) will affect marine turtles and cetaceans. Is this perhaps related to inter-island cabling? Clarity should be provided.	A list of the types of European Protected Species found in Orkney was provided for information. Cetaceans and otters could be affected by onshore wind energy proposals if these included development of piers on islands where pier facilities are either absent or are inadequate for the transport of turbine parts. However it is agreed that marine turtles would be unlikely to be affected and they have been removed from the list to avoid confusion.
CE		Appendix B; Page 6. EMEC has other wave and tidal test facilities within Orkney waters which are not mentioned here. A full and comprehensive list should be provided. We are happy to assist with this should further information be required.	Appendix B has been updated accordingly.
CE		Appendix B; Page 6. The document is correct in stating that The Crown Estate entered into Agreements for Lease (AfLs) for 1600MW within the PFOW strategic area. However, a certain number of agreements have lapsed and the most up to date map can be found here - http://www.thecrownestate.co.uk/media/5729/ei-pentland-firth-and-orkney-waters_a4.pdf The document should be updated to include this link and not the link that currently exists.	Appendix B has been updated accordingly.
CE		Appendix F; Page 21; Issue 3. We welcome the desire set out in the document to have a complementary planning system covering both the terrestrial and marine environment.	Noted.

