

## Appendix 13 Monitoring Framework for the LDP

Under SEA regulations, monitoring is required in order to identify at an early stage any unforeseen adverse effects caused by the Plan. This allows for remedial action to be taken and prevents the actual impacts of the plan by measuring them against those that were predicted. It allows major problems to be identified and dealt with in timely fashion, and environmental baseline information to be gathered for future reviews of the LDP. It also ensures that proposed mitigation measures are carried out and that no unforeseen impacts result. The methodology used in the development of a monitoring programme for the LDP is based on the use of indicators or targets, the assignments of responsibilities and the setting of appropriate timelines. It also includes intervention in the event of an unforeseen occurrence.

Monitoring requires reporting on the set of indicators and targets drawn up for the various environmental aspects and used to describe future trends in the baseline, which enable positive and negative impacts on the environment to be measured. The indicators that are used show changes that would be attributable to the implementation of the Plan. In particular the indicators can also in certain circumstances act as an early warning system should unforeseen impacts occur or conditions deteriorate further or faster than anticipated. For example water quality indicators could describe trends in both improvements and deterioration in quality. If quality targets are not being reached and water is seen to be unexpectedly deteriorating immediate intervention will be required.

Monitoring is a continuous process for the duration of the LDP and usually involves the use of indicators or targets. An 'indicator' is a measure of how the 'baseline' has changed and is a means of checking whether the LDP is performing as predicted. Given that indicators are used to monitor whether the LDP is performing as predicted they are usually based upon information that will be directly affected by the implementation of the LDP. The methods used for monitoring vary according to the type of indicators that are being used. Indicators may comprise both quantitative (facts and figures) and qualitative (descriptive) information. Changes in quantitative information (facts and figures) can be measured through the use of data capture, interrogation and management systems. However, it is important that the interpretation of the quantitative 'data' accurately represents what is happening on the ground, as 'numbers' can sometimes be misleading.

The indicators developed during SEA Scoping Report stage have been reviewed for the purpose of the LDP monitoring framework. Certain elements of the LDP will be easier to monitor than others. It is assumed that a large proportion of these indicators will be collated on a year-by-year basis. Other aspects may only be assessed against trend data collected over a period of time and may be less frequent. To achieve this, a number of indicators to monitor each of the SEA objectives have been identified.

An initial set of indicators and targets (where possible) were identified for each of the SEA objectives and criteria. The indicators and targets will be used to indicate adverse and/or beneficial change using quantified measures of performance. The indicators and targets relate, where possible, to the baseline information collected so comparisons between the present situation within Shetland, and that predicted for

the future can be made. This has not been possible in every case. However, this approach does ensure that the indicators and targets are relevant to Shetland and the SEA objectives. They should be measurable over the time period for which the LDP is to be adopted and should relate to the significant effects that have been identified as part of the assessment. Indicators have been chosen that, where possible, are **SMART**:

- Specific
- Measurable
- Achievable
- Relevant
- Time bound

Monitoring of the LDP will be an evolving process and will focus on aspects of the environment that are likely to be significantly impacted by the LDP. Possible indicators have been identified for main environmental issues relating to 10 SEA topic areas, although they may be changed depending whether it is practical or feasible to obtain them. The indicators are at a level that is relevant to the Plan and are collated and reported on by a variety of Government Agencies, such as Scottish Environment Protection Agency, Scottish Natural Heritage, Historic Scotland, external organisations and the Council. The collection of environmental baseline information is not centrally co-ordinated in Shetland and no State of Shetland's Environment Report has been produced. Some indicator information is already being actively collated and reported at a level sufficient to meet the needs of the Plan. Sources for Shetland include the Biological Records Centre and Local Biodiversity Action Plans with indicators. Other statistics might be forthcoming from Council Departments as the monitoring framework is further refined.

In an effort to further develop the LDP monitoring framework the following principles will apply:

- Need to clearly set out responsibility for the monitoring, frequency and format for presenting results;
- Need to collect new information, update and strengthen original baseline data, rectifying any deficiencies, and thereby provide an improved basis for the formulation of future plans;
- Need to establish a mechanism for action to enhance positive effects of the plan, mitigate any negative ones and assess any areas that were originally identified as containing uncertainty;
- Need to present a clear and easily understandable picture of how actual implementation of the LDP is affecting Shetland by answering questions such as; Is it moving the area towards or away from the more sustainable future we intended? Are any significant effects identified actually happening? Are any unforeseen consequences being felt? Are any mitigation measures that were proposed operating effectively?

## Appendix 13 Monitoring Framework

SEA Objective	Possible SEA Indicator	Type of Data	Format of Data	Monitoring Technique	Source of Data	Review Timescale
<b>Biodiversity</b>						
To further the conservation of biodiversity	<ul style="list-style-type: none"> <li>• Location, number and condition of designated sites (Ramsar and Sites of Special Interest (SSI))</li> <li>• Biodiversity Action Plan (BAP) habitats and species</li> <li>• Number, extent and condition of marine and coastal designated sites (including Ramsar and SSSIs.</li> <li>• Populations of wild birds</li> </ul>	Qualitative and Quantitative	Description or Statistics	Review information collected for baseline	LBAP, indicators, SNH, RSPB, Shetland Biological Records Centre SIC Biodiversity Officer	Annually
<b>Population</b>						
To improve the quality of life for people and communities across Shetland	<ul style="list-style-type: none"> <li>• Mix adjusted average price of dwellings sold in Shetland</li> <li>• Ratio of house prices to earnings</li> <li>• Property type and housing needs by property type</li> <li>• Levels of crime and vandalism</li> <li>• Number and distribution of</li> </ul>	Qualitative and Quantitative	Description or Statistics	Review information collected for baseline	The Council can source statistics from the various sources including SIC Economic Development Service – Shetland in Statistics annual publication, SIC Education Service	Annually

	<p>educational, social and recreational facilities.</p> <ul style="list-style-type: none"> <li>• Number and distribution of community facilities (youth centres etc)</li> <li>• Perceptions of Shetland as a place to live</li> <li>• Local GDP per head</li> <li>• Average earnings by sector</li> <li>• Unemployment rate</li> <li>• Employment by sector</li> <li>• Participation in training</li> <li>• Number of people working from home, self employed</li> <li>• Number of new business start-ups</li> <li>• Percentage of household and industrial/commercial waste recycling.</li> <li>• Levels of vacant or derelict land</li> <li>• Proportion of population living in towns or main settlement areas</li> </ul>				and SIC Social Services. Other sources include; Hjaltland Housing Association, Highlands & Islands Enterprise – Shetland, Census Office and Scottish Government statistics.	
<b>Human Health</b>						
To improve the quality of health in Shetland	<ul style="list-style-type: none"> <li>• Number and distribution of sports facilities</li> <li>• Life expectancy</li> <li>• Access to open spaces</li> <li>• Utilisation of ‘green travel’ modes or journeys</li> </ul>	Qualitative and Quantitative	Description or Statistics	Review information collected for baseline	SIC Economic Development Service – Shetland in Statistics (annual publication), SIC	Annually

	<ul style="list-style-type: none"> <li>• Incidence of key diseases per 1,000 population</li> <li>• Number of visitors to key libraries, leisure centres, museums and tourist attractions</li> </ul>				Education Service, SIC Social Services, SIC Transport Service, NHS Shetland, Visit Scotland Recreational Trust, and Shetland Arts Trust.	
<b>Soil</b>						
To protect Shetland's soil and peat resource and use them in a sustainable manner	<ul style="list-style-type: none"> <li>• Land use by parish</li> <li>• Key areas of land contamination</li> <li>• Number of new developments per annum on greenfield land</li> <li>• Location of areas of open space (including distribution by parish)</li> </ul>	Qualitative and Quantitative	Description or Statistics	Review information collected for baseline	SNH, SEPA, SIC Planning Service	Annually
<b>Water</b>						
To protect and enhance freshwater and marine water quality	<ul style="list-style-type: none"> <li>• No of water treatment works</li> <li>• Area of the intertidal and subtidal area used for aquaculture industry.</li> </ul>	Qualitative and Quantitative	Description or Statistics	Review information collected for baseline	SEPA, SIC Planning Service, North Atlantic Fisheries College (NAFC) Marine Centre	Annually
To reduce or manage flood risk with and from any new developments	<ul style="list-style-type: none"> <li>• Location of coastal flood defences</li> <li>• Number of properties at risk of flooding</li> <li>• Proportion of</li> </ul>	Qualitative and Quantitative	Description or Statistics		SEPA, SIC Planning Service, SIC Building Standards	Annually

	developments that have incorporated SUDs <ul style="list-style-type: none"> <li>• Number of planning applications granted permission contrary to SEPA advice on flood risk.</li> </ul>					
To ensure that Shetland's water resources are used effectively and sustainably	<ul style="list-style-type: none"> <li>• Daily water demand and information about the water supply network</li> <li>• Distribution of areas at risk of flooding</li> </ul>	Qualitative and Quantitative	Description or Statistics	Review information collected for baseline	SEPA, SIC Planning Service	Annually
<b>Air</b>						
To protect Shetland's air quality	<ul style="list-style-type: none"> <li>• Number of Area Quality Complaints received by the Council</li> <li>• Air quality statistics</li> <li>• Location of key polluting industry</li> <li>• Amount of trips made by public transport</li> <li>• Journey times to strategic links</li> </ul>	Qualitative and Quantitative	Description or Statistics	Review information collected for baseline	SEPA, SIC Infrastructure Services – Environment & Energy Team ZETRANS (Shetland transport authority)	Annually
<b>Climatic factors</b>						
To reduce greenhouse gas emissions and to contribute to	<ul style="list-style-type: none"> <li>• Average electricity consumption / generation</li> <li>• Energy related carbon emissions by source</li> </ul>	Quantitative or Qualitative	Statistics	Review information collected for baseline	Hjaltland Housing Association, SIC Transport Service, ZETRANS	Annual

Scotland's 80% CO2 reduction target	<ul style="list-style-type: none"> <li>Loss of intertidal and marine habitat to coastal squeeze</li> <li>Transport usage levels (passenger numbers)</li> </ul>				(Shetland transport authority), SIC Planning Service – Coastal Engineer	
To adapt to the predicted effects of climate change such as flood risk.	<ul style="list-style-type: none"> <li>Location and number of coastal flood defences</li> <li>Number of planning applications granted permission that are situated below the 5m contour</li> </ul>	Quantitative	Statistics	Review information collected for baseline	SEPA and SIC Planning Service SIC Planning Service – Coastal Engineer	Annual
Facilitate the development and/ or use of energy generated from renewable energy or low carbon technologies and contribute to meeting climate change greenhouse gas reduction targets	<ul style="list-style-type: none"> <li>Number of renewable energy schemes implemented.</li> <li>Total installed capacity</li> <li>Number of low carbon technologies or renewable energy installations incorporated into new buildings</li> </ul>	Quantitative	Statistics	Review information collected for baseline	SIC Planning Service or SIC Building Standards	Annual
<b>Material Assets</b>						
To promote the sustainable use of Shetland's natural resources	<ul style="list-style-type: none"> <li>Mineral output statistics</li> <li>Number of extraction facilities</li> <li>Mineral outputs and extraction facilities</li> </ul>	Qualitative and Quantitative	Statistics	Review information collected for baseline	SIC, SEPA, Scottish Water	Annual

	<ul style="list-style-type: none"> <li>• Water quality and usage</li> </ul>					
To provide opportunities for sustainable waste management	<ul style="list-style-type: none"> <li>• Recycling rates for different types of waste</li> <li>• Household waste per household</li> <li>• Number of kerbside recycling schemes</li> <li>• Waste generation statistics</li> <li>• Commercial and industrial waste data</li> <li>• Recycled aggregate generation and use in new developments</li> <li>• Recycling rates for definite types of waste</li> <li>• Number of kerbside recycling schemes</li> <li>• Waste generation statistics</li> </ul>	Quantitative	Statistics	Review information collected for baseline	SIC Infrastructure Services – Environment and Energy Team, SEPA	Annual



<b>Cultural Heritage</b>						
To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	<ul style="list-style-type: none"> <li>• Number of listed buildings</li> <li>• Number of archaeological sites</li> <li>• Number of Special Architectural or Historic Interest buildings</li> <li>• Number of Scheduled Monuments</li> <li>• Shetland Sites and Monuments statistics</li> <li>• Numbers of buildings on the buildings at risk register</li> </ul>	Quantitative and Qualitative	Statistics and Description	Review information collected for baseline	SIC Planning – Planning Officer, Conservation, Historic Scotland, County Archaeologist	Annual
To safeguard distinctive cultural heritage features and their settings through the responsible design and siting of development		Quantitative and Qualitative	Statistics and Description	Review information collected for baseline	SIC Planning – Planning Officer, Conservation, Historic Scotland, County Archaeologist	Annual
<b>Landscape and Built Environment</b>						
To protect the special qualities and characteristics of Shetland's landscapes and seascapes	Distribution of character, types and their key attributes Extent of landscape designations Number of Gardens and Designed Landscapes in Shetland	Quantitative and Qualitative	Statistics and description	Review information collected for baseline	SIC Planning – Planning Officer, Conservation, Historic Scotland, County Archaeologist	Annual