States of Jersey

Jersey Island Plan Review

Strategic Environmental Assessment

Environmental Report

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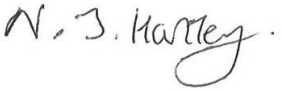
Checker	Nicola Hartley	
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1 Introduction

The States of Jersey are reviewing the Island Plan published in 2002. The Island Plan is the main document determining planning policy for the Island and will guide future land-use planning decisions, as well as setting a clear framework for the protection and enhancement of the Island's built and natural environment. Section 2 provides further detail about the Island Plan and its development.

As part of the Island Plan Review, the States have undertaken a Strategic Environmental Assessment (SEA) to inform the Plan's development and to enable a critical review of the Plan's policies from an environmental perspective. The SEA was undertaken initially on an earlier version of the Plan prepared in July 2009 and the results documented in the first revision of the SEA Report (001-WX45465-WXR-01-F). The SEA Report has since been updated in line with the Island Plan published for consultation in September 2009.

This Environmental Report therefore documents the SEA process its findings and how it has been applied to the (Draft) Jersey Island Plan, September 2009.

1.1 The SEA Process

SEA is a systemic process for evaluating the environmental consequences of plans and programmes to ensure that environmental issues are integrated and assessed at the earliest opportunity in the decision-making process. The SEA concept was formalised by European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, although informal SEA had been undertaken for a number of plans and programmes prior to this date.

Article 1 of the SEA Directive states that the aim is to:

'provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development'.

Jersey is not a member of the European Union. However, many of the European Directives are of relevance to the Island and the application of SEA to the Island Plan was identified as having the potential to offer a number of benefits such as: independent scrutiny of the plan policies; the identification of potential enhancement opportunities; and a framework for monitoring the significant environmental effects of the Plan. For this reason, an informal SEA which followed the key principles of the SEA process and Directive was undertaken. Section 3 provides further detail about the application of the SEA process to the Island Plan review.

1.2 Structure of the Environmental Report

Table 1-1 outlines the contents and structure of this Environmental Report.

Table 1-1 Structure of the Environmental Report

Section of the Report	Outline Contents
1: Introduction	Provides background to the SEA process and outlines the structure of the Environmental Report.
2: The Island Plan	Provides a brief summary of the key components of the Island Plan

Section of the Report	Outline Contents
3: The Strategic Environmental Assessment Process	Outlines how the SEA process has been applied to the Island Plan.
4: Establishing the Context and the Baseline	This explains the method used to review other relevant plans and programmes, outlines how baseline data was gathered and the key issues and opportunities facing Jersey.
5: Methodology for Assessing the Plan	Explains how the Environmental Objectives were developed to assess the plan and summarises the approach used to assess the Island Plan options and policies.
6: Assessment of the Island Plan Options	Provides a summary of the waste management options considered during the development of the Island Plan.
7: Assessment of the Island Plan Policies	This presents the results of the assessment of the Island Plan policies including recommendations to strengthen the policies to improve their environmental performance.
8: Monitoring	Provides a monitoring framework that should be used to monitor the significant environmental effects of the Island Plan.
Appendix A	Provides a review of other relevant plans and programmes considered in the SEA
Appendix B	Presents a summary of the baseline data that has been gathered.
Appendix C	Presents the matrix assessing the waste management options
Appendix D	Presents the matrices assessing the Island Plan policies.

2 The Island Plan

The Jersey Island Plan sets the framework for making development control decisions. Article 19 of the Planning and Building (Jersey) Law 2002 identifies that all development should be in accordance with the Island Plan unless there is sufficient justification for granting planning permissions that are inconsistent with the plan. The previous Island Plan was produced in 2002 and there is a legal requirement to review the plan every ten years. However, owing to a large number of changes that have happened since the production of the 2002 plan it was decided that an earlier review was needed.

The Island Plan consists of two parts:

- Section 1 comprises the written statement containing the Island Plan's strategic and detailed policy framework, as well as site specific proposals that will guide future development over the next ten years.
- Section 2 comprises the Proposals Map for the Island.

It is intended that the Planning and Environment Minister has and will continue to publish supplementary guidance where needed.

The new Island Plan will become the Island Plan 2010 and will set the framework for development in Jersey until 2019. The Island Plan includes the following chapters:

- Island Plan Strategic Policy Framework
- General Development Control Policies
- Natural Environment
- Historic Environment
- Built Environment
- Economy
- Housing
- Social, Community and Open Space
- Travel and Transport
- Natural Resources and Utilities
- Waste Management
- Implementation and Monitoring

3 The Strategic Environmental Assessment Process

This section of the report explains how the SEA process has been applied to the Island Plan.

3.1 Applying SEA to the Island Plan

As outlined in Section 1, an informal SEA has been undertaken. Whilst key elements of the SEA process as established by the SEA Directive have been completed, not all legal and procedural requirements of the SEA Directive have been fulfilled, for example specific consultations. However, the approach that has been adopted fulfils the 'spirit' of the SEA Directive.

The SEA Directive has been transposed in the UK into Regulations (these do not apply to Jersey) and good practice guidance[1] has been produced to assist practitioners with key stages of the process. Table 3-1 presents the key stages in the SEA process, as defined by good practice guidance and explains how the process has been applied to the Island Plan.

Table 3-1 SEA Stages and their Application to the Island Plan

SEA Stage	Section of this Report	Application to the Jersey Island Plan
Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope	Section 4	A review has been undertaken of other plans, policies and programmes at an international and a States of Jersey level. Baseline data has been gathered to characterise the existing environmental conditions across the Island and to determine key trends and issues. Using the review of plans and programmes and the collation of baseline data, key environmental problems have been identified. Using the review of plans and programmes and the baseline data a series of Environmental Objectives have been developed to assess the performance of the Island Plan policies.
Stage B: Developing and Refining Alternatives and Assessing Effects	Sections 6 and 7	This stage of the SEA process relates to the development of plan options and testing the effects of the preferred plan option and its contents. As this is a partially retrospective SEA (as it began after the plan preparation began), it has been decided that it would be inappropriate to

[1] Office of the Deputy Prime Minister, Scottish Executive, Welsh Assembly Government, Department of the Environment (Northern Ireland) (2005) A Practical Guide to the Strategic Environmental Assessment Directive, Practical Guidance on applying European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment.

SEA Stage	Section of this Report	Application to the Jersey Island Plan
		revisit a number of the options explored in the Green Paper[2] and for this reason the focus of the assessment has been upon predicting the significant environmental effects of the Island Plan's policies. Mitigation measures have been identified to avoid or reduce adverse effects and to maximise potential beneficial effects. A monitoring framework has been developed to monitor the significant effects of implementing the Island Plan.
Stage C: Preparing the Environmental Report	The entire report	This Environmental Report documents the SEA process and reports the significant environmental effects of the Island Plan.
Stage D: Consultation and Decision Making		There is no statutory requirement to undertake SEA in Jersey. However, a voluntary SEA has been undertaken and the SEA is to be published in conjunction with the Island Plan.
Stage E: Monitoring the implementation of the Plan or Programme	Monitoring will commence once the Island Plan is adopted.	A monitoring framework has been developed as part of the Environmental Report which is documented in Section 8.

3.2 Wider Sustainability Issues

The focus of SEA is intended to be environmental, i.e. there is no specific requirement to consider wider socio-economic issues such as housing, employment, crime etc. However, in the UK, there is a recognised process known as Sustainability Appraisal (SA) which is applied to land-use plans and integrated with the SEA process. SA is, therefore a tool used to assess the social, economic and environmental effects of a plan or programme. It is recognised that there are some challenging socio-economic issues facing Jersey and, therefore, the scope of the SEA has been expanded slightly to consider some wider, non-environment specific issues. Further information about how the scope has been widened is presented in Section 4.

[2] Island Plan Review: Strategic Options Green Paper (July 08)

4 Establishing the Context and Baseline

This section provides information about the existing environmental conditions across Jersey and forms the basis for the assessment of the Plan. It also summarises the review of other relevant plans, programmes and environmental protection objectives.

4.1 Review of Relevant Plans and Programmes

A review was undertaken of other relevant plans, programmes and environmental protection objectives to:

- Identify where the Island Plan could influence existing plans and vice versa;
- Identify any external environmental objectives, indicators or targets that should be reflected in the SEA process;
- Identify any baseline data relevant to the SEA process; and
- Identify potentially conflicting environmental issues, problems or protection objectives.

Box 1 identifies the SEA Directive requirements for the review.

Box 1: SEA Directive Requirements for the Review of Plans, Programmes and Environmental Protection Objectives

The SEA Directive requires that the SEA covers:

'an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and prgorammes' (Annex 1 (a)).

'the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation' (Annex 1 (e))

A review was undertaken of key International Conventions and European Directives that could potentially influence the Island Plan and its policies, as well as the SEA process. Whilst Jersey is not part of the EU, many of the Directives and Strategies and the principles and issues they highlight are of relevance to Jersey and were considered an important part of the process.

National level plans and programmes were also reviewed including national strategies for air quality, biodiversity etc to provide a Jersey context for the SEA process. Appendix A presents the results of the review of relevant plans and programmes.

4.2 The Environmental Baseline

Understanding the baseline conditions across Jersey is essential to enable judgements to be made through the assessment process about the likely effects of the Island Plan. It is also an essential part of developing Environmental Objectives that are used to assess the plan. Box 2 establishes the SEA Directive requirements for this stage of the process:

Box 2: SEA Directive Requirements for Baseline Data Collation

The SEA Directive requires that the SEA covers:

'the environmental characteristics of areas likely to be significantly affected' (Annex 1 (c))

'any existing environmental problems which are relevant to the plan or programme, including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EC'(Annex 1 (d)).

4.2.1 The SEA Directive Topics

The SEA Directive establishes a series of topic areas for which the specific effects of the plan should be predicted. The topics are: biodiversity; population; human health; flora; fauna; soil; water; air; climatic factors; material assets; cultural heritage including architectural and archaeological heritage; and landscape. Baseline data has been gathered for each of these topics and the scope of the population topic has been broadened to enable baseline data to be gathered in relation to socio-economic issues such as housing, employment, deprivation; and crime. Data has also been gathered in relation to travel and transport and waste and minerals as they are recognised as being important issues for Jersey.

The environmental baseline was characterised through the following methods:

- Review of plans, programmes and environmental protection objectives; and
- Data research based around a series of baseline indicators developed from the SEA Directive topic.

The SEA Directive requires effects upon 'material assets' to be considered within the SEA. Material assets refer to the stock of valuable assets within a study area and can include many things from valuable landscapes, natural and cultural heritage through to housing stock, schools, hospitals and quality agricultural land. It is considered that material assets of the Island are appropriately covered in the following baseline sections, and consequently will not be repeated as a separate section:

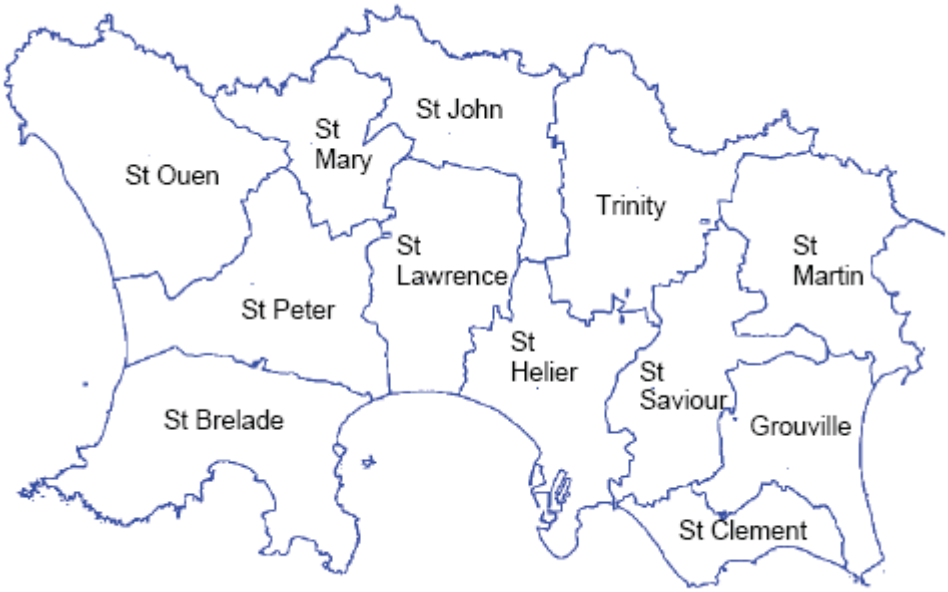
- Biodiversity, flora and fauna;
- Soil;
- Cultural heritage;
- Landscape;
- Population; and
- Transportation.

The completed baseline data collation tables are presented in Appendix B of this report with Section 4.2.3 summarising some of the key environmental issues facing the Island identified through the baseline data.

4.2.2 Jersey's Parishes

Jersey is the largest of the Channel Islands with an area of 118.2 sq. km situated 14 miles off the north-west coast of France and 85 miles from the English coast. The Island is divided into 12 Parishes which are shown on Figure 4-1 below:

Figure 4-1 The Parishes of Jersey



4.2.3 Key Environmental Issues and Opportunities

The collation of baseline data enabled the identification of some key issues and opportunities for Jersey that need to be taken into consideration when preparing the Island Plan and when undertaking the SEA. Table 4-1 summarises the key issues.

Table 4-1 Key Environmental Issues and Opportunities

Environmental Topic	Key Environmental Issues	Key Environmental Strengths and Opportunities
Biodiversity, flora and fauna	Further research is needed into the state of the marine environment across Jersey. Knowledge about the coastal and marine habitats lags behind that for terrestrial habitats. There are a number of threats to the coastal and marine environment of Jersey with ports, harbours, aquaculture, agriculture, mineral extraction, industry, housing, tourism and power generation all applying pressure. There is a long-term threat posed by reclamation for waste disposal and creating additional land resources. For example, filling a large area of St Aubin's Bay destroyed a valuable area of habitat. There is a worldwide issue of loss of intertidal habitat to inappropriate development. There are potential threats to Ramsar sites linked to the further development of the aquaculture industry. Climate change and coastal squeeze present a long-term risk to coastal habitats. The twelve parishes across the Island have a significant role to play in the provision, management and development of open space across the Island. The majority of areas of open space are under the ownership and management of the Parishes. Whilst management by the Parishes means that there are high levels of community ownership, there are issues associated with inequalities relating to the quality, quantity and access to open space across the Island.	There are a number of opportunities associated with the high quality coastal and marine environment of Jersey. Tourism is well-developed and there is scope to further develop the existing recreational offer of the coastal environment, providing it is undertaken in a sustainable manner. There are opportunities to improve planning decisions and to offer greater levels of protection to key habitats and species across the Island. There have historically been issues associated with development abutting designated sites and, therefore threatening adjacent habitats and potentially the integrity of the designated site. Opportunities should be sought to promote the development of wildlife corridors. Biodiversity in Jersey is protected with an expanding network of designated sites. These, and other locations, support a number of protected habitats and species, many of which are nationally rare but able to flourish by virtue of Jersey's geographic isolation and distinct climatic regime. Different species exist in Jersey at both the northern and southern limits of their ranges, producing unique communities of plants and animals. In addition, the special value of the offshore and inter-tidal marine environment is recognised by the presence of four Ramsar sites. The very high tidal range, offshore currents and diversity of habitats provide ideal conditions for a wide range of species, and these should continue to be afforded the highest levels of protection.
Population	Employment levels in Jersey are high and are higher than in the UK. The financial sector has performed particularly well with performance improving over the last 20 years and it now accounts for more than half of total economic activity in Jersey, employing approximately one quarter of the workforce.	Whilst there have been declines in the economic performance of some sectors such as manufacturing, there has been growth in others such as construction and retail. Maintaining and further developing the Island's economic success will be very important. In the future, the agriculture sector will need to become more

Environmental Topic	Key Environmental Issues	Key Environmental Strengths and Opportunities
	Traditional industries in Jersey such as agriculture and tourism have had to compete in an increasingly competitive market place as international markets have developed. Ensuring that these industries remain sustainable and profitable will be a future challenge. There is a continuous need to provide new homes on the Island and the future challenge will relate to where the housing development should be situated and also the density of the proposed new developments. The housing needs of Jersey's population need to be met. House prices are very high in Jersey in comparison with average wages. The affordability of property for low-income earners is of central importance and recent efforts have been focused upon this issue through the introduction of the Jersey Homebuy scheme The 2007 Housing Needs Survey identified that there is potentially going to be a shortfall of particular property types over the next five years (despite overall supply being above demand). A dwelling mix policy is not currently applied to new housing by the States but this issue may need to be addressed in the future to ensure that the supply of housing meets local needs. There is an increasingly ageing society which means that the working age population is shrinking and the dependent population is growing. This has implications for the economy, health care, housing and also the vitality and vibrancy of communities on the Island. Inward migration could help to increase the number of working age residents on the Island which could benefit the Island's economy in the long-term. The Annual Social Survey in 2007 revealed that the three most important Island-wide problems from a crime perspective were: anti-social behaviour by young people; people dealing in drugs; street violence and disorder.	competitive and market/consumer orientated. Opportunities to diversify and improve efficiency need to be explored.
Human Health	There are some issues associated with social deprivation in St Helier. An increasingly ageing population has the potential to increase	The Island is traversed by a large number of cycle tracks, footpaths etc and the Island presents many opportunities for all sectors of the

Environmental Topic	Key Environmental Issues	Key Environmental Strengths and Opportunities
	pressure on health services and there is a need for sufficient services and facilities to be made available.	population to participate in sports activities.
Water (including the coastal and marine environment)	Whilst flood defences currently provide adequate levels of protection to Jersey's Coast, there is a need to plan for the future and for a long-term approach to be adopted in policy making. There is a risk of wave overtopping of these defences in the future. However, the predicted level of sea level rise over the next 10 to 20 years is relatively small. A recent programme of improvements has been undertaken across Jersey improving the defences with successful schemes implemented in St Ouen, St. Brelade and St. Aubin and some of the smaller bays. In the future there are likely to be morphological changes along the coast which could see the lowering of beaches which poses risks associated with flood defences being undermined. It is predicted that winter rainfall is likely to increase, summer rainfall will decrease and higher temperatures will increase surface evaporation. This could pose long-term threats to water resource availability as the Island's water supply is almost exclusively from surface water sources to approximately 90% of the population. There could be risks associated with drought in the future which could affect water supply to the Island's residents. There is a long-term reclamation threat to the coastal environment. There are currently issues associated with the performance of the principal Sewage Treatment Works in the Bellozane Valley. The works would fail to meet nitrogen content standards required for compliance with the EU Urban Wastewater Treatment Directive and the works would also need to be improved to meet the tighter bacteriological standards of the most recent EU Bathing Water Directive (2006/7/EC). The existing works need to be upgraded both to reduce environmental risks and to ensure that sufficient capacity exists for the projected population growth.	There are a number of opportunities associated with the high quality coastal and marine environment of Jersey. Tourism is well-developed and there is scope to further develop the existing recreational offer of the coastal environment, providing it is undertaken in a sustainable manner. Jersey's planning law extends to the limits of the territorial waters (not the Mean Low Water Mark as in the UK) and so there is no barrier between the land and sea from a development control perspective. There is an opportunity to capitalise upon this and ensure holistic planning to benefit all of Jersey's built and natural environment. There is pressure to further develop Jersey's coastline linked to recreation, commerce, tourism, etc. The long-term threat of climate change could, therefore, potentially constrain future development along the coastline and flooding and sea level rise risks must be considered in development control decision-making. Whilst the current position in Jersey is to 'hold the line' and to continue maintenance of coastal defences, there may be a need to question this policy in the long-term from a social, economic and environmental perspective.
Energy and Climatic Factors	Climate change poses a long-term threat to Jersey's coast. The increase in sea level predicted is 500mm by the 2080s. There are	The Island has a good onshore and offshore wind resource although there are a number of potential constraints to the development of this

Environmental Topic	Key Environmental Issues	Key Environmental Strengths and Opportunities
	also likely to be increases in wave heights and periods and changes in wave direction. This will affect risks of coastal flooding and erosion which could indirectly affect the morphology of the coastline. Coastal defences protect significant stretches of Jersey's coastline. These defences protect the coastline from coastal erosion and flooding. Jersey is heavily dependent upon imported energy which makes it vulnerable to global changes in energy patterns. This dependence upon imported energy also means that increases in price significantly affect business and household energy bills.	technology onshore including ecological constraints, noise, aviation and communication impacts, visual intrusion and site practicality. There are opportunities to further develop micro-generation technologies such as ground source heat pumps and solar water heating. There is currently quite limited energy generation from renewable sources on the Island.
Landscape	It is acknowledged that there are a number of potential threats to the landscape and seascape through inappropriate development. The seascapes of the island are very sensitive and they are at risk of being adversely affected by inappropriate development. The Island Plan should require that the effect of a development upon the seascape is thoroughly assessed prior to planning permission being granted.	The special value of parts of the Jersey landscape is recognised through the characterisation exercise. Future development proposals must have due consideration to the sensitivity of certain landscapes to change. The designation of St Ouen's Bay as a National Park has the potential to increase protection to this valuable part of the Island.
Cultural heritage and townscape	Whilst there exist thorough records of notable sites on the Island, work on designating Historic Character Areas (equivalent to UK Conservation Areas) remains ongoing. When completed, this project will aid the understanding and protection of the wider historic context within which the individual sites are located. There has historically been a loss of key heritage and distinctive features of the St. Helier townscape. Such loss needs to be monitored and the potential effects of new development on this heritage critically reviewed.	Jersey has a wealth of heritage assets given its relatively small size. There is an opportunity to improve knowledge about the historic environment and also to develop knowledge about the quality of the resource to improve decision-making and also the protection and enhancement of these resources. Opportunities should be sought to protect and also promote valuable built heritage as a tourist opportunity. The designation of Historic Character Areas is considered a significant opportunity to improve the protection and enhancement of the heritage and townscape of the Island. The regeneration of St. Helier presents an opportunity to improve the setting and character of a number of areas of high architectural and heritage value through effective public realm improvements.

Environmental Topic	Key Environmental Issues	Key Environmental Strengths and Opportunities
Air	The primary source of air pollution in Jersey is from vehicle exhausts. Concentrations of nitrogen dioxide (NO_2) occur at major road junctions and are associated with periods of congestion, particularly in the morning and evening rush hours. Cleaner engine and fuel technology has seen a reduction in emissions per vehicle in recent years, although this has been largely negated by the increase in the number of vehicles on the Island's roads. Attempts to address poor air quality are therefore closely linked to transport policies and the promotion of more sustainable transport options. The most significant non-transport source of poor air quality, the Bellozanne waste incinerator, is due to be replaced by a modern plant incorporating emissions-reducing technology. This should lead to a further reduction in the already low levels of sulphur dioxide (SO_2) and volatile organic compounds (VOCs) experienced on the Island. The prevailing wind directions are south westerly or north westerly and the strength of the prevailing winds help to prevent chronic incidences of air pollution. However, a number of the streets in St Helier have relatively high buildings on either side, creating a canyon effect which can affect the dispersal of air pollution. This should be considered when designing new developments.	Opportunities should be sought to reduce reliance upon the private car to improve air quality particularly in the more urban parts of the Island.
Soil and land quality	The introduction of new sources of pollution and contamination during the development process should be avoided. Damage to soil functions such as infiltration and carbon sequestration should be avoided.	Opportunities should be sought to remediate areas of contamination when pursuing new development. A key strength is the lack of contamination across the Island; this is largely because Jersey does not have a history of heavy industrial activities.
Travel and Transport	Very high use of the private car causes problems of traffic congestion and poor air quality, particularly in St Helier during the morning and evening rush hours. Bus services are increasing in popularity but are heavily subsidised by the States and still account for a very low proportion of total journeys.	There is an opportunity to increase bus use, particularly for travelling into St. Helier to reduce problems associated with congestion. However, there will need to be further investment in the bus network to achieve this, particularly in the routes serving the southern parishes.

Environmental Topic	Key Environmental Issues	Key Environmental Strengths and Opportunities
	Alternatives need to be promoted and encouraged, and new development focussed in areas that are accessible by a range of transport options. The strategic importance of both St. Helier Harbour and Jersey Airport needs to be safeguarded.	
Minerals and Waste	Current waste management practices are unsustainable in the long-term and have adverse environmental impacts. Waste reduction initiatives and the extension of both kerbside and static recycling facilities are likely to lead to improvements in the coming years and reduce the reliance upon landfill as a means of disposal. Jersey is largely self-sufficient in minerals, but the promotion of recycled aggregates should be seen as a priority to conserve limited primary resources and minimise the associated environmental impacts of their exploitation. Jersey has to rely heavily on indigenous mineral resources. There are constraints to the opening of new stone quarries including deeply weathered upper rock layers; head and wind blown sand deposits; and environmental constraints.	There is a large amount of inert waste generated and there is opportunity for this to be reduced through careful planning and more sustainable construction and demolition practices. The use of recycled aggregates would also help to reduce mineral extraction needs. Opportunities should be sought to promote higher levels of recycling in construction projects.

5 Methodology for Assessing the Plan

This section of the report presents the methodology that has been used to assess the Island Plan. Box 3 identifies the activities which are required to comply with the SEA Directive as part of the assessment process.

Box 3: SEA Directive Requirements Applicable to the Assessment of Effects and Mitigation

Information to be provided in the Environmental Report includes:

• 'the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, including architectural and archaeological heritage, landscape and the interrelationship between the above factors. These effects should include secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects' (Annex I (f) and footnote)

• 'the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme...' (Annex I (g))

• 'an outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information' (Annex I (h))

5.1 The Environmental Objectives

The use of environmental objectives is a recognised way of assessing the performance of a plan or programme. The environmental objectives have been devised using the SEA Directive topics and informed by the review of other relevant plans and programmes and the identification of the key environmental issues and opportunities.

The environmental objectives are intended to be overarching and aspirational. A series of guide questions have been developed to support each objective to ensure that only issues relevant to Jersey are considered during the assessment. These guide questions have been used by the assessment team to determine the likely effects of the Island Plan upon the achievement of the objectives. Each objective is also supported by a series of baseline indicators which are used to characterise the baseline conditions across the Island. The environmental objectives, guide questions and indicators are presented in Table 5-1. The elements of the plan have been reviewed to predict to what extent the environmental objectives would be met, or, otherwise, if the plan were adopted in that form.

Table 5-1 Environmental Objectives, Guide Questions and Indicators

SEA Directive Topic	Link to the Island Plan Strategic Policies	Environmental Objectives	Guide Questions	Baseline Indicators (those in italics are currently baseline data gaps)
Biodiversity, Flora and Fauna	Sustainable development Protection of the environment	1) To protect and enhance terrestrial and freshwater biodiversity	Will it protect and enhance the condition of designated sites at an international/national and local level? Will it promote sustainable agricultural land management to benefit wildlife? Will it avoid habitat degradation and fragmentation and promote the development of wildlife corridors? Will it provide opportunities for ecological enhancement of terrestrial and aquatic species?	Location, number and condition of designated sites (Ramsar and Sites of Special Interest (SSI)) Biodiversity Action Plan (BAP) habitats and species Habitats created through the Countryside Renewal Scheme
		2) To protect and enhance coastal and marine biodiversity	Will it protect and enhance the valuable coastal and marine biodiversity, for example, rocky reefs and intertidal sediment flats? Will it protect and enhance the condition of designated sites? Will it protect habitats or allow adaptation to the threat of coastal squeeze?	Number, extent and condition of marine and coastal designated sites (including Ramsar and SSIs. Extent and condition of coastal habitats and species
Population	Sustainable development Economic development and diversification	3) To provide good quality affordable housing that meets the requirements of the local population	Will it lead to the establishment of the correct housing mix? Will it promote the development of affordable housing? Will it provide the appropriate quantity of housing?	Mix adjusted average price of dwellings sold in Jersey Ratio of house prices to earnings Property type and housing needs by property type

SEA Directive Topic	Link to the Island Plan Strategic Policies	Environmental Objectives	Guide Questions	Baseline Indicators (those in italics are currently baseline data gaps)
		4)To encourage the development of sustainable communities	Will it protect and enhance community spirit and cohesion? Will it promote a sense of place? Will it protect and enhance the network of educational and community facilities?	*Number and distribution of educational facilities.* *Number and distribution of community facilities (youth centres etc)* *Perceptions of Jersey as a place to live*
		5)To promote sustainable economic growth	Will it promote the development of the tourist industry? Will it provide employment opportunities? Will it provide opportunities for diversification e.g. in the rural sector? Will it promote low footprint economies? Will it promote the uptake of rural initiatives?	Average earnings by sector Unemployment rate Employment by sector *Number and type of rural diversification schemes implemented per annum.*
Human health	Sustainable development Protection of the environment	6)To improve physical and mental health for all and reduce health inequalities	Will it promote healthy lifestyles? Will it reduce health inequalities? Will it improve access to health care services and facilities?	*Number and distribution of sports facilities* Life expectancy Incidence of key diseases per 1,000 population
Soil and Land Quality	Sustainable development Protection of the environment	7) To guard against land contamination and encourage the appropriate re-use of brownfield sites	Will it result in the loss of greenfield land? Will it result in soil contamination?	Land use by parish *Key areas of land contamination* *Number of new developments per annum on greenfield land* Habitats created under Countryside Renewal Scheme Location of areas of open space (including distribution by parish)
		8) To protect soil functions	Will it result in the compaction and erosion of soils? Will it lead to the removal or alteration of soil structure and function?	

SEA Directive Topic	Link to the Island Plan Strategic Policies	Environmental Objectives	Guide Questions	Baseline Indicators (those in italics are currently baseline data gaps)
Water	Sustainable development Protection of the environment	9)To protect and enhance the quality and availability of water resources	Will it allow for adaptation and reduce risks posed by coastal squeeze? Will it protect and enhance water quality? Will it promote the sustainable use of water resources? Will it increase surface water runoff?	Pollution incidents Daily water demand and information about the water supply network Distribution of areas at risk of flooding Surface water quality data
		10) To protect and enhance coastal, intertidal and marine waters	Will it protect and enhance coastal water quality? Will it promote sustainable development of the aquaculture industry?	Bathing water quality Area of the intertidal and subtidal area used for aquaculture industry. Location of coastal flood defences
Air	Sustainable development Protection of the environment	11) To protect and improve air quality	Will it reduce vehicular emissions? Will it promote improvements to air quality?	Air quality statistics Location of key polluting industry
Energy and Climatic Factors	Sustainable development Protection of the environment Quality of design Travel and transport	12) To limit and adapt to climate change	Will it reduce risks posed by coastal squeeze? Will it promote adaptation to the risks posed by climate change? Will it result in damage to or compromise existing coastal or flood defences? Will it reduce greenhouse gas emissions?	Energy related carbon emissions by source Location of coastal flood defences *Loss of intertidal and marine habitat to coastal squeeze* Number of renewable energy schemes implemented.
		13) To increase energy efficiency and require the use of renewable energy sources	Will it promote energy efficiency? Will it increase renewable energy use?	
Cultural Heritage	Sustainable development Protection of the	14) To protect and enhance the cultural heritage resource	Will it protect and enhance valuable heritage assets? Will it protect and enhance the historic	Number of listed or registered buildings Number and location of Historic

SEA Directive Topic	Link to the Island Plan Strategic Policies	Environmental Objectives	Guide Questions	Baseline Indicators (those in italics are currently baseline data gaps)
	environment Quality of design		landscape? Will it protect and enhance valuable parts of the urban environment?	Character Areas
Landscape	Sustainable development Protection of the environment Quality of design	15) To protect and enhance landscape, seascape and townscape character and quality	Will it protect and enhance the seascape? Will it protect and enhance landscape character and quality? Will it protect and enhance the character and quality of the urban environment? Will it promote good quality design?	Distribution of Character Areas, types and their key attributes Extent of landscape designations *Amount of development occurring in specific landscape designations (Green Zone, Countryside Zone and Zone of Outstanding Character)*
Waste and Minerals	Sustainable development Protection of the environment Quality of design	16) To minimise waste, increase re-use and recycling and to promote sustainable resource use	Will it reduce waste generation and promote sustainable waste management? Will it promote the use of recycled materials and aggregate? Will it result in damage to valuable geological sites (e.g. SSI) Will it promote the sustainable use of natural resources?	Recycling rates for different types of waste Number of kerbside recycling schemes Waste generation statistics Mineral outputs and extraction facilities Recycled aggregate generation *and use in new developments*
Transportation	Sustainable development Travel and transport Quality of design	17) To promote the use of more sustainable modes of transport	Will it result in increased pressure on key transport infrastructure? Will it result in the loss of transport infrastructure? Will it increase opportunities to travel by sustainable modes of transport?	Extent of the bus network and bus patronage Travel to work by mode Extent of the cycle network Proximity of new developments to public transport facilities *Availability of public transport - proximity to residential developments/tourism*

SEA Directive Topic	Link to the Island Plan Strategic Policies	Environmental Objectives	Guide Questions	Baseline Indicators (those in italics are currently baseline data gaps)
				destinations

5.2 Assessment of the Island Plan Options

The SEA Directive requires that reasonable alternatives to the plan are assessed during its development. The SEA commenced after the Green Paper Consultation[3] which set out the issues, evidence and options that needed to be considered during the development of the Island Plan. The purpose of the Green Paper was to seek opinion on some of the more difficult issues facing the Island including housing provision, waste disposal and mineral extraction. Whilst the primary purpose of the Green Paper was to set out the options it also included a high-level review of some of the key advantages and disadvantages of certain options. For this reason, it was decided inappropriate to revisit some of the strategic options as part of this SEA, as decisions had already been taken with regards to the likely future direction of the plan. However, a high-level retrospective assessment of the waste management options was undertaken as they attracted a lot of interest and provoked a lot of discussion and so a further analysis of these options was considered beneficial and has been included in this report. Furthermore, specific decisions about where further landfill activity should be undertaken had not been decided at a policy level and so there remained scope for the SEA to influence this decision-making process.

Each of the waste options was assessed using a simple comparative matrix, an extract of which is presented in Table 5-2. Each cell of the matrix was completed using the notation presented in Table 5-3.

Table 5-2 Options Assessment Matrix Extract

SEA Objective	Option 1 – small amount of descriptive text about the option		Option 2 – small amount of descriptive text about the option	
To protect and enhance terrestrial and freshwater biodiversity	+	Commentary text provided here to explain the results	-	Commentary text provided here to explain the results
To protect and enhance coastal and marine biodiversity				

Table 5-3 Assessment Notation Used to Complete the Matrices

Impact	Description	Symbol
Major Positive Impact	The policy/option contributes to the achievement of all elements of the environmental objective.	++
Positive Impact	The policy/option contributes partially to the achievement of the environmental objective but not completely.	+
No Impact/ Neutral	There is no clear relationship between the policy/option and/or the achievement of the environmental objective or the relationship is negligible.	*0*

[3] Island Plan Review: Strategic Options Paper Green Paper (July, 2008)

Impact	Description	Symbol
Negative Impact	The policy/option detracts from the achievement of some elements of the environmental objective.	-
Major Negative Impact	The policy/option detracts from the achievement of all elements of the environmental objective.	- -
Uncertain impact – more information required	It is not possible to determine the nature of the impact as there may be too many external factors that would influence the appraisal or the impact may depend heavily upon implementation at the local level.	?
Positive and Negative Impacts	The policy/option has a combination of both positive and negative contributions to the achievement of the environmental objective.	+/-
Level of Uncertainty	There is a high degree of uncertainty in the impact prediction	H
	There is a low degree of uncertainty in the impact prediction	L
Permanent Impact	A receptor would experience a permanent change as a result of the option/policy	P
Temporary Impact	A receptor would experience a temporary change as a result of the option/policy	T

5.3 Assessment of the Island Plan Policies

The Island Plan consists of 10 topic chapters (General Development Control; Natural Environment; Historic Environment; Built Environment; Economy; Housing; Social, Community and Open Space; Travel and Transport; Natural Resources and Utilities; and Waste Management) which include a series of policies that are to be used by the States of Jersey to make development control decisions. These specific policies are developed from a framework of overarching strategy policies relating to:

- Sustainable development
- Protection of the environment
- Economic growth and diversification
- Travel and transport
- Quality of design

All of the policies within each of the chapters have been subject to an assessment of their performance against the environmental objectives. The policies within each of the chapters have been grouped together to enable the cumulative effects of the policies to be understood and many of the policies within a chapter would deal with individual issues and, therefore a group assessment permits a more robust understanding of the collective effects of a chapter's policies. Therefore, for some of the chapters only one assessment matrix has been produced. However, for some of the chapters, such as economy which includes a large number of policies covering a range of different economic areas, a decision was taken to group the policies into sub-sections, for example, retail policies, office policies and a matrix was produced for each group of policies. An extract of the matrix used is presented in Table 5-4 and was completed using the notation presented in Table 5-3. The end column of the matrix identifies the performance of each individual policy within the group assessed against the Environmental

Objective and, therefore provides additional clarity about the sustainability performance of individual policies.

Table 5-4 Matrix Used to Assess the Plan Policies Extract

Environmental Objective	Type of Effect			Geographical Extent of Effect	Permanency	Level of Certainty	Commentary/Mitigation and Recommendations	Performance of Specific Policies
	ST (<5yr)	MT (5-10yr)	LT >10yr)		Permanent Temporary	Low High		
1) To protect and enhance terrestrial and freshwater biodiversity	+	+	+	*This column will explain the likely geographical extent of the effects predicted.*	*Confirms whether the effects are likely to be permanent or temporary.*	*Confirms the level of confidence of the assessor in the prediction.*	*Provides an explanation of the effects and identifies mitigation measures needed to reduce or offset adverse effects and to maximise potential beneficial effects.*	*This series of columns is used to define the performance of each individual policy within the group assessed on the Environmental Objectives.*

6 Assessment of the Island Plan Options

This section of the report presents the results of the assessment of the Island Plan Options. Each of the options was assessed against the environmental objectives to enable the identification of their key strengths and weaknesses.

6.1 Waste Management

Two options were considered during the development of the Island Plan:

- Option 1 – Terrestrial landfilling of existing mineral workings (La Gigoulande, Simon Sand and Gravel and Ronez).
- Option 2- Further land reclamation at La Collette

The completed assessment matrix is presented in Appendix C. The assessment demonstrates that the terrestrial landfill option is the more preferable long-term option for the Island particularly from a marine biodiversity perspective as it would avoid adverse direct and indirect effects upon the South East Jersey Ramsar Site and wider aspects of the marine environment. Reclamation could also introduce risks associated with changes to coastal hydrology, sediment transport and also saline flows, all of which could affect the wider coastline and not just the location where reclamation occurs. Other potential negative effects associated with reclamation are linked to long-term changes to the seascape and landscape. Conversely, the terrestrial landfill option is likely to offer long-term landscape benefits as it would help to facilitate the restoration of existing mineral workings which currently cause adverse visual effects and it would avoid any adverse effects upon the marine environment (although the Ronez quarry abuts the north coast it is considered unlikely there would be any effects upon marine and intertidal habitat). There would also be opportunities to create valuable ecological habitats which could also offer recreational opportunities. For example, sand dune habitat could be created at the Simon Sand and Gravel quarry which could provide habitat linkage with the Blanches Banques SSI situated to the south of the site.

The three potential mineral workings considered for the landfill option all have potential benefits and disbenefits and it is evident that further assessment work would be needed before any of them could be pursued to ensure that potential site specific environmental effects are thoroughly assessed and mitigated. One of the potential adverse effects of terrestrial landfill is the distances that may have to be travelled to dispose of the waste. A large amount of the inert waste generated originates in St Helier and this settlement is closer to La Collette which would reduce the distances travelled to dispose of waste. There are also potential risks of contamination of the underlying sand aquifer if landfilling occurs at the Simon Sand and Gravel Site and this demonstrates the need for thorough Environmental Impact Assessments (EIAs) prior to utilising any of the sites.

6.1.1 Recommendations

Prior to pursuing the terrestrial landfill option, EIAs should be conducted to ensure that effects of the options are assessed and adverse effects mitigated. There may also be opportunities to deliver significant enhancements through the landfilling option through sensitive restoration schemes that promote key BAP habitats.

7 Assessment of the Island Plan Policies

This section presents the results of the assessment of the Island Plan Policies. A succinct reporting style has been adopted which presents the key strengths and key weaknesses of the policies within each chapter of the plan, identifies recommendations to potentially improve the performance of the policies and highlights specific issues which should be monitored based upon the identified significant environmental effects. For further assessment details and results of the performance of individual policies against the Environmental Objectives, refer to Appendix D which presents the full assessment matrices.

7.1 Island Plan Strategic Policy Framework

Island Plan Strategic Policies	
Key Strengths	The combination of strategic policies is likely to protect terrestrial and freshwater biodiversity in the short through to the long-term. It is considered unlikely that this suite of policies would offer enhancement opportunities. Development will be concentrated within the Island's built up areas and development will only be considered on greenfield land in exceptional circumstances. Therefore, this policy will have indirect beneficial effects on the protection of terrestrial and freshwater biodiversity in greenfield areas. The focus of the spatial strategy upon promoting development in St. Helier should also indirectly protect a number of the designated sites outside of St. Helier as there are no sites within the settlement. Collectively, the strategic policies should help to ensure that sustainable growth and development can occur across the Island, with development concentrated in those locations that have the capacity to accommodate further growth (Policies SP1 and SP3) and protection afforded to those parts of Jersey where there is a very high quality environment (Policy SP4). There is also a focus upon ensuring that development is accessible and that dependence on the private car is reduced (Policy SP6). Therefore, positive effects were recorded against the objective *'to encourage the development of sustainable communities'* as this strategic approach should ensure that the Island continues to be a place where people want to live and work. There are also likely to be indirect benefits for health and well-being as a reduced reliance on the private car should help to create a more pleasant living environment and public realm through reduced congestion and pollution. This is likely to be a gradual benefit that will be realised in the long-term as there is a shift towards pedestrian and cycle, rather than private car priority. Although this may need to be supported by specific Jersey wide initiatives that promote active travel. Policy SP5 clearly supports economic development and diversification and highlights the need for innovation and positive effects were recorded against the objective *'to promote sustainable economic growth'.* It is expected that there are likely to be significant opportunities for economic growth in St. Helier associated with the new developments such as the Esplanade Quarter. Focusing development within the urban areas indirectly protects greenfield areas of land from development and this also helps to protect soil functions. There is a limited amount of brownfield land available in Jersey for development. However, focusing development in St. Helier should ensure that vacant areas of land are utilised which should benefit townscape and the public realm, as well as protecting landscape character and quality in rural locations. It is acknowledged within the St. Helier Urban Character Appraisal[4] that there is a significant opportunity to revitalise St. Helier and improve the quality of its townscape and its overall vibrancy. Policy SP2 *Efficient Use of Resources* performs positively against a number of the objectives addressing waste minimisation and resource use and energy efficiency. There is also a clear commitment throughout the strategic

[4] WMUD (October, 2005) Urban Character Appraisal, St. Helier.

Island Plan Strategic Policies	
	policies upon the need to reduce carbon dioxide emissions. For example, focusing development within St. Helier, where public transport connections are good should ensure that employees and residents have alternative options to the private car. Policy SP6 specifically addresses ensuring that new development is accessible by alternative modes of transport to the car and Policy SP2 which addresses resource use should help to ensure that achieving a low carbon footprint is a central theme of the design process.
Key Weaknesses	New development across the Island will lead to increased water resource demand. The issue of water use is not explicitly addresses in this part of the Island Plan and this could be addressed in Policy SP2 by strengthening its wording.
Recommendations to Improve Specific Policies	
Policy SP2 – Efficient Use of Resources	This policy should make reference to the need for water resources to be conserved and effective water management techniques incorporated into new development.
Policy SP4 – Protecting the Natural and Historic Environment	This policy could be strengthened to make it more proactive such that it encourages the delivery of biodiversity enhancement measures rather than focusing solely upon protection.
Policy SP7 – Better by Design	This policy could be improved by including a clause highlighting the need for 'safety by design' principles to be part of achieving high design quality.

7.2 General Development Policies

General Development Policies	
Key Strengths	Jersey supports a wide range of habitats and species and it is essential that this diversity is not compromised by inappropriate development. The General Development Control policies and particularly GD1 clearly state that new development should not adversely affect biodiversity, protected species, important areas of open space, wildlife corridors or the marine zone and this should ensure that all new development is thoroughly assessed from this perspective before planning permission is granted. In the long-term there is potential for Policy GD6 to offer some opportunities for enhancements if areas of contaminated land are remediated. For this reason, positive effects were recorded against the objectives *'to protect and enhance terrestrial and freshwater biodiversity'* and *'to protect and enhance coastal and marine biodiversity'.* Collectively, these policies address issues such as ensuring sustainable patterns of development, ensuring appropriate densities are achieved, maintaining the character of existing neighbourhoods, ensuring new developments are accessible by sustainable modes of transport, promoting high levels of design quality, seeking to design out crime and seeking to protect the quality of the built and natural environment which should ensure that existing communities and their character are not adversely affected by new development. There are also likely to be indirect health benefits, as the quality of the natural environment and access to areas of open space (addressed in Policy GD1) is a factor affecting overall health and well-being. There are also likely to be economic benefits as a high quality built and natural environment can be a factor encouraging new businesses to invest in a location. New development has the potential to increase use of the private car and therefore, the types of new development granted planning permission should be carefully reviewed from a location and trip generating perspective. Within the policies, there is a clear emphasis placed upon ensuring that development is accessible by pedestrians, cyclists and public transport users and for safety issues to have been considered and for this reason positive effects were recorded against the objectives *'to protect and improve air quality',' to limit and adapt to climate change'* and '*to promote the use of more sustainable modes of transport'.* Whilst the policies are not actively improving air quality they should help to ensure that adverse pollution effects are not caused by new development and this is particularly important as there are recognised air quality problems linked to road traffic in parts of St. Helier. Any Supplementary Planning Guidance, Masterplans or Site Briefs must follow the principles contained in the Island Plan to ensure the key requirements are carried through to development.
Key Sustainability Weaknesses	Policy GD2 could pose risks to protected species as it addresses the demolition and replacement of buildings. Whilst this issue is addressed in Policy GD1, it is felt that this is a real risk linked to Policy GD2 and a clause relating to this issue is worthy of inclusion.
Recommendations to Improve Specific Policies	
Proposal 1	Strengthen this policy to ensure that any Supplementary Planning Guidance, Masterplans or Site Briefs follow the principles contained in the Island Plan to ensure the key sustainability requirements are carried through to

General Development Policies	
	development.
Policy GD2 – Demolition and Replacement of Buildings	A clause should be added to the policy addressing the need for the demolition of buildings to not adversely affect protected species and for suitable mitigation to be included as necessary.
Policy GD6 – Contaminated Land	It would be beneficial to include a clause which states that the biodiversity potential of contaminated sites should be assessed before permission to remediate a site is granted, as these sites can support protected species.
Policy GD7 – Design Quality	This policy could be strengthened to include the provision for developments to link to the cycle network where possible and for the provision of secure cycle facilities to be an integral part of new developments.

7.3 Natural Environment

Natural Environment Policies	
Key Strengths	All of the policies clearly commit to protecting and enhancing all aspects of Jersey's natural environment, including marine, coastal and terrestrial resources. The marine environment of Jersey is highly biodiverse. There are three offshore Ramsar sites, as well as a large site to the south east of the Island which is one of the largest intertidal reef sites in Europe, important as a wintering habitat for waders and wildfowl. There are also a large number of coastal Sites of Special Interest (SSI). The marine and coastal environment is clearly protected by Policy NE6 and NE5 which establish a Coastal National Park and a Marine Zone protecting the Island's marine environment from the Mean High Water Mark to the territorial limits. There is recognition within the polices of the need to protect non-designated features as well as species protected by law and designated sites. For example, Policy NE4 protects trees, woodland and boundary features which is also likely to offer indirect cultural heritage and landscape benefits, as they are a very distinctive feature of Jersey's landscape. This policy also highlights the need for landscaping schemes to mitigate any potential adverse effects caused by development and for such schemes to include species that benefit biodiversity. Positive effects were recorded against the objective *'to protect and enhance landscape, seascape and townscape character and quality'.* The exceptional quality of the coastal landscape and the vulnerability of parts of it to any further development pressure, such as St. Ouen's Bay are acknowledged in Policy NE6 Coastal National Park that clearly states a presumption against development in this part of the Island. The policy does include scope for small-scale cultural and tourism development, providing it is appropriate to the landscape character and this should ensure that there is sufficient level of protection but that access and opportunities for the tourist industry can continue to develop. The development of a Coastal National Park Management Plan as advocated in Proposal 5 will be a particularly important mechanism for engaging all relevant stakeholders in the process of managing, conserving and enhancing the Park. Such a Plan should clearly identify targets for the National Park and roles and responsibilities for achieving the objectives and targets established to ensure that real benefits can be achieved for this part of Jersey's landscape. The protection and enhancement of the natural environment is likely to have positive impacts for the economy, as the natural environment is a key factor that attracts tourists to the Island and it is imperative that the landscape remains distinctive and attractive to ensure the continued success of this industry in the long-term. Policy NE8 addresses awareness raising and whilst this is something that is likely to be a gradual process, in the long-term it is likely to lead to a greater appreciation and understanding of why Jersey's natural environment is so important and so could lead to a greater sense of stewardship and focus upon why protection and enhancement is so important.
Key Sustainability Weaknesses	A separate policy relating to the Ramsar sites could be beneficial, highlighting the need for all developments potentially affecting such sites to be assessed to ensure that all potential direct, indirect and cumulative effects are identified

Natural Environment Policies	
	and mitigated. Whilst the supporting policy text highlights such issues it is felt that this needs to be reflected in suitable policies to ensure that the correct message is conferred regarding the protection of some of the Island's most valuable environmental resources. The legal ramifications of any development potentially affecting such sites should also be highlighted in the policies to again highlight the weight afforded to their protection.
Recommendations to Improve Specific Policies	
NE1 – Conservation and Enhancement of Biological Diversity	It is recommended that this policy makes specific reference to Environmentally Sensitive Areas, Sites of Special Interest and Ramsar sites, rather than just using the term 'protected site'.
NE2 – Species Protection	The policy refers to the need for appropriate assessment for development proposals that could affect species. It would be beneficial to outline within the supporting text exactly what would be expected of a developer to meet this requirement, as the procedure that has to be followed in the UK is very onerous to ensure the highest levels of protection to species and their habitats. Clarity on this matter would ensure that prospective developers factor sufficient time into their programmes to ensure that they can meet this requirement of the policy.
NE3 – Wildlife Corridors	There would be some merit in encouraging wildlife corridor enhancements to take into consideration specific opportunities that would benefit Biodiversity Action Plan Species.
NE5 – Marine Zone	It is recommended that Policy NE5 is strengthened to ensure that it clearly identifies the need for development proposals to be assessed and any potentially adverse effects mitigated. Whilst a specific reference to the potential need for EIA is included in the supporting text it is not reflected in the policy wording and it is particularly important that this is referenced owing to the potential for land reclamation occurring over the plan period which could affect this zone. The final paragraph of the policy could be amended to read: *'Development will only be permitted where an assessment has demonstrated that it would not adversely affect the amenities, character, ecological balance of the area because of its construction, siting, scale, form, appearance, operation, materials use, noise or emissions, or suitable measures have been incorporated into the development design to avoid or mitigate potential adverse effects.* *The need for Environmental Impact Assessment for developments will be decided on a case by case basis and must be agreed with the States of Jersey prior to planning applications being submitted'.*
NE8 – Access and Awareness	Whilst the policy is considered beneficial, it would also be useful if it included a bullet point which encouraged the improved interpretation and understanding of biodiversity across the Island through any improved access schemes e.g. through notice boards.
General Recommendations	It is encouraged that Sites of Importance for Nature Conservation are designated during the plan period to ensure that smaller/undesignated areas encompassing valuable habitat are protected and enhanced.

7.4 Historic Environment

Historic Environment Policies	
Key Strengths	There is a clear focus upon preservation and enhancement in these policies and so positive effects have been recorded against the *'to protect and enhance the cultural heritage resources objective'.* Proposal 7 states that the identification and designation of Conservation Areas will be considered during the Plan period and this is considered a very positive decision, as it should ensure that those parts of the built environment of historic value are recognised and plans put in place to ensure their long-term preservation and enhancement. This is likely to have indirect benefits for the townscape, particularly in St. Helier and should be an integral part of the long-term regeneration of the town. By designating Conservation Areas it may be possible to establish a sense of place and a clear historic identity which was identified as being an important issue in the St. Helier Urban Character Appraisal. Protecting and enhancing the cultural heritage resource is also likely to offer benefits for the townscape. There are likely to be indirect economic benefits as a result of the implementation of these policies as heritage resources and the wider historic environment are also a tourist attraction. The SEA previously recommended that Policy HE4 should make reference to Policy NE2, as demolition within Conservation Areas could potentially affect species like bats and this was considered an omission in the policy. This weakness has been addressed through reference to Policy NE2 in the text preceding the policy.
Key Sustainability Weaknesses	The policies focus largely upon the built heritage and archaeological resources, however further consideration could be given within the Island Plan to protecting and enhancing the historic landscape. There will be a number of elements of the Jersey landscape that are of historic value and this will not be limited to trees, woodlands and boundary features protected in Policy NE4. There may be scope for historic landscape character protection to focus more clearly in the policies.

7.5 Built Environment

Built Environment Policies	
Key Strengths	A central theme of all of these policies is upon ensuring that the vitality and viability of St. Helier is enhanced through a variety of regeneration proposals and public realm improvements. A series of challenging objectives are established that will seek to develop and cement St. Helier's role as a centre of Island life. These improvements are likely to help to attract inward investment in the long-term. There is inevitably a large amount of uncertainty about the future development of parts of St. Helier as masterplanning studies are currently underway to determine the future of areas, such as La Collette. Ensuring that the potential benefits of the regeneration proposals is achieved will be a key challenge and this is addressed through the provisions of Proposals 9 and 11 which highlight the importance of developing strategies such as a Public Realm Strategy and Masterplans for regeneration zones. These Masterplans should provide an opportunity to consider a wide range of sustainability issues and ensure that the strengths of these areas are protected and enhanced whilst challenging and addressing key weaknesses and areas of underperformance. Local community and stakeholder engagement is a key theme and this should help to ensure that local support, ideas and buy-in are achieved through a collaborative masterplanning process which positively contributes to the objective '*to encourage the development of sustainable communities'* as community members should have the opportunity to influence their future. Positive effects were recorded against a number of the environmental objectives, particularly '*to protect and enhance the cultural heritage resource'* and *'to protect and enhance landscape, seascape and townscape character and quality'*. All of the policies within this part of the plan, including the Policy BE10 Roofscape, seek to ensure that the quality of the built and natural environment is protected and enhanced, either through effective planning and design, improving the quality of the public realm, limiting new development within the Green Backdrop Zone and the Shoreline Zone, limiting the development of tall buildings and promoting effective modifications within the townscape, such as sensitive shop front modifications. Proposal 8 states that Conservation Areas will be designated and this should help to ensure that those areas of high architectural and historic value in St. Helier are protected. The public realm enhancements focus upon increasing pedestrian priority, making open space more widely available and reducing the adverse effects of traffic which in the long-term could help to reduce private car use in St. Helier and benefit air quality. Improving the availability of open space would also be consistent with the requirements of the Outdoor Open Space, Sport and Recreation Study and could have long-term health benefits if activity levels increase. The text supporting this chapter of the plan clearly states that higher density development will be needed in the future if the Island's development needs are to be met without the need to use greenfield land. This is a positive statement as it highlights the need for the effective use of land to protect some areas of very high landscape value. However, there is a risk that such development could be inappropriately designed and this is why the guidance to be prepared as part of Proposal 10 will be very important to ensure that

Built Environment Policies	
	high quality, high density design is promoted that incorporates sufficient levels of open space. It is strongly recommended that the application of this guidance is monitored to ensure that it is being effectively implemented and design quality is not being compromised. Collectively, these policies could help to promote economic growth by ensuring that a high quality public realm and investment environment is established. The proposals within each of the regeneration zones, in particular could be very important and this again highlights the need for high quality masterplans that ensure that development is concentrated in the correct locations and that high standards of design are delivered. Proposal 12 '*Jersey Airport Regeneration Zone'* is also likely to offer economic benefits in the long-term as it states that a land-use Masterplan will be developed for the airport which should ensure that land uses are identified that will complement and support the economic development of this part of Jersey. The scope of this chapter of the Plan is not limited to St. Helier and there is a recognition of the need to develop a Masterplan to guide the future development of the Five Oaks area and for village plans to be developed, where new development is proposed to protect their vitality and viability. There is a clear emphasis on ensuring that communities are sustainable and that they are served by the correct facilities.
Key Weaknesses	No specific weaknesses were identified in this part of the plan
Recommendations to Improve Specific Policies	
General Recommendations	Whilst no specific recommendations are proposed for individual policies, there are some issues that need to be taken into consideration during the Plan period relating to the implementation of these policies. It will be very important to ensure that the Masterplans developed for each of the Regeneration Zones in St. Helier are compatible i.e. that proposals in one location do not have the potential to undermine the viability of development in other areas. This is critical to ensure that maximum benefits are achieved in the long-term.

7.6 Economy

Economy Policies	
Key Strengths	Collectively, these policies should help to ensure that the centre of St. Helier remains a vibrant place that is attractive to potential investors as well as existing residents and businesses. The policies seek to ensure that new office development and retail opportunities are concentrated in St. Helier and not in other locations that could adversely affect the centre. Public transport connections to St. Helier from other parts of the Island are generally good and, therefore, employees should have a choice of travel options and this could help to reduce a dependence on the car use in the long-term. There has been a general increasing trend of bus usage across the Island and the economy polices, coupled with those in the travel and transport chapter could help to continue this trend. Accessibility of new economic development to cycle, pedestrian and public transport links is a key theme of all policies, including those which address development in smaller local centres. Some of the policies emphasise the need to re-use existing buildings or to convert buildings where possible for office use. This should help to ensure that St. Helier town centre remains vibrant, that buildings do not fall into disrepair, adversely affecting the townscape and that land and resources are not used unnecessarily. There is a lot of change currently underway in St. Helier and a number of masterplanning exercises are ongoing. There is some degree of uncertainty regarding the extent of new development that is likely to occur and the potential effects of the Esplanade development upon the use of buildings within the centre of St. Helier. This is why monitoring of the Island Plan's policies will be particularly important as it will be essential to ensure that the balance of office and residential uses in St. Helier is appropriate and that sterile environments which contradict the concept of a vibrant centre are not being established. Focusing development in St. Helier should help to protect the character of other smaller settlements and also protects the rural parts of the Island from development. There is also a clear commitment within Policy EIW6 to avoid industrial development in the countryside and for industrial units to be contained within the built-up area or existing sites. This should help to protect the wider environment and ensure that uses which have the potential to cause a local nuisance are thoroughly assessed and correct decisions made about their locations. The policies within this section of the plan identify the need for economic development to be carefully assessed and designed and for it not to have adverse effects upon the built and natural environment and so positive effects have been recorded against a number of the objectives. Collectively, the policies should help to ensure that there is land available for economic development which should help to sustain economic growth and provide employment opportunities whilst at the same time minimising effects on the environment. Most policies refer to the requirements of Policy GD1 which strengthens the connection to protection of species and designated habitats. Agriculture is a key component of Jersey's economy and it is essential that agricultural diversification opportunities are maximised and that the land is used sustainably to maintain incomes. However, agricultural diversification

Economy Policies	
	can present both opportunities and threats. For example, it could lead to pollution affecting soil and water resources, the loss of key soil functions including carbon and water storage, the loss of biodiversity resources or fragmentation of habitats and disturbance effects, as well as potential landscape changes. These types of effects could be triggered by a more intensive use of the land or the introduction of a more polluting land-use. Conversely, agricultural diversification may lead to a reduction in the intensity of certain agricultural practices which can benefit the environment and improve incomes for the landholders. This is addressed through Policy ERE2 which permits agricultural diversification providing a number of conditions are met relating to effects of the environment and compliance of the proposals with the Rural Economy Strategy objectives. Such benefits could also be realised through policies ERE3, ERE4 and ERE5 which permit some changes of use. Policy ERE7 permits the development of redundant and derelict glasshouses for agricultural diversification, or in exceptional circumstances, other uses and this is a positive use of a derelict structure in the rural parts of Jersey and should positively impact the landscape providing the replacement buildings are sensitively developed. A number of the policies address change of use or diversification and identify a number of criteria that have to be fulfilled before such development can occur. The policies include a reference to avoiding pollution effects which should help to protect soil resources from new contamination. A comprehensive suite of policies is included addressing tourism development and it is clearly identified that such development must not adversely affect the built or natural environment. There is a clear presumption against new tourist attractions in the Coastal National Park and limited development within the Green Zone. This should ensure that economic growth linked to tourism can occur without leading to the erosion of the natural environment which in itself is a tourist attraction.
Key Weaknesses	It is considered unlikely that the economy policies would have significant effects upon the coastal and marine environment. However, there is significant uncertainty about what development will occur at La Collette. A masterplanning exercise is currently underway which should provide further clarity, for example there is potential for the fuel farm to be moved and for further reclamation to occur. It is recommended that irrespective of the development type that occurs at La Collette, that the potential effects on the marine and coastal environment are assessed and mitigated, particularly upon the Ramsar Site. Whilst the construction of individual hotels and guest accommodation is unlikely to affect water resource availability or cause pollution, there is a risk that larger scale activities could adversely affect water quality, for example, development promoted in the Tourist Destination Areas (Policy EVE2). It is recommended that pollution is specifically mentioned in the policy to ensure that potential developers are aware of the need to avoid and mitigate any potential pollution risks. It is also recommended that Policy EVE2 makes reference to avoiding development which could adversely affect the Marine Zone although it is acknowledged that there is a cross reference to Policy GD1 which addresses this issue.
Recommendations to Improve Specific Policies	

Economy Policies	
General Comments Relating to the Light Industry and Warehousing Policies	Whilst the focus of these policies is not upon energy efficiency and renewable energy use, they could be strengthened to suggest that sustainable design principles should be incorporated into new industrial developments including incorporating renewable energy systems into the design.
Policy - ERE8 – Fishing and Fish Farming	This policy could be strengthened by the policy specifically referencing the policies which protect the marine environment.
General Comments for the Visitor Economy Policies	Policy NE5 ‘Marine Zone’ should be referred to in the tourism policies, as there is potential for new tourism development to adversely affect the marine environment. Making reference to this policy would strengthen these policies although it is acknowledged that there is a cross reference to Policy GD1 which does cover this issue.

7.7 Housing

Housing Policies	
Key Strengths	All of these policies focus upon providing the correct amount and mix of housing across the Island to ensure that the housing needs of the population are met. There is clear justification throughout the chapter about why certain decisions have been taken when developing the policies and therefore policy decisions are informed by a robust evidence base. There are specific policies addressing affordability, housing mix and meeting the needs of the elderly and those with disabilities. Major positive effects have, therefore, been recorded against the objective '*to provide good quality affordable housing that meets the requirements of the local population'.* The text supporting the policies states that monitoring will be an integral part of the implementation of the policies and this will be essential for ensuring that the policies are delivering the correct type of housing and are meetings needs. New housing development has the potential to result in localised biodiversity effects. The greatest risks in Jersey are considered to be to protected species, as the ecological SSIs are situated outside of urban areas and the plan is not promoting the significant re-zoning of greenfield land for new housing development and so new housing development should occur in regeneration areas, the Category A sites zoned for housing and as infill development within the existing urban area. This should help to reduce the likelihood of adverse effects upon terrestrial and freshwater biodiversity. Positive effects have been recorded against the objective *'to encourage the development of sustainable communities'*, as the policies highlight the need for new housing to be situated in or in close proximity to the existing built up areas to ensure that new houses are within a convenient distance of shopping, community and transport facilities (Policies H7, H5). The focus within the spatial strategy and the housing policies is upon providing new housing within the built up area where connections and facilities are better. This should help to reduce the need to travel which could have indirect air quality benefits in the long-term if emissions from vehicular sources are reduced. Additionally, focusing development within the built-up area will continue to protect the countryside from development and this will protect soil functions and ecosystems in rural locations. The sites zoned for Category A housing are currently a blight on the landscape as they are derelict glasshouse sites and so there would be landscape and visual benefits associated with their conversion to a housing use.
Key Weaknesses	There is scope for energy efficient design to be a key element of new housing development and this could be more clearly encouraged in the policies. Whilst no significant weaknesses have been identified it is strongly recommended that new development outside of the built up area is avoided to reduce the risk of a cumulative encroachment into the countryside.

7.8 Social and Community

Social and Community	
Key Strengths	There is a clear focus throughout his chapter of the Island Plan upon ensuring that new educational and community facilities meet local needs and are well-situated in relation to the existing built-up area which should ensure that long distances do not have to be travelled to access such facilities. They are particularly important in the parishes that are situated a further distance from St. Helier where there are a large number of facilities and amenities for Jersey residents. Positive effects are recorded against the *'to encourage the development of sustainable communities objective'.* Siting new community facilities in close proximity to public transport and pedestrian and cycle links could also help to reduce the need to travel in the long-term which could indirectly help to protect air quality. The provision of community facilities positively supports the other policies in the plan covering housing provision and economic development as new homes and communities will need to be supported by the appropriate social infrastructure. There is an acknowledgement within the policy of the need to ensure that new community facilities are well-sited in relation to the built up area and that their design is sensitive to adjacent areas and so positive effects were recorded against the objective *'to protect and enhance landscape, seascape and townscape character and quality'.* The availability of open space is important in creating a place that is desirable to live and also offers benefits for health and well-being. There is a clear theme throughout this section of the Plan upon maintaining and improving local amenity and ensuring open space provision which is likely to have long term benefits from a health perspective. The focus upon providing such facilities within the existing built up area should also protect the valuable Jersey countryside from such development.
Key Weaknesses	There is greater scope to encourage high quality design through some of the policies or at least to cross-reference some of the other relevant policies in the plan. All new development that occurs across the Island should be focusing upon providing high quality and innovative design that seeks to minimise waste, water and energy use.
Recommendations to Improve Specific Policies	
SC01 – Educational Facilities	These policies could be improved by making reference to the need for landscaping and enhanced areas for biodiversity to be incorporated into facilities and their grounds.
SCO2 – Healthcare Facilities	
SCO3 – Community Facilities	

7.9 Travel and Transport

Travel and Transport Policies	
Key Strengths	All of the policies focus upon reducing dependence on the private car by improving pedestrian and cycle access, improving public transport provision and rationalising parking provision. Positive effects have been recorded against the objective *'to promote the use of more sustainable modes of transport'.* Improving and encouraging the use of alternatives to the private car could help to encourage a modal shift in the long-term which could benefit air quality and help to reduce vehicular carbon dioxide emissions which will positively contribute to the climate change agenda (approximately one third of greenhouse gas emissions in Jersey come from motorised vehicles). These policies should also help to improve the quality of the public realm and complement a number of the other policies in the plan by reducing the dominance of traffic within the townscape which should have benefits for communities (visually and from an amenity perspective) as well as the setting of cultural heritage resources. There are acknowledged problems of traffic congestion in St. Helier and in the long-term the quality and attractiveness of this centre could be improved if there is a movement towards a travel hierarchy focused upon pedestrians rather than users of the private car. There are also likely to be long-term economic benefits, as reduced congestion and a more efficient road environment could reduce money lost by firms as a result of congestion. Similarly, the provision of new cycle and pedestrian routes coupled with public realm enhancements could help to attract inward investment. There could be indirect health and well-being benefits as a result of the provision and enhancement of footpaths and cycle paths as this could encourage improved levels of physical fitness, there may be health benefits associated with improved air quality and benefits linked to a reduced risk of road accidents. The delivery of improved public transport facilities across the Island will make places more accessible to the public, therefore, contributing to the development of sustainable communities. Such benefits are more likely to be realised in the medium to long term as the implementation of improvements will be gradual. Policy TT8 addresses the need for new developments including housing to be accessible to public transport and this should ensure that new communities are not established that cannot access facilities and services. There are four policies which address parking standards and provision and there are likely to be some indirect benefits for communities across the Island, particularly in St.Helier. A presumption against off-street parking provision is likely to make the urban environment more attractive and there is a clear focus upon encouraging improvements to the public realm through restricting parking. Policy TT14 addresses highway improvements and clearly identifies that a number of requirements will have to be fulfilled if road improvement schemes are to be supported. This includes ensuring that the environmental costs and benefits of the scheme have been thoroughly assessed. The focus of the schemes is upon reducing congestion which should reduce traffic flows and improve traffic movement benefitting air quality in the long-term. Policy TT6 addresses the provision of park and ride facilities which could

Travel and Transport Policies	
	offer a number of environmental benefits if it helps to remove traffic from the road network in the long-term; this is strengthened by the reference to Policy GD1.
Key Weaknesses	There is a general presumption throughout the policies upon discouraging new car parking unless absolutely necessary. However, Policy TT10 and Policy TT12 do permit new car parking development which could lead to increased areas of hardstanding depending upon where they are situated and the existing site land use. For this reason, negative effects have been recorded against the objective *'to protect and enhance the quality and availability of water resources'*. TT13 permits the creation of new access routes onto the Primary Route Network which could potentially affect the local townscape and this policy could be strengthened with regards to its environmental protection requirements.
Recommendations to Improve Specific Policies	
TT10 – Off-Street Public Parking Provision in St. Helier	This policy should include a clause stating that porous pavements and sustainable drainage systems should be considered as part of new car parking proposals.
TT12 – Parking Provision Outside St. Helier	This policy could be more explicit in its requirement for new car parks to have porous surfaces that promote infiltration. The policy currently states that a high standard of design will be required with regards surfaces but it is not explicit.
TT15 – Operational Development at the Port of St. Helier and Jersey Airport	A clause should be added to this policy highlighting that new development within the operational areas of the port and the airport will only be permitted if potential environmental effects have been assessed and mitigated, particularly with regards to potential effects on the marine environment and also potential effects upon birds at the airport.

7.10 Natural Resources and Utilities

Natural Resources and Utilities	
Key Sustainability Strengths	Within this section of the Island Plan there is a clear focus upon protecting the aquatic environment from the adverse effects of development (Policy NR1 and Proposal 20) which should have indirect benefits for biodiversity, if abstraction and pollution risks are effectively controlled and for human health, as potential drinking water sources should not be adversely affected by pollution. The provision of new infrastructure such as telecommunication masts and communication antennae are addressed in this section of the Island Plan which all have the potential to adversely affect the environment during their construction. However the policies aim to keep this development within existing grounds of telecoms systems or the built up area. Three of the policies within this section of the plan address renewable energy production. Generation of energy from renewable energy sources is very undeveloped in Jersey, but it is recognised that changes need to be made and alternative technologies explored if carbon dioxide emissions from energy generation are to be reduced and climate change effectively tackled. The development of renewable energy technologies has the potential to cause adverse environmental effects if not assessed and suitable mitigation implemented as part of the scheme design. All three of the policies clearly state that an EIA will be needed for all such developments. Therefore, positive effects are recorded against many of the environmental objectives as the requirements of the policies should protect environmental resources such as biodiversity, cultural heritage, water, soils. Tidal technology could be explored further, as the Channel Island waters offer an attractive tidal resource. However, such developments would need to be very carefully implemented to ensure that the marine environment and particularly the Ramsar sites were not adversely affected. In the long-term there could be economic benefits associated with the development of tidal technologies as it may be possible for niche markets and businesses to be established. Improving energy efficiency could also benefit companies by reducing their energy bills. Previous recommendations were made through the SEA process to strengthen the energy policies to ensure that sufficient consideration was given to the need to protect Jersey's marine environment when developing such infrastructure. It was also advised that the policies should be explicit in their need for the EIAs for such schemes to assess the effects of ancillary infrastructure. These recommendations have subsequently been incorporated into the policies and have strengthened their environmental performance. A separate matrix was completed for the minerals policies of the plan and positive effects were recorded against the objectives *'to protect and enhance terrestrial and freshwater biodiversity'* and *'to protect and enhance coastal and marine biodiversity'* as there is a key theme of protection throughout. For example, Policy NR8 states that new or extended mineral workings should not have an unacceptable impact on SSI and EIAs should be undertaken to assess the effects and to identify appropriate mitigation. There may also be opportunities to provide biodiversity and landscape enhancements through the restoration of minerals sites. For example, Simon Sand and Gravel is situated in a coastal location and there is a significant opportunity to restore

Natural Resources and Utilities	
	dune habitats in this area and to provide linkages with the Blanches Banques SSI to the south. The minerals policies should also ensure that other environmental resources such as soils, water, cultural heritage and the landscape are all protected from the potential effects of mineral development, particularly through the use of Policy NR10 which addresses the planning conditions that will be applied to mineral workings. There are likely to be continued economic opportunities through the continuation of mineral extraction on the Island and potentially through the development of new off-loading facilities for imported aggregates. The need to minimise the effect of mineral extraction upon the local community and the health and safety of members of the public is demonstrated and so health and well-being should be protected. Policy NR7 '*Secondary and Recycled Materials/Alternative Aggregates Production*' promotes the use of secondary and recycled materials as an alternative to primary aggregates where appropriate. Therefore these policies have been assessed as major positive over the medium to long term against the objective *'to minimise waste, increase re-use and recycling and to promote sustainable resource use'.*
Key Sustainability Weaknesses	Whilst the text supporting the renewable energy policies promotes the adoption of sustainable energy solutions at all levels including at the local and district scale, this is not reflected in the policies and this could be viewed as a potential omission as local level actions have the potential to positively contribute to a global problem.
Further Recommendations for Specific Policies	
NR1 – Protection of Water Resources	The term significant adverse effects rather than 'unacceptable impact' could be used as an alternative wording as this is recognised terminology in the environmental assessment field.
NR2 – Exploratory, appraisal or prototype off-shore utility scale renewable energy proposals	
NR3 – Off-shore utility scale renewable energy development	
NR4 – Proposals for Onshore Renewable Energy Production	
NR9 – Restoration, Aftercare and After Use	Policy NR9 addresses restoration of mineral sites and this clearly promotes environmental enhancements which should benefit terrestrial ecology. It will be important for restoration plans to be carefully scrutinised to ensure that they complement the BAP.
NR9 – Restoration, Aftercare and After Use	Policy NR9 addresses restoration of mineral sites and this clearly promotes environmental enhancements which should benefit terrestrial ecology. It will be important for restoration plans to be carefully scrutinised to ensure that they complement the BAP.

7.11 Waste Management

Waste Management Policies	
Key Strengths	All of the policies clearly focus upon ensuring that any new waste management infrastructure across the Island for management of solid or liquid is waste is developed such that potential adverse effects on the environment, amenity and the surrounding land uses and neighbourhoods are understood and appropriately mitigated. The development of new waste infrastructure has the potential to significantly affect the high quality natural environment of Jersey during the construction, operational and decommissioning/restoration phases. Within the policies there is a recognised need for EIAs to accompany certain waste management proposals, as well as the inclusion of a number of clauses within the policies identifying the potential effects that would not be acceptable. For this reason, positive effects were recorded against a number of the Environmental Objectives. There is also a focus within Policy WM2 upon utilising existing quarries as sites for waste management facilities. Landscape and ecological enhancement opportunities could be delivered through the restoration of former solid waste management sites. It is strongly recommended that the full potential of this opportunity is maximised and that restoration proposals encourage the provision of habitat that would complement Jersey BAP targets. A number of the waste management policies including WM2, WM4, WM6, WM7, WM8, WM9, LWM2 and LWM4 clearly highlight the importance of new waste infrastructure not adversely affecting neighbouring uses or the quality of the environment which should protect the Island's communities and their health and well-being, particularly for those living near to the existing and future waste disposal sites. The restoration of waste sites also has the potential to provide a new recreational use for the community. Policy WM5 addresses the provision of local household waste recycling facilities which are acknowledged as requiring improvement across the Island. The provision of improved facilities and ensuring that such facilities are an integral part of new development should help to increase waste recycling rates in the long-term. New waste management facilities have the potential to raise concerns amongst the community and cause anxiety. There is a focus within the policies upon ensuring that public health is not adversely affected through a clear reference for assessments to address potential effects including odour, dust, fumes, noise, vibration, all of which can cause ill health effects if not appropriately controlled. The focus upon pollution control in the policies addressing the waste water treatment network is also very important as they should help to protect public water sources from pollution. These policies could help to reassure the public that waste management proposals will be subject to the highest levels of scrutiny and so their health and well-being should be protected. One of the most positive policies in this part of the Island Plan is WM1 addressing waste minimisation and new development. Changing attitudes towards waste management and raising the profile of the importance of re-use and recycling is critical if waste disposal rates are to reduce. The requirement for Waste Management Plans to be produced is a clear strength but the quality of these plans and whether they are challenging enough should be reviewed as part of the monitoring process. Policy LWM1

Waste Management Policies	
	addresses similar issues but from a waste water perspective. Policy WM7 addresses Energy from Waste and the new facility that is to be provided at La Collette should address the current air pollution problems caused by the existing facility at the Bellozanne site. This policy is designed to provide the framework necessary to support other applications that may come forward for Energy from Waste throughout the plan period and includes a number of important environmental protection clauses. In the long-term, the focus upon increased re-use and recycling could help to reduce the amount of material that is landfilled which could indirectly help to reduce greenhouse gas levels released from landfills on the Island. Wastewater from developments has the potential to pollute the coastal and marine environment. There are existing problems associated with the Sewage Treatment Works causing pollution because under high/storm flow conditions, the sewage treatment works experiences difficulties and it struggles to meet its discharge conditions and would fail to meet nitrogen content standards required for compliance with the EU Urban Wastewater Treatment Directive. New development across the Island has potential to exacerbate this problem and therefore an effective wastewater treatment network is needed. The focus should be upon seeking to reduce the volume of foul effluent and then ensuring that the network is capable of treating the effluent generated in an effective manner that does not result in adverse environmental effects. There are potential indirect economic benefits linked to the implementation of these policies, as ensuring there is a comprehensive and effective waste water and solid waste treatment network in place could reduce the risk of pollution incidents which could potentially be very costly for both developers and the Government to clean up. Ensuring the marine and coastal environment is not adversely affected by waste effluent is also very important for both the fishing and tourism industries. Sustainable urban drainage systems will increase the adaptability of the Island to climate change risks and consequences. Whilst fluvial flooding is not a significant problem across the Island, there are isolated problems linked to poor surface water run-off or flooding of existing marshy areas. This has historically been a problem in St. Helier which has been resolved through an underground storage area and separation of surface water and sewerage drains. The policies should help to reduce the risk of this problem occurring in the future and owing to risks posed by climate change a comprehensive and effective approach to drainage management is important. Major waste management infrastructure is concentrated in two key locations, Bellozanne and La Collette and the Island Plan indicates that these two locations will be the continued focus of new waste management infrastructure. This has the benefit of limiting the potential adverse effects of such development to only two parts of Jersey which should help to protect the landscape and also provide benefits associated with co-location, such as limiting the multiple handling of waste and also reducing the distance travelled to move waste around the Island. However, Policy WM8 identifies La Gigoulande Quarry as a designated landfill site. An EIA was prepared for this site and this stated that with the implementation of appropriate mitigation, there should not be significant environmental effects and that there would be a number of positive impacts. The main disadvantage of the La Gigoulande site is the potential distance waste may have to be moved, compared to a facility that was created through reclamation at La Collette, although this

Waste Management Policies	
	could have very significant adverse effects on the South East Ramsar Site.
Key Weaknesses	There are few weaknesses in this set of policies. Some minor improvements have been suggested below.
Further Recommendations for Specific Policies	
WM6 – Inert Waste Recycling	The types of unacceptable environmental effects that would not be appropriate should be more explicitly defined as part of the policy to reduce any ambiguity for future developers, for example adverse effects on noise, nature conservation, drainage.
WM10 – Restoration of Land Reclamation and Landfill Sites	This policy could be improved by making specific reference to the Jersey BAP and seeking to ensure that wildlife creation opportunities associated with the restoration process contribute to the BAP's targets and objectives.

8 Monitoring

This section provides an outline monitoring framework that can be used to monitor the significant effects of the Island Plan. Monitoring can be used to:

- Determine the performance of the plan and its contribution to meeting objectives and targets
- Identify the performance of mitigation measures
- Fill data gaps identified during the SEA process e.g. baseline data gaps
- Identify undesirable environmental effects
- Confirm whether environmental predictions were accurate

Box 4 identifies the SEA Directive requirements in relation to monitoring.

Box 4: SEA Directive Requirements Applicable to Monitoring

'Member States shall monitor the significant environmental effects of the implementation of plans and programmes... in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action' (Article 10.1).

The Environmental Report should provide information on 'a description of the measures envisaged concerning monitoring' (Annex I (i)).

8.1 The Monitoring Approach

The monitoring framework has been developed to measure the impacts of implementing the Island Plan using indicators that are appropriate to the scope and potential impacts of the plan. Table 8-1 which presents the monitoring framework explains the effects that will be monitored and why.

8.2 Proposed Monitoring Framework

Table 8-1 provides a framework for monitoring the effects of the Island Plan and determining whether the predicted environmental effects are realised. The framework is based around the environmental objectives and includes the following elements:

- The potentially significant impact that needs to be monitored
- A suitable monitoring indicator
- A link to the relevant policies in the Plan to which the use of the monitoring indicator will apply
- The proposed frequency of the monitoring

The Island Plan will run until 2019 and this is a significant period of time over which the Island Plan will need to be monitored. Over this period it is expected that new monitoring indicators will be identified and that it may be necessary for the monitoring framework to be updated annually to ensure that the most appropriate indicators are used. The framework outlined in Table 8-1 should, therefore be subject to regular review and update.

Table 8-1 Proposed Monitoring Framework

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
1) To protect and enhance terrestrial and freshwater biodiversity	There are a series of policies in the Island Plan that seek to protect and enhance biodiversity and so effects are predicted to be positive. Whilst policies addressing new development such as housing and economy clearly identify that there should be no adverse effects on biodiversity resources, the effectiveness of these policies and their use should be monitored to determine whether adverse effects are being controlled. Equally biodiversity improvements could be delivered through effective design. Some policies seek to deliver enhancements and the number of enhancements secured, for example through restoration schemes, should be monitored.	SP1,2,4, 6 GD1,2,6,7 Natural Environment policies HE3,4 BE1,3,4 and proposal 9 Economy policies Rural and Marine Economy policies Visitor Economy policies Housing policies SCO4, SCO5, SCO6 Proposal 18, TT1, TT", TT£, TT6, TT7, TT12, TT13, TT14, TT15, TT17 NR1, Proposal 20, NR13-15, NR8-10 Waste Management policies (including liquid waste policies)	Number of planning applications incorporating biodiversity enhancement features. Number of developments that affect species protected by law and BAP habitats and species. Number of developments that adversely affect designated sites both directly and indirectly. Area of BAP habitat created by new developments. Condition of designated sites – Ramsar and SSIs Number of planning applications resulting in the loss of hedgerows and field boundaries. Number of schemes which result in the loss of woodland and trees. Area of land under CSR agreements and the biodiversity benefits delivered. Number and extent of key habitats Health of population of key species	Increase the number of schemes that deliver environmental enhancements that complement the BAP targets. Reduce the number of developments that adversely affect the environment.	Annually
2) To protect and enhance coastal and marine	There are a number of policies in the plan that seek to protect the marine	SP1-4	Number of developments that adversely affect designated	Reduce the number of developments that	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
biodiversity	environment and the effectiveness of these policies should be monitored. However, there also some policies in the plan that do pose a risk to coastal and marine biodiversity and so these effects need to be monitored.	GD 1,7 Natural Environment policies BE4 EVE1 ER 10 SCO5 NR1 – 4, NR12 TT13-15, 17 Waste management polices (including liquid waste management)	sites both directly and indirectly.	adversely affect the environment. Ensure no net loss of Ramsar habitat.	
3) To provide good quality affordable housing that meets the requirements of the local population	There are recognised housing need issues across the island and the plan includes a number of policies to address these issues. There are some targets included within the housing policies relating to mix and affordability and the achievement of these targets should be monitored. The effectiveness of the policies needs to be monitored to ensure that the needs of the Island's residents are being met.	EIW 1,4 Housing policies	Number of affordable homes built each year. Location of the affordable homes built each year. Percentage of 1, 2, 3 and 4 bedroom homes built as a proportion of the total. House price to income affordability ratio. Number of homes built relative to estimated demand by category, tenure, type, size and affordability	To increase the provision of affordable housing provided across the Island.	Annually
4)To encourage the development of sustainable communities	The policies in the Island Plan should collectively benefit communities by protecting and enhancing the natural environment and promoting new	Strategic policies General Development policies BE 1,2 and BE proposals	Number of new community facilities and their proximity to residential centres. Monitor the number of	No specific targets developed.	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
	development in appropriate locations. A number of the policies also seek to reduce the level of nuisance caused by new developments and this should benefit communities but should be monitored to check the effectiveness of these policies.	8-13 Economy policies Housing policies Social and Community policies Travel and Transport policies NR13, 14 Waste Management policies	developments that result in improved community facilities and public space. All other indicators monitored are of relevance to this objective.		
5)To promote sustainable economic growth	There is a focus within the plan upon supporting the future economic development of the Island. All aspects of the economy are considered including office based activities and those related to the marine and rural economy. The success of these policies upon supporting economic development and diversification should be monitored.	Strategic policies General Development policies BE 1,2 and BE proposals 8-14 Economy policies H 5, H8 and H9 Travel and Transport policies Renewable Energy policies	Amount of land developed for employment/land supply by type. Amount of employment land lost to residential development. Number of rural diversification schemes implemented (a specific definition of a rural diversification scheme needs to be agreed by the States of Jersey. Number of buildings converted for industrial/business and residential uses. Employment by Sector. Unemployment rate Vacancy rates	To increase the number of rural diversification schemes implemented.	Annually
6)To improve physical and mental health for all and	Whilst there are no specific policies addressing health and well-being there	SP 6,7 General Development	Percentage of people rating their health as ‘good’ or ‘fairly	To achieve a net gain in the availability of	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
reduce health inequalities	are a number of aspects of the Island Plan which are likely to indirectly benefit health and well-being by protecting the quality of the environment and ensuring that new development does not affect amenity as a result of dust, noise, odour creation. The focus upon protecting the countryside of the Island is also likely to offer long-term benefits to health and well-being by protecting a valuable recreational resource.	policies Natural Environment policies BE 1,4 and proposal 9 Economy Retail policies EIW 3-6 Housing policies Social, Community and Open Space policies Proposal 17, SCO4-5 Travel and Transport polices NR13, NR14 Waste Management policies	good' over the previous 12 months. Amount of open space lost to new development. Area of open space enhancement delivered by new development. Number of new community facilities developments resulting in improved community facilities or open space.	community facilities over the plan period. No net loss in community facilities.	
7) To guard against land contamination and encourage the appropriate re-use of brownfield sites	Whilst there is a limited amount of brownfield/vacant land across the Island it is important that these sites are developed in preference to greenfield locations. There is a strong commitment throughout the Island Plan to avoiding greenfield development. However, the need for higher density development is identified if this is to be achieved and for this reason, development densities should also be monitored.	SP 1-3 GD 1,6 Natural Environment policies BE 1,2 and proposal 11 EO 1-3 Economy light industry and warehousing policies Rural and Marine Economy policies EVE1, EVE3 Housing policies SCO1, SCO2, SCO3,	Number of homes built on previously developed land. Number of new office/industrial developments on previously developed land. Number of glasshouse sites re-used. Average density of new housing and office developments.	To increase the amount of development on vacant and brownfield sites. To increase the number of glasshouse sites that are re-used.	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
		SCO6 TT 6,10,11 NR 13, NR 14, NR15 NR10 Waste Management policies			
8) To protect soil functions	All new development has the potential to result in the loss of soil resources. There is a focus within the plan upon ensuring that new development occurs within built up areas and that greenfield land is protected which should protect soil resources in the long-term. The effectiveness of this policy should be monitored.	Strategic policies GD 1,6 Natural Environment policies BE 1,2 and proposal 11 EO 1-3 Economy light industry and warehousing policies Rural and Marine Economy policies H 1, 2, 5 SCO1 – SCO6, Proposal 17 TT 13,14 NR2-4 Minerals policies Waste Management policies	Number of planning applications which include site remediation and the area of land remediated. Area of peat and organic soils lost as a result of new planning applications. Percentage of new developments granted planning permission on previously developed land.	No net loss of soil resources. Increase the amount of contaminated land remediated and successfully developed.	Annually
9)To protect and enhance the quality and availability of water resources 10) To protect and	There is a focus throughout the policies of the Island Pan upon ensuring that waste resources are protected from pollution incidents and it will be	SP 1-4 GD 1,6 NE 5-7	Number of developments incorporating water saving measures per annum as a potential of the total number of	To increase the number of developments year on year including water saving measures.	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
enhance coastal, intertidal and marine waters	important for the effectiveness of these policies to be monitored. The need to reduce the amount of effluent and waste water requiring treatment is also a key focus of the plan and the success of this policy should be monitored.	BE 1,2 and proposal 11 EIW 3, 5, 6 Rural and Marine Economy policies EVE 1,2 H5, H10 SCO5 TT 5-17 Natural Resources and Utilities policies and proposals Waste Management policies including liquid waste management policies	developments requiring planning permission. Number of new developments incorporating SuDS as a ratio of total planning permissions granted. Water quality of rivers. Number of pollution incidents per annum. Bathing water quality Estimated household water consumption. Number of developments which incorporate Flood Risk Assessments.	To reduce the number of pollution incidents per annum. To raise the quality of coastal and marine waters to ensure they meet EU standards.	
11) To protect and improve air quality	New development has the potential to have adverse air quality effects, for example new industrial development could introduce new pollution sources. There could also be benefits through a clear focus within the plan upon improving pedestrian and cycle access and ensuring that new development is accessible to public transport. The delivery of the new Energy from Waste facility during the plan period is also likely to benefit air quality.	SP 1,2,6 GD1 BE 1 and proposal 9 Economy Office policies Economy Retail policies EIW 3, 5, 6 ERE 4-8 EVE 1-3 Travel and Transport policies Natural Resources and Utilities policies Waste Management	Average NO_2 levels. (Monitoring could be linked to the monitoring undertaken for the Air Quality Strategy).	Decrease in NO_2 levels	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
		policies			
12) To limit and adapt to climate change	There are policies in the plan which seek to reduce energy consumption, promote the use of renewable energy sources and promote higher standards of design to reduce carbon emissions. The benefits of such policies are more likely to be realised in the long-term and should be monitored.	SP 2,6 GD 1 EO 1-4 Economy Retail policies ERE 4-8 Visitor Economy policies Travel and Transport policies NR1, NR20, NR2, NR3, NR4, NR8, NR10 Renewable Energy policies WM 1,2,7,9	Monitoring indicators used for Objectives 13 and 17 are all relevant and can be used to monitor performance of this objective.		Annually
13) To increase energy efficiency and require the use of renewable energy sources	There is a focus upon improving energy efficiency and promoting sustainable building design which is likely to have benefits in the long-term as the pursuit of such initiatives become more widespread. Opportunities should be sought for examples of exemplar design to be recognised and this information to be made available to other developers and designers. There are also policies which support the potential development of larger renewable energy schemes across Jersey as this is a sector that is	SP 2 GD 1 Travel and Transport policies Renewable Energy policies WM 7 LWM 1 and Proposal 22	Number and type of renewable energy schemes with planning permission per annum. Number of developments granted planning permission achieving design awards, as a percentage of the total number of planning applications granted each year. Number of developments incorporating energy efficiency measures. Number of developments achieving BREEAM/Code for Sustainable Homes standards.	To increase the number of developments incorporating energy efficiency measures. To increase the number of developments achieving design awards.	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
	relatively undeveloped, although other issues would need to be monitored from an environmental perspective to ensure that the policies are successful in ensuring that no adverse effects occur.		Number of developments linked to combined heat and power systems.		
14) To protect and enhance the cultural heritage resource	There are a series of policies in the Island Plan that seek to protect and enhance cultural heritage resources and so effects are predicted to be positive. There is also a commitment within the plan to designating Conservation Areas and over the plan period it will be important to assess how effective the Conservation Areas are in protecting architectural and historic resources.	SP4 GD 1-3,5,7,9 NE 4,5,7 Housing policies Built Environment policies Economy Office policies Economy Retail policies Economy light industry and warehousing policies Rural and Marine Economy policies Visitor Economy policies SCO4, SCO5 Travel and Transport policies NR 13-15 Renewable Energy policies NR8, NR10 Waste Management policies	Number of Listed buildings lost to new development. Number of historic landscape features such as boundary walls and hedgerows lost to new development. Number of archaeological sites damaged or lost to new development. Number of developments that enhance the setting or understanding of cultural heritage resources. Number of Conservation Areas designated and the number of Conservation Area Appraisals completed. Number of protected historic buildings or structures demolished per annum.	To reduce the number of Listed Buildings adversely affected/lost to new development. Increase in the number of Conservation Areas designated. Condition of Conservation Areas and the extent to which new development is consistent with the Conservation Area Appraisals.	Annually
15) To protect and	The spatial strategy of the Island Plan	SP 1,3,4,7	Amount of development	To limit the amount of	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
enhance landscape, seascape and townscape character and quality	is upon concentrating development within urban areas particularly St. Helier which should help to regenerate parts of St. Helier and should protect areas of the countryside from new development. There is also a proposal within the island Plan to designate a Coastal National Park which should help to protect this valuable part of the Island's landscape/seascape from inappropriate development.	General Development policies NE 4,5,6, 7 and Proposals 4, 5 and 6 Historic Environment policies Built Environment policies Economy Office policies Economy Retail policies Economy light industry and warehousing policies Rural and Marine Economy policies Visitor Economy policies Social & Community policies Travel and Transport policies Natural Resources and Utilities policies Waste Management policies	proposed within the Coastal National Park (include details about type and size). Amount of development permitted within the National Park that is contrary to the National Park objectives. Amount of development that occurs outside the Built Up Area, for example within the Green Zone and Shoreline Zone. Number of glasshouse sites brought back into use or redeveloped.	development that occurs within the National Park. To limit the amount of new development within the Green zone.	
16) To minimise waste, increase re-use and recycling and to promote sustainable resource use	Policies in the Island Plan seek to promote waste minimisation and highlight the fact that waste disposal should be seen as the last option. The effectiveness of these policies in increasing recycling and composting as well as the re-use of material should be	SP 2,7 GD 1,2 Economy Office policies Economy Retail policies NR6-8 Waste Management	Number of new developments utilising recycled and secondary materials as a percentage of the total number of planning applications granted each year. Number of new recycling centres provided across the	To increase the use of secondary and recycled materials used in new developments. To increase the availability of and access to waste recycling facilities.	Annually

Environmental Objective	Effect to be Monitored (including justification)	Link to Relevant Island Plan Policies	Monitoring Indicator	Potential Target	Review Timescale
	monitored.	policies	Island. Commercial and household waste recycling rates. Municipal waste production per head.	To reduce the amount of waste production per head.	
17) To promote the use of more sustainable modes of transport	The plan seeks to reduce reliance on the private car promoting the need for new developments to be accessible by alternative modes of transport such as bike, walking or bus. The extent to which new development achieves this should be monitored and levels of activity and public transport use monitored.	SP 1,6 GD 1,4,7 HE 3,4 BE 1 and proposal 9 Economy Office policies ER 1,2,3,4,7,8, EVE 1,2 H 1,5-8,10 SCO1, SCO2, SCO3, SCO6 SCO5 Travel and Transport policies NR9	Extent of the bus network and bus patronage. Travel to work by mode. Number of new developments granted planning permission within 500m of a bus stop. Annual increase in length in the public footpath network. Annual increase in length in the cycle network. Reduce the number of congestion hotspots.	To increase accessibility to all forms of transport from new developments. To increase the length and coverage of the footpath and cycle network.	Annually

Appendix A

Review of Plans and Programmes

Key Objectives Relevant to the Plan and the SEA	Key Indicators and Targets Relevant to the Plan and the SEA	Implications for the SEA *(Completed prior to the assessment of the plan policies)*	How have the Elements of the Plan been considered in the Island Plan and the SEA Process? *(Completed following the assessment of the plan policies)*
World Summit on Sustainable Development, Johannesburg, September 2002			
The World Summit reaffirmed the international commitment to sustainable development. The aims are to: ▪ Accelerate the shift towards sustainable consumption and production with a 10-year framework of programmes of action. ▪ Reverse trend in loss of natural resources. ▪ Urgently and substantially increase the global share of renewable energy. ▪ Significantly reduce the rate of loss of biodiversity by 2010.	No specific targets or indicators, however key actions include: ▪ Greater resource efficiency. ▪ Support business innovation and take up of best practice in technology and management. ▪ Waste reduction and producer responsibility. ▪ Sustainable consumer consumption and procurement. ▪ Create a level playing field for renewable energy and energy efficiency. ▪ New technology development. ▪ Push on energy efficiency. ▪ Low-carbon programmes. ▪ Reduced impacts on biodiversity.	International objectives and targets relating to biodiversity and environmental protection should be considered in the SEA both when characterising the baseline and setting the SEA objectives.	There are clear policies in the plan addressing the protection of the natural environment including biodiversity resources and policies which promote sustainable design and reducing consumption of energy, water and natural resources.
European Spatial Development Perspective (ESDP) (January 1999)			
The European Spatial Development Perspective is based on the EU aim of achieving balanced and sustainable development, in particular by strengthening environmentally sound economic development and social cohesion. This means, in particular, reconciling the social and economic claims for spatial development with the area's ecological and cultural functions and, hence,	There are no specific targets or indicators of relevance. Targets and measures for the most part deferred to Member States.	The SEA should include objectives that complement the principles of the ESDP. This would include the topics of ecology, flooding, land erosion, soil, water and air contamination, geomorphology, landscape, culture and the interactions between all of these	The Island Plan policies collectively focus upon ensuring sustainable development across the Jersey.

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contributing to a sustainable, and at larger scale, balanced territorial development. The EU will therefore gradually develop, in line with safeguarding regional diversity, from an Economic Union into an Environmental Union and into a Social Union. This is reflected in the three following fundamental goals of European policy: ▪ Economic and social cohesion ▪ Conservation of natural resources and cultural heritage ▪ More balanced competitiveness of the European territory		topics and indirect effects on climate change. It is also important to use the precautionary principle when undertaking the assessment.	
Directive to Promote Electricity from Renewable Energy (2001/77/EC)			
This Directive aims to promote an increase in the contribution of renewable energy sources to electricity production in the internal market for electricity and to create a basis for a future Community Framework. Member States are obliged to take steps to increase the consumption of electricity produced from renewable energy sources, by setting national indicative targets, in terms of a percentage of electricity consumption by 2010.	Member States are obliged to take appropriate steps to encourage greater consumption of electricity produced from renewable energy sources in conformity with the national indicative targets. Global indicative target: 12% of gross national energy consumption by 2010 and 22.1% indicative share of electricity produced from renewable energy sources in total Community electricity consumption by 2010. UK target: renewables to account for 10% of UK consumption by 2010.	The SEA Framework should include objectives that seek to promote the use of renewable energy sources.	There are policies within the plan which seek to promote trials of larger scale renewable energy technologies and also a focus upon improving resource efficiency.
UN Framework Convention on Climate Change			
The Convention sets an overall framework for intergovernmental efforts to tackle the challenge	There are no specific targets or indicators of relevance.	The SEA needs to include objectives that address climate	There are policies within the plan that focus upon reducing reliance

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posed by climate change. It acknowledges that the climatic system is affected by many factors and is a shared system. Under the Convention governments have to: ▪ Gather and share information on greenhouse gas emissions. ▪ Launch national strategies for climate change. ▪ Cooperate in preparing for adaptation to the impacts of climate change.		change, flooding and the need to reduce greenhouse gas emissions.	on private car and upon resource and energy efficiency which complement the central principles of the Convention.
Kyoto Protocol to the UN Framework Convention on Climate Change (1992)			
The Kyoto Protocol agreed in 1997 was designed to address the fact that greater cuts in emissions were needed to prevent serious interference with the climate. It has been ratified by over 166 countries. It sets legally binding emissions reductions targets on the developed countries that have ratified it (including the UK). In December 2007, the United Nations Framework Convention on Climate Change took place and brought together over 180 countries. The conference resulted in the adoption of the Bali Roadmap which consists of a number of forward-looking decisions that represent the various tracks that are essential to reaching a secure climate change future. Included in the Roadmap is the Bali Action Plan which charts the course for negotiating a new process designed to tackle climate change with the aim of completing this by 2009.	Industrial nations agreed to reduce their collective emissions of greenhouse gases by 5.2% from 1990 levels by the period 2008 to 2012. The UK target is to reduce emissions to 12.5% below 1990 levels by 2012 (NB: the UK has imposed further targets upon itself since then). Countries can achieve their Kyoto targets by: ▪ Reducing greenhouse gas emissions in their own country. ▪ Implementing projects to reduce emissions in other countries. ▪ Trading in carbon. Countries that have achieved their Kyoto targets will be able to sell their excess carbon allowances to countries finding it more difficult or too expensive to meet their targets.	The SEA should include an objective relating to the reduction of greenhouse gas emissions.	There are policies within the plan that focus upon reducing reliance on private car and upon resource and energy efficiency which complement the central principles of the Convention.

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EU Sixth Environmental Action Plan (EAP)			
The EAP reviews the significant environmental challenges and provides a framework for European environmental policy up to 2012. The four priority areas are: ▪ Climate change ▪ Nature and biodiversity ▪ Environment and health ▪ Natural resources and waste The action plan highlights that ambitious action is needed to reduce global emissions particularly after 2012 when Kyoto's targets expire. This is needed to limit global warming to 2 degrees Celsius. Protecting, conserving, restoring and developing the functioning of natural systems, natural habitats, wild flora and fauna is needed to halt desertification and the loss of biodiversity, including the diversity of genetic resources, both in the European Union and on a global scale. There is a need to contribute to the high level of quality of life for citizens by providing an environment where the level of pollution does not give rise to harmful effects on human health and the environment. Sustainable urban development should also be promoted. Better resource efficiency and resource and waste management is needed to bring about more sustainable production and consumption patterns, thereby de-coupling the use of	There are no specific targets or indicators of relevance.	The SEA should include objectives that address the protection of biodiversity, adapting to climate change and the sustainable use of resources.	There are policies within the Island Plan addressing the protection and enhancement of the natural environment, reducing natural resource use and encouraging waste minimisation.

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resources and the generation of waste from the rate of economic growth and aiming to ensure that the consumption of renewable and non-renewable resources does not exceed the carrying capacity of the environment. The Action Plan introduced the concept of developing thematic strategies for particular fields that build upon the existing EU regulatory framework and include new knowledge on threats to the environment and human health. The fields for which the strategies are developed are: ▪ Air ▪ Waste prevention and recycling ▪ Marine environment ▪ Soils ▪ Pesticides ▪ Natural resources ▪ The urban environment			
Aarhus Convention (Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters) (1998)			
The Convention addresses the need to guarantee the rights of access to information, public participation in decision-making and access to justice in environmental matters. There is a requirement for these provisions to be implemented in the Member States.	There are no specific targets or indicators of relevance.	A formal SEA, compliant with the SEA Directive requirements is not being undertaken for the Island Plan. However, the development of the plan itself should be transparent.	The development of the Island Plan has been an inclusive process with the Green Paper consultation being very important.

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The European Environment and Health Action Plan 2004 - 2010			
The action plan is designed to give the EU scientifically grounded information needed to help EU member States to reduce the adverse health impacts of certain environmental factors and to endorse better co-operation between actors in the environment, health and research fields.	There are no specific targets or indicators of relevance.	The Island Plan has the potential to offer a number of long-term benefits to human health through sound policy making and an effective land-use strategy. As part of the SEA, an objective should be developed about the need to protect and enhance human health to ensure that all policies are scrutinised from a human health perspective.	The plan recognises the importance of protecting public health from new development and there are a number of policies which seek to protect the countryside and the Island's natural resources.
EU Air Quality Framework Directives (96/62/EC) and Daughter Directives (1993/30/EC), (2000/69/EC), (2002/3/EC), (2004/107/EC)			
The Framework Directive establishes a framework under which the EC will agree air quality limit values or guide values for specified pollutants in a series of Daughter Directives. The Directives contain limit values relating to the pollutants and it is necessary for these targets to be translated into UK legislation. They seek to maintain ambient-air quality where it is good and improve it in other cases with respect to sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead.	Thresholds for pollutants are included in the Directive.	The SEA Framework should include an objective that seeks to protect and enhance air quality.	The Island plan polices seek to improve access for cyclists and pedestrians as well as encouraging development to be well situated in relation to transport links which should help to tackle some of the existing air quality issues linked to congestion in Jersey. The policy also clearly indicates that new development should not increase air pollution.
Directive on ambient air quality and cleaner air for Europe (2008/50/EC)			
This Directive demonstrates the EU's strong commitment to improving air quality by setting binding standards and target dates for reducing concentrations of fine particle (PM2.5) pollution.	Thresholds for pollutants are included in the Directive.	The SEA Framework should include an objective that seeks to protect and enhance air quality.	The Island plan polices seek to improve access for cyclists and pedestrians as well as encouraging development to be

Key Objectives Relevant to the Plan and the SEA	Key Indicators and Targets Relevant to the Plan and the SEA	Implications for the SEA *(Completed prior to the assessment of the plan policies)*	How have the Elements of the Plan been considered in the Island Plan and the SEA Process? *(Completed following the assessment of the plan policies)*
It merges four previous Directives (96/62/EC, 1999/30/EC, 2000/69/EC, and 2002/3/EC) and a Council Decision (97/101/EC) into a single directive on air quality. The Directive establishes ambitious, cost-effective targets for improving human health and environmental quality up to 2020.			well situated in relation to transport links which should help to tackle some of the existing air quality issues linked to congestion in Jersey. The policy also clearly indicates that new development should not increase air pollution.
Water Framework Directive (2000/60/EC)			
The purpose of this Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which: (a) prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems (b) promotes sustainable water use based on a long-term protection of available water resources (c) aims at enhanced protection and improvement of the aquatic environment, inter alia, through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances (d) ensures the progressive reduction of pollution of groundwater and prevents its further pollution	Objectives for surface waters: ▪ Achievement of good ecological status and good surface water chemical status by 2015 ▪ Achievement of good ecological potential and good surface water chemical status for heavily modified water bodies and artificial water bodies ▪ Prevention of deterioration from one status class to another ▪ Achievement of water-related objectives and standards for protected areas Objectives for groundwater: ▪ Achievement of good groundwater quantitative and chemical status by 2015 ▪ Prevention of deterioration from one status class to another ▪ Reversal of any significant and sustained upward trends in pollutant concentrations and prevent or limit	The SEA should include objectives that promote the protection and enhancement of the water environment. This includes water usage as well as a need to assess indirect effects such as dependent aquatic and terrestrial ecosystems and flooding.	There are a range of policies in the Island Plan addressing the protection and enhancement of the natural environment including the water environment. There is an emphasis upon pollution risks from new development being minimised.

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(e) contributes to mitigating the effects of floods and droughts	input of pollutants to groundwater ▪ Achievement of water related objectives and standards for protected areas		
Groundwater Directive (80/68/EEC)			
This Directive prohibits the direct or indirect discharge into groundwater of List I substances and limits discharges of List II substances so as to avoid pollution. ▪ The Directive does not apply to discharges of domestic effluents from isolated dwellings not connected to a sewerage system	There are no specific targets or indicators of relevance.	The SEA Framework should include objectives that seek to protect water quality and deliver enhancements where possible.	There are a range of policies in the Island Plan addressing the protection and enhancement of the natural environment including the water environment. There is an emphasis upon pollution risks from new development being minimised.
Nitrates Directive (91/676/EEC)			
This Directive has the objective of: ▪ Reducing water pollution caused or induced by nitrates from agricultural sources ▪ Preventing further such pollution	The Directive provides guidelines for monitoring nitrate levels for the purpose of identifying vulnerable zones.	The SEA Framework should include objectives that seek to protect water quality and deliver enhancements where possible.	There are a range of policies in the Island Plan addressing the protection and enhancement of the natural environment including the water environment. There is an emphasis upon pollution risks from new development being minimised.
Drinking Water Directive (98/83/EC)			
Sets standards for a range of drinking water quality parameters.	The Directive includes standards that constitute legal limits.	The SEA Framework should include objectives that seek to protect water quality and deliver enhancements where possible.	

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Urban Waste Water Treatment Directive (92/271/EEC)			
The objective of the Directive is to protect the environment from the adverse effects of urban waste water discharges and discharges from certain industrial sectors. It concerns the collection and treatment of: ▪ Domestic waste water ▪ Mixture of waste water ▪ Waste water from certain industrial sectors The four main principles established in the Directive are: ▪ Planning ▪ Regulation ▪ Monitoring ▪ Information and Reporting.	The Directive includes specific requirements for managing urban wastewater, establishing the systems that need to be in place in Member States.	The SEA Framework should include objectives that seek to protect water quality and deliver enhancements where possible.	There are a range of policies in the Island Plan addressing the protection and enhancement of the natural environment including the water environment. There is an emphasis upon pollution risks from new development being minimised. There are also policies in the plan that seek to reduce the amount of waste water requiring disposal through techniques such as grey water recycling.
Bathing Water Directive (76/160/EEC and 2006/7/EC)			
The objective of the Bathing Water Directives (76/160/EEC and 2006/7/EC) is to protect public health and the environment from pollution in bathing waters. Member States are required to identify popular bathing areas and to monitor water quality at these throughout the bathing season. A number of microbiological and physico-chemical standards are established by Directive 76/160/EEC that bathing waters must comply with (mandatory standards) or endeavour to comply with (guideline standards). However, Directive 2006/7/EC sets higher standards and	The Directive includes standards that constitute legal limits.	The SEA Framework should include objectives that seek to protect water quality and the wider coastal environment, seeking to deliver enhancements where possible.	There are a range of policies in the Island Plan addressing the protection and enhancement of the natural environment including the water environment. There is an emphasis upon pollution risks from new development being minimised.

Key Objectives Relevant to the Plan and the SEA	Key Indicators and Targets Relevant to the Plan and the SEA	Implications for the SEA *(Completed prior to the assessment of the plan policies)*	How have the Elements of the Plan been considered in the Island Plan and the SEA Process? *(Completed following the assessment of the plan policies)*
these will have to be complied with by 2015.			
Recommendation of the European Parliament and of the Council of 30 May 2002, concerning the implementation of Integrated Coastal Zone Management (ICZM) in Europe (2002/413/EC)			
In 2000 a Communication on Integrated Coastal Zone Management: A Strategy for Europe was adopted. Its aim was to promote a collaborative approach to planning and management of the coastal zone, through governance with civil society. In 2002 the above Recommendation was adopted, outlining the steps which the Member States should take to develop national strategies for ICZM. The Recommendation sets out 8 principles, which define the essential characteristics of ICZM, to be used to formulate national strategies and measures to ensure good coastal zone management. The principles specify that coastal zone management should be based on: ▪ A broad overall perspective (thematic and geographic), which will take into account the interdependence and disparity of natural systems and human activities with an impact on coastal areas. ▪ A long-term perspective which will take into account the precautionary principle and the needs of present and future generations. ▪ Adaptive management during a gradual process which will facilitate adjustments as problems and knowledge develop. This implies the need for a sound scientific basis concerning the evolution of the coastal zone. ▪ Local specificity and the great diversity of	There are no specific targets or indicators of relevance.	Effective coastal zone management will be very important for Jersey and the key principles of this recommendation should be considered when assessing the Plan's policy and strategy.	There are a range of policies in the Island Plan addressing the protection and enhancement of the natural environment including the water environment. There are policies that seek to protect the coastal zone, although a greater emphasis could potentially be placed upon Integrated Coastal Zone Management.

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European coastal zones, which will make it possible to respond to their practical needs with specific solutions and flexible measures. ▪ Working with natural processes and respecting the carrying capacity of ecosystems, which will make human activities more environmentally friendly, socially responsible and economically sound in the long run. ▪ Involving all the parties concerned (economic and social partners, the organisations representing coastal zone residents, non-governmental organisations and the business sector) in the management process, for example by means of agreements and based on shared responsibility. ▪ Support and involvement of relevant administrative bodies at national, regional and local level between which appropriate links should be established or maintained with the aim of improved coordination of the various existing policies. Partnership with and between regional and local authorities should apply when appropriate. ▪ Use of a combination of instruments designed to facilitate coherence between sectoral policy objectives and coherence between planning and management.			
Shellfish Waters Directive (79/923/EC)			
This Directive aims to protect the quality of coastal and brackish waters designated for	There are no specific targets or indicators of relevance.	The SEA Framework should include objectives that seek to	There are policies within the plan that seek to protect the marine

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protection or improvement to support particular shellfish populations. This Directive will be repealed in 2013 by the EC Water Framework Directive.		protect water quality and the wider coastal environment, seeking to deliver enhancements where possible.	environment and also the fishing industry.
Surface Water Abstraction Directive (75/440/EEC)			
This Directive controls the quality of water from rivers, lakes and reservoirs that is used to supply public drinking water. It establishes quality standards for abstracted surface waters, ensures that water is appropriately treated before it enters the public supply and improves the overall quality of surface water sources that are used as a source of drinking water.	The Directive sets quality standards for different water abstraction uses.	The SEA Framework should include objectives that seek to protect water quality and deliver enhancements where possible.	There are policies in the plan upon avoiding pollution risks and upon using water resources sustainably. Issues relating the quality of drinking water are for Jersey Water to address.
Directive on the Assessment and Management of Flood Risks (2007/60/EC)			
This Directive aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. It requires Member States to assess whether all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas, and to take adequate and coordinated measures to reduce this flood risk. It also reinforces the rights of the public to access this information and to have a say in the planning process. The Directive shall be carried out in coordination with the Water Framework Directive, most notably through flood risk management plans and river basin management plans, and also through coordination of the public participation procedures in the preparation of these plans.	There are no specific targets or indicators of relevance.	The SEA Framework should include objectives that address the need to increased flood risk and should also promote the use of sustainable drainage systems where possible.	There is a policy within the plan that addresses the need to avoid increased flood risk as a result of new development. A greater emphasis could potentially be placed in the plan upon the long-term risks posed by coastal flooding.

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Marine Strategy Framework Directive (2008/56/EC)			
The aim of the Directive is to more effectively protect the marine environment across Europe. It aims to achieve good environmental status of the EU's marine waters by 2021 and to protect the resource base upon which marine-related economic and social activities depend. The Directive constitutes the vital environmental component of the Union's future maritime policy, designed to achieve the full economic potential of oceans and seas in harmony with the marine environment. The Directive establishes European Marine Regions using geographical and environmental criteria. Each Member State is required to develop strategies for their marine waters.	The Directive sets targets for the development of marine strategies and for the completion of initial assessments of the environmental status of the marine waters.	The SEA Framework should include objectives that seek to protect water quality and the wider coastal environment, seeking to deliver enhancements where possible.	There are specific policies in the Island Plan addressing the protection of the marine environment.
Freshwater Fish Directive (78/659/EEC) (updated in 2006 by Directive 2006/44/EC on the Quality of Fresh Waters Needing Protection or Improvement in Order to Support Fish Life)			
The objective of this Directive relates to the protection of fresh waters needing protection or improvement to support fish life. Member States are required to designate freshwaters needing protection or improvement to support fish life and have a duty to produce action plans to ensure compliance with standards. In 2013 the Directive will be repealed and waters currently designated as Freshwater Fish Directive Waters will be protected areas under the Water Framework Directive.	The Directive sets out physical and chemical parameters which are used by Members states as guideline standards for salmonid and cyprinid waters.	The SEA Framework should include objectives that seek to protect water quality seeking to deliver enhancements where possible.	There are policies within the plan that seek to protect the marine environment and also the fishing industry.

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Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)			
The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) was adopted in Bern, Switzerland in 1979, and came into force in 1982. The principle objectives are to conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the co-operation of several States, and to promote such co-operation. Particular emphasis is given to endangered and vulnerable species, including endangered and vulnerable migratory species. In order to achieve this the Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1000 wild animal species. Each Contracting Party are obliged to: ▪ Promote national policies for the conservation of wild flora, wild fauna and natural habitats, with particular attention to endangered and vulnerable species, especially endemic ones, and endangered habitats, in accordance with the provisions of this Convention ▪ Have regard to the conservation of wild flora and fauna in its planning and development policies and in its measures against pollution ▪ Promote education and disseminate general information on the need to conserve species of wild flora and fauna and their habitats	There are no specific targets or indicators of relevance.	The SEA Framework should include objectives that seek to protect and enhance biodiversity, flora and fauna.	There are specific policies in the plan addressing the protection and enhancement of the natural environment.

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Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971)			
The Convention on Wetlands of International Importance was signed in Ramsar, Iran in 1971. It is an inter-governmental treaty which provides the framework for national action and international co-operation for the conservation and wise use of wetlands and their resources, as a means to achieving sustainable development throughout the world. There are presently 150 Contracting Parties to the Convention, with 1842 wetland sites, totalling 179.9 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance. The original emphasis was on the conservation and wise use of wetlands primarily to provide habitat for waterbirds. However, over the years the Convention has broadened its scope to incorporate all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation and for the well-being of human communities. 'The Convention's mission is the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world' (Ramsar COP8, 2002).	There are no specific targets and indicators in the document. The general objectives of the Ramsar Strategic Plan 2003-2008 are: ▪ The wise use of wetlands: To simulate and assist all Contracting Parties to develop, adopt and use the necessary and appropriate instruments and measures to ensure the wise use of all wetlands within their territories. ▪ Wetlands of International Importance: To stimulate and support all Contracting Parties in the appropriate implementation of the Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance, including the appropriate monitoring and management of listed sites as a contribution to sustainable development. ▪ International cooperation: To promote international cooperation through the active application of the guidelines for international cooperation under the Ramsar Convention and in particular to mobilise additional financial and technical assistance for wetland conservation and wise use. ▪ Implementation capacity: To ensure that the Convention has the required	The SEA Framework should include objectives that seek to protect and enhance biodiversity, flora and fauna.	There are policies in the plan addressing the need to protect and enhance the natural environment and a number of the policies which could potentially result in effects to the Ramsar site include clauses highlighting the need to avoid adverse effects, although in isolated instances there wording could be strengthened.

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	implementation mechanisms, resources and capacity to achieve its mission. ▪ Membership: To progress towards the accession of all countries to the Convention.		
Directive on the Conservation of European Wild Birds (79/409/EEC)			
Relates to the conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States to which the Treaty applies, including the designation of certain habitats as Special Protection Areas. It covers the protection, management and control of these species and lays down rules for their exploitation, and also the prevention of pollution / deterioration of habitats or any disturbances affecting the birds.	The preservation, maintenance and re-establishment of biotopes and habitats shall include primarily the following measures: ▪ Creation of protected areas ▪ Upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones ▪ Re-establishment of destroyed biotopes ▪ Creation of biotopes	The SEA Framework should include objectives that seek to protect and enhance biodiversity, flora and fauna.	There are specific policies in the plan addressing the protection and enhancement of the natural environment.
Bonn Convention on the Conservation of Migratory Species of Wild Animals (1979)			
The Convention on the Conservation of Migratory Species of Wild Animals (also known as the Bonn Convention or CMS) was adopted in Bonn, Germany in 1979, and is an intergovernmental treaty under United Nations Environment Programme. The aim is for contracting parties to work together to conserve terrestrial, marine and avian migratory species and their habitats (on a global scale) by providing strict protection for endangered	There are no specific targets or indicators of relevance.	The SEA Framework should include objectives that seek to protect and enhance biodiversity, flora and fauna.	There are specific policies in the plan addressing the protection and enhancement of the natural environment.

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migratory species. The overarching objectives set for the Parties are: ▪ Promote, co-operate in and support research relating to migratory species ▪ Endeavour to provide immediate protection for migratory species included in Appendix I ▪ Endeavour to conclude Agreements covering the conservation and management of migratory species included in Appendix II			
Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)			
Directive seeks to conserve natural habitats, and wild fauna and flora within the European Community.	Member States are required to take measures to maintain or restore at favourable conservation status, natural habitats and species of Community importance. This includes Special Areas of Conservation and Special Protection Areas and it is usually accepted as also including Ramsar sites (European Sites). Plans that may adversely affect the integrity of European sites may be required to be subject to Appropriate Assessment under the Directive.	The SEA Framework should include objectives that seek to protect and enhance biodiversity, flora and fauna.	There are specific policies in the plan addressing the protection and enhancement of the natural environment.
Directive on Waste (75/442/EEC) (as replaced by Directive 2006/12/EC)			
The 1975 Framework Directive on Waste was revised by a number of amendments and a new codified version came into force in 2006. This is the only legally valid version of the Waste Framework Directive. The Directive establishes a framework for the	There are no specific targets or indicators of relevance.	The SEA Framework should include objectives that promote sustainable waste management. It will also be important for the SEA process to carefully scrutinise waste policies in the Island Plan to	There are policies addressing waste management. These policies focus upon promoting re-use, recycling and waste minimisation, as well as seeking to control the development of

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management of waste across the European Community. It requires Member States to: ▪ Give priority to waste prevention and encourage re-use and recovery of waste ▪ Prohibit the uncontrolled disposal of waste ▪ Establish an integrated network of disposal installations ▪ Prepare waste management plans ▪ Ensure that the cost of disposal installations ▪ Prepare waste management plans ▪ Ensure that the cost of disposal is borne by the waste holder ▪ Ensure waste carriers are registered ▪ Ensure that waste is recovered or disposed of without endangering human health The Directives overarching requirements are supplemented by other Directives for other waste streams.		determine their potential environmental effects.	new waste management infrastructure.
Directive on the Landfill of Waste (99/31/EC)			
The Directive is intended, by way of stringent operational and technical requirements on the waste and landfills, to prevent or reduce the adverse effects of the landfill of waste on the environment, in particular on surface water, groundwater, soil, air and human health.	The Directive establishes guidelines and targets for the quantities or biodegradable waste being sent to landfill. The key targets given in the directive are given maximum timeframes from the start year in which to have them achieved. With 2001 as the start year: ▪ By 2009, biodegradable municipal waste going to landfills must be reduced to 50%.	The SEA Framework should include objectives that promote sustainable waste management. It will also be important for the SEA process to carefully scrutinise waste policies in the Island Plan to determine their potential environmental effects.	There are policies addressing waste management. These policies focus upon promoting re-use, recycling and waste minimisation, as well as seeing to control the development of new waste management infrastructure.

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	▪ By approximately 2016, biodegradable municipal waste going to landfills must be reduced to 35%.		
Environmental Liability Directive 2004/35/EC			
The Directive focuses upon the prevention and remedying of environmental damage – specifically damage to habitats and species protected by EC law, damage to water resources and land contamination which presents a threat to human health. The Directive is based on the polluter pays principle. Polluters would, therefore be responsible for remediating the damage they cause to the environment or of measures to prevent imminent threat of damage. Local authorities would be responsible for enforcing the regime in the public interest. The Directive provides specific criteria to determine when damage is significant. Damage from nuclear and maritime accidents falls outside the scope of the regime.	Annex I of the Directive includes criteria for determining whether effects are significant.	The SEA Framework should include a suite of objectives that address environmental protection and enhancement issues. Through the SEA process it should be possible to scrutinise the plan's policies and identify where they require strengthen to reduce the risk of adverse environmental effects through their application and implementation.	Pollution control is a central theme of a number of the policies which should ensure protection of the natural environment and also offer protection to public health.
European Sustainable Development Strategy (2006)			
The Strategy sets out how the EU will effectively live up to its long-standing commitment to meet the challenges of sustainable development. It reaffirms the need for global solidarity and the importance of strengthening work with partners outside of the EU. The Strategy sets objectives and actions for seven key priority challenges until 2010. The	There are no specific indicators or targets of relevance.	The SEA Framework should include a range of objectives that complement the principles of the Development Strategy.	The Island Plan includes a number of policies that contribute to the achievement of some of the key priorities, for example policies covering sustainable transport, sustainable design and construction, protection and enhancement of the natural

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priorities are: ▪ Climate change and clean energy ▪ Sustainable transport ▪ Sustainable consumption and production ▪ Conservation and management of natural resources ▪ Public health ▪ Social inclusion, demography and migration ▪ Global poverty and sustainable development challenges			environment and energy efficiency.
European Transport Policy for 2010: A Time to Decide			
This policy outlines the need to improve the quality and effectiveness of transport in Europe. A strategy has been proposed which is designed to gradually break the link between transport growth and economic growth to reduce environmental impacts and congestion. The policy advocates measures that promote an environmentally friendly mix of transport services.	There are no specific indicators or targets of relevance.	The SEA Framework should include objectives that promote the use of sustainable modes of transport. The policies in the Island Plan should also be reviewed to determine whether they are likely to increase the likelihood of travel by the private car.	The policies focus upon increasing pedestrian and cycle priority and reducing the domination of the private car within the urban environment.
EU Thematic Strategy on Air Quality			
The thematic strategy on air quality identifies that despite significant improvements in air quality across the EU, a number of serious air quality issues still persist. The strategy promotes an approach which focuses upon the most serious pollutants and that more is done to integrate environmental concerns into other policies and programmes.	There are no specific targets or indicators of relevance.	The SEA Framework should include an objective that seeks to protect and enhance air quality.	Reducing the adverse effects of new development on air quality is a central theme of a number of the policies and there is a clear focus upon increasing use of alternatives to the private car.

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The objective of the strategy is: ▪ To attain levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment. The strategy emphasises the need for a shift towards less polluting modes of transport and the better use of natural resources to help reduce harmful emissions.			
EU Biodiversity Strategy (1998)			
The Strategy aims to anticipate, prevent and attack the causes of significant reduction or loss of biodiversity at the source, which will help both to reverse present trends in biodiversity decline and to place species and ecosystems, including agro-ecosystems, at a satisfactory conservation status, both within and beyond the territory of the EU.	There are no specific indicators or targets of relevance.	The SEA Framework should include objectives that seek to protect and enhance biodiversity, flora and fauna.	There are specific policies in the plan addressing the protection and enhancement of the natural environment.
EU Thematic Strategy for Soil Protection			
Eight main threats to soil are identified which are: ▪ Erosion ▪ Organic matter decline ▪ Contamination ▪ Salinisation ▪ Compaction ▪ Soil biodiversity loss	There are no specific targets or indicators of relevance.	The SEA Framework should include objectives that seek to protect and enhance the soil resource.	The need to avoid soil pollution is raised in a number of the policies and the focus of the spatial strategy upon concentrating development in the urban areas of the Island will indirectly protect soil resources in rural locations.

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▪ Sealing ▪ Landslides and flooding The thematic strategy calls for a framework directive and hence advocates higher levels of protection to the soil resource.			
EU Thematic Strategy on the Prevention and Recycling of Waste (2005)			
The long-term strategy aims to help Europe become a recycling society that seeks to avoid waste and uses waste as a resource.	There are no specific indicators or targets of relevance.	The SEA Framework should include objectives that promote sustainable waste management. It will also be important for the SEA process to carefully scrutinise waste policies in the Island Plan to determine their potential environmental effects.	There are policies addressing waste management. These policies focus upon promoting re-use, recycling and waste minimisation, as well as seeing to control the development of new waste management infrastructure.
European Landscape Convention (2000)			
The aims are to promote European landscape protection, management and planning, and to organise European co-operation on landscape issues. The Convention is part of the Council of Europe's work on natural and cultural heritage, spatial planning, environment and local self-government, and establishes the general legal principles which should serve as a basis for adopting national landscape policies and establishing international co-operation in such matters. The UK is a signatory to this Convention and is committed to its principles.	There are no specific indicators or targets of relevance.	The SEA Framework should include objectives that seek to protect and enhance landscape character and quality.	There are policies in the plan which protect landscape/townscape and seascape. The plan includes proposals to develop a Coastal National Park and there are policies protecting the rural parts of the Island from development.

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UN Convention on Biological Diversity			
This was one of the main outcomes of the 1992 Rio Earth Summit. The key objectives of the Convention are: ▪ The conservation of biological diversity ▪ The sustainable use of its components ▪ The fair and equitable sharing of the benefits arising from the use of genetic resources The achievement of the objectives in the Convention relies heavily upon the implementation of action at the national level.	There are no specific indicators or targets of relevance.	The SEA Framework should include objectives that seek to protect and enhance biodiversity, flora and fauna.	There are specific policies in the plan addressing the protection and enhancement of the natural environment.
UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (1972)			
The Convention requires that cultural and natural heritage is identified, protected, conserved, presented and transmitted to future generations. It also requires that effective and active measures are taken to protect and conserve cultural and natural heritage.	There are no specific indicators or targets of relevance.	The SEA Framework should include objectives that seek to protect and enhance cultural heritage resources.	Policies are included in the plan which seek to protect cultural heritage resources from inappropriate development and also seek to provide enhancements where possible. There are also proposals to develop Conservation Areas within St. Helier to protect the areas of high architectural and historic value.

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Biodiversity – A Strategy for Jersey (2000)			
The overarching goal is to *'conserve and enhance biological diversity in Jersey and to contribute towards the conservation of global biodiversity when appropriate'.* Specific objectives are: To conserve and where practical enhance: ▪ The overall populations and natural ranges of native species and range of wildlife habitats and ecosystems. ▪ Internationally important species, habitats and ecosystems. ▪ Species, habitats and natural and managed ecosystems that are characteristic of local areas. ▪ The biodiversity of natural and seminatural habitats where this has been diminished over recent past decades. ▪ Increase public awareness of, and involvement in, conserving biodiversity; and to contribute to the conservation of biodiversity on a European and global scale. The strategy identifies a number of actions that need to be taken to protect and enhance biodiversity across the Island including; ▪ Designating Sites of Special Interest ▪ Preparing species action plans ▪ Identifying Sites of Importance fro Nature	There are no specific indicators or targets in the strategy. However, valuable information is documented about the state of Jersey's environment and the key habitats and species present across the Island.	The SEA Framework should include objectives that seek to protect and enhance biodiversity, flora and fauna.	There are specific policies in the plan addressing the protection and enhancement of the natural environment.

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Conservation ▪ Developing other strategies including a Coastal Zone Management Strategy ▪ Undertaking further research and monitoring ▪ Developing a GIS system for storage of species information ▪ Developing a biodiversity review panel			
Jersey Mineral Strategy 2000-2020			
The Strategy aims to balance the community's needs for aggregates with the need to conserve mineral resources for future generations and to prevent unacceptable damage to the environment.	There are no specific indicators or targets in the strategy. The long term framework for the management of the island's mineral resources is set out and specific quarry sites are examined in detail. A greater importing of minerals is advocated to meet future demand.	The SEA Framework should include objectives that ensure the sustainable use of primary mineral resources and seek to promote the use of secondary aggregates.	The plan includes a number of policies addressing mineral extraction and ensuring that it is undertaken sustainably across the Island.
States of Jersey Strategic Plan 2006-2011			
The plan contains six commitments by the Council of Ministers to address issues facing the Island: ▪ Maintain a strong, successful and environmentally sustainable economy ▪ Create the environment in which everyone living in Jersey has the opportunity to enjoy a good quality of life ▪ Promote a safe, just and equitable society ▪ Maintain and enhance the natural and	There are no specific indicators or targets in the plan. Rather, broad policy priorities are established to meet the six commitments	The SEA Framework should include objectives that support the achievement of the six commitments within the Strategic Plan.	The Island Plan policies complement a number of the commitments identified in the strategic plan, for example policies covering the protection and enhancement of the natural environment, policies addressing housing and economic development, as well as a clear focus within the policies upon ensuring that new development does not adversely affect quality of life and local amenity.

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built environment ▪ Create a strong, recognised identity for Jersey and promote a real sense of belonging ▪ Ensure that States services are necessary, of high quality and efficiently run Measures to meet the commitments are to be proposed by the relevant departments in their own sector-specific planning documents.			
First Draft of the States of Jersey Strategic Plan 2009 – 2014: Green Paper			
A draft has been prepared of the Strategic Plan for 2009 – 2014. The overarching aim is *'Working together to meet the needs of the community'.* To achieve the aim, the following priorities have been identified: ▪ Support the Island community through the economic downturn. ▪ Maintain a strong, sustainable and diverse economy. ▪ Reform the public service to reduce costs. ▪ Ensure sustainable public finances – living within our means. ▪ Promote sustainable population levels. ▪ Provide for the ageing population. ▪ Reduce social deprivation, increase social inclusions and community safety. ▪ Support people to help themselves. ▪ Enhance support services to vulnerable	Key indicators are identified that can be used to measure whether the priorities are being achieved. The indicators include: ▪ Productivity (Gross Value Added) ▪ Average earnings ▪ Employment/unemployment ▪ Changes in overall population ▪ Levels of inward migration ▪ Levels of recorded crime ▪ Increased life expectancy ▪ Literacy rates ▪ Sport and leisure participation ▪ Air/water quality compliance with international standards. ▪ Energy consumption. ▪ Supply of homes.	The SEA Framework should include objectives that complement the priorities of the emerging strategic plan and enable the Island Plan's policies to be critically reviewed to determine how they would affect the achievement of the priorities.	The Island Plan policies complement a number of the commitments identified in the strategic plan, for example policies covering the protection and enhancement of the natural environment, policies addressing housing and economic development, as well as a clear focus within the policies upon ensuring that new development does not adversely affect quality of life and local amenity.

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children, adults and families. ▪ Maintain and develop the Island's infrastructure. ▪ Enhance and improve healthcare provision and promote a healthy lifestyle. ▪ Maintain high quality education and skills. ▪ Protect and enhance our natural and built environment. ▪ Adequately house the population. ▪ Protect and enhance our unique identity through the community and Parish.			
Social Housing Property Plan 2007-2016			
The plan addresses the pressing need for greater investment in Jersey's social housing stock. It recommends that capital required for the refurbishment and maintenance of rental properties be raised from the sale of a proportion of the stock. This is in line with wider objectives to increase home ownership on the Island.	There are no specific indicators or targets in the plan.	In its consideration of Housing issues, the SEA should reflect the need, identified in the plan, to ensure that the social rented housing stock reflects the needs of the Island's community and meets acceptable standards of quality and accessibility.	The plan provides specific policies to develop housing in accordance with housing needs on the island.
Contaminated Land Strategy For Jersey			
The aim of this Strategy is to provide a working document which clarifies the processes and responsibilities in dealing with contaminated land in Jersey. Specific objectives are as follows: ▪ Produce a workable definition of contaminated land ▪ Identify the States Departments and legislation involved and the processes by	There are no specific indicators or targets in the plan.	The SEA Framework should include objectives that support the objectives identified in this plan. The SEA should promote the use of brownfield sites and the remediation of contaminated areas where possible.	There are policies within the Island Plan that seek to reduce the risk of pollution caused by new development. The focus upon development within the built up areas also increases the likelihood of brownfield sites being re-used and remediated.

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which such departments deal with planning/development applications on contaminated land ▪ To consider Jersey's geology and hydrogeology and the legacy of waste disposal in the Island ▪ To determine the need for a pro-active inspection regime and/or legislation similar to the UK ▪ Provide guidance for developers to assist them in dealing with contaminated land ▪ Provide guidance and training for planners (Development Control) and Building Control Officers to assist them in processing such applications ▪ To develop a register of contaminated land using the Planning Department's Geographical Information System (GIS) ▪ To promote the use of the register to identify potential sites subject to legal authorisation ▪ To detail the health and safety documentation involved in dealing with contaminated land ▪ To identify the disposal & treatment options for contaminated land remediation in Jersey			
Building a Safer Society (BaSS) Annual Report 2006			
The BaSS Strategy has three strategic priorities: ▪ To create a safer environment by reducing crime, public disorder and anti-	The report contains a number of priorities for ongoing work to support the achievement of the strategic priorities, but not specific targets	The SEA Framework should include objectives that seek to reduce crime and anti-social behaviour. It should also support BaSS initiatives to	There are policies within the Island Plan that highlight the need for safety by design principles to e an integral consideration for potential developers

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social behaviour ▪ To provide people with opportunities to develop their potential as lifelong learners and active and responsible members of society ▪ Reduce the harm caused by drugs, alcohol and solvents	relevant to the SEA.	promote healthy lifestyles, enhance community integration and tackle social exclusion.	to ensure levels of safety and perceptions of safety are not adversely affected.
A Strategy for Skills Development in Jersey 2005-2010			
The Strategy aims to ensure that the Island's workforce is able to meet the challenges of economic change and development. Specifically, it's objectives are to: ▪ Develop the capacity and skills of the workforce of the future ▪ Redefine and uplift the skills of the adult population ▪ Ensure that the nature of the skills being developed is in line with current and emerging skills and labour market needs	The Strategy contains a number of priorities for ongoing work to support the achievement of the objectives, but not specific targets relevant to the SEA.	The SEA Framework should include an objective for the Island Plan to promote life-long learning and skills acquisition.	Whilst the Island Plan is not able to address skills issues directly it does seek to ensure that sufficient land is available for economic growth and development across the Island which could offer indirect skills benefits if new training opportunities are provided by new companies that choose to locate on the Island.
Making the Most of Jersey's Coast: Integrated Coastal Zone Management Strategy (2008)			
Policies within the Strategy are subdivided into four priority areas: ▪ Protect and conserve the wildlife, habitats, geodiversity and cultural heritage of Jersey's coast and sea, their supporting ecological processes and overall resilience. ▪ Increase understanding of marine and coastal environments, their natural processes, the impact that human activities have upon them, how to	The plan sets out policies to identify, investigate, encourage and develop various activities in support of the four priority areas. It does not set specific targets relevant to the SEA.	As a small island community, the coastal environment is of critical importance to the quality of life of Jersey's population, as well as being a vital economic resource in terms of tourism and resource exploitation. The SEA Framework should reflect this importance by supporting the Strategy's focus on an ecosystems approach to the sustainable management of the coast.	There are policies in the Plan highlighting the need for the highest levels of protection to be afforded to the marine environment.

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minimise those that have an adverse effect and improve the quality of decision-making. ▪ Promote and encourage sensitive use of natural resources to ensure long term environmental, social and economic benefits. ▪ Work with stakeholders to promote awareness, understanding and appreciation of the value of marine and coastal environments and seek wider involvement in adapting to change and in developing new policies.			
Integrated Travel and Transport Plan for Jersey: Action Plan 2007-2011			
Jersey's geography and high level of prosperity has led to very high rates of car ownership and use. However, the Plan recognises that these levels are peaking, and that an increasing number of journeys are being undertaken without use of the private car but by more sustainable means. Further reducing the use and dependence on the car is the key strategic aim of the Plan.	By 2011, the Plan aims to: ▪ Reduce peak hour traffic flows by 15% ▪ Reduce road injuries by 20% ▪ Reduce road transport pollution in accordance with Jersey's Air Quality Strategy	The SEA framework should include an objective to ensure that new development is located in areas where a choice of transport options is available. The SEA should also be supportive of the more general aim to reduce dependence on the private car and encourage sustainable forms of transport, including walking, cycling and use of the Island's bus services.	There are policies throughout the plan that seek to reduce the need to travel by private car. There are also policies specifically addressing this issue in the travel and transport
Draft Energy Policy: Fuel for Thought (2007)			
The Policy proposes an energy framework that establishes a hierarchy for action: **1** Reduce energy demand **2** Move towards renewable sources of	The Policy has an overall target of a 52% reduction in carbon emissions by 2030 on 1990 levels. At least 10% of all energy in new buildings is to be provided by	The SEA Framework should include an objective for new developments to contribute to a reduction in carbon emissions. This could be achieved in a number of ways including through	There are policies which promote the development of renewable technologies across the Island at both the macro and micro scale.

Key Objectives Relevant to the Plan and the SEA	Key Indicators and Targets Relevant to the Plan and the SEA	Implications for the SEA *(Completed prior to the assessment of the plan policies)*	How have the Elements of the Plan been considered in the Island Plan and the SEA Process? *(Completed after the assessment of the plan policies)*
energy **3** Reduce dependence on imported energy **4** Reduce environmental impacts **5** Off-set residual carbon emissions	renewable sources by 2010. No specific targets are set for energy security.	the promotion of on-site micro-renewable technology, with requirements for energy efficiency or by locating development in areas that minimise the need to travel.	
Solid Waste Strategy: Changing the Way We Look at Waste (2005)			
The Strategy outlines an approach to waste management that prioritises action in line with the internationally accepted waste hierarchy:  Prevention Minimisation Re-use Recycling / Composting Energy Recovery Disposal	Overall recycling / composting rate to reach 32% by the end of 2009. Target recycling rates for certain waste streams: Paper/card (50%), glass (90%), plastics (10%), timber (50%), WEEE (60%) and to increase rates of metal, textiles and miscellaneous items recycling above current levels. Additional targets relate to investment in waste management facilities.	The SEA Framework should reinforce the application of the waste hierarchy by including objectives to minimise waste and promote recycling and composting. Additionally, it should also promote the use of recycled aggregates in construction to reduce the amount of inert waste requiring disposal.	There are a series of policies in the plan addressing the need for effective waste management. The importance of the waste hierarchy is clearly identified.
Rural Economy Strategy – Growing the Rural Economy (2005)			
The aim is to develop a rural economic strategy which promotes growth efficiencies and diversification within the countryside and which protects and enhances Jersey's natural environment. It seeks to deliver the following key aims of the strategic plan: ▪ Implement an economic development policy to encourage economic growth. ▪ Develop a strategy which will explore and promote new opportunities for the rural economy. ▪ Protect and promote Jersey's environment as one of its most important	A number of indicators are cited that will be used to measure the performance of the strategy: ▪ GVA per employee ▪ Land use surveys ▪ Cycle and bridle path lengths.	The SEA Framework should include objectives that complement the aims of the strategy and promote the sustainable development of the rural economy in the long-term.	The economy policies address the development of the rural economy and support its diversification providing potential adverse environmental effects are assessed.

Key Objectives Relevant to the Plan and the SEA	Key Indicators and Targets Relevant to the Plan and the SEA	Implications for the SEA *(Completed prior to the assessment of the plan policies)*	How have the Elements of the Plan been considered in the Island Plan and the SEA Process? *(Completed after the assessment of the plan policies)*
assets. The strategy clearly identifies the need for the agricultural economy to adapt if it is to survive in the long-term. The need for a close link with the planning team is highlighted. A review is to be undertaken of this strategy during 2009.			
Air Quality Strategy			
The air quality strategy is currently under review and has not been reviewed in this SEA.			
Cultural Strategy for the Island			
The vision is: *'That the people and the States of Jersey recognise and value culture in all its forms as central to the life of the Island, to its identity, to its quality of life, to its sense of community, and to its future prosperity'.* The key aims are: Aim 1: To foster, develop and strengthen the Island's identity Aim 2: To make cultural activities integral to the economic and social development of Jersey Aim 3: To help develop and boost economic activity	There are no specific indicators or targets in the plan.	The SEA should include objectives that acknowledge the need to protect and enhance Jersey's distinctive culture, such that there is a clear sense of place established and that all residents of the Island have the opportunity to access cultural facilities.	There are a series of policies that seek to protect and enhance the cultural heritage resources. The designation of Conservation Areas within St. Helier should add to the level of protection offered, although there may be scope within the plan to develop understanding and awareness of heritage issues amongst Island residents.

Key Objectives Relevant to the Plan and the SEA	Key Indicators and Targets Relevant to the Plan and the SEA	Implications for the SEA *(Completed prior to the assessment of the plan policies)*	How have the Elements of the Plan been considered in the Island Plan and the SEA Process? *(Completed after the assessment of the plan policies)*
Aim 4: To enrich the quality of life for all residents and enhance our visitors' experience Aim 5: To help develop culture at the grass roots Aim 6: To help foster lifelong learning Aim 7: To widen access to, and participation in, cultural activities			

Appendix B

Baseline Data

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
Total population	2001 – 87, 186 2007 – estimated to be 90,800	Jersey in Figures, 2008	 Increase in population of approximately 1,400 persons since end of 2006 (natural growth of almost 300 and net inward migration of about 1,100 people.	No comparative data available.
Population Density	2007 – 790 per km^2	Jersey in Figures, 2008.	No trend or historical data available.	Population density is almost double that of England (390 per km^2 and a quarter less than Guernsey (980 per km^2). An estimated 70% of the population live in the four urban parishes: St. Helier, St. Saviour, St. Brelade and St. Clement.
Net migration	2001: -100 2002: -100 2003: -200 2004: -100 2005: 300 2006: 800 2007: 1100	Jersey in Figures, 2008	 Net inward migration has gradually increased since 2005 and is largely driven by an increase in private sector employment which is linked to an improvement in the Island's economy.	Not applicable.
Age structure of the working-age population	2001: 65% of the population were of a working age (16 –	Jersey in Figures, 2008		Not applicable.

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
	59/64 years), 17% above the working age and 18% below the working age.		The proportions have been largely constant since 1981.	
Crime incidence per 1,000 population	53 per 1,000 population for 2008	Jersey in Figures, 2008	 Total crime rose in 2008 compared to 2007. However, this was largely due to an increase in reporting of historic offences.	Approximately two thirds of crimes occur in St Helier.
Perceptions of Safety	9 out of 10 people considered their neighbourhood to be safe or very safe.	Jersey Annual Social Survey, 2007	No trend data available.	At least 88% considered their neighbourhood to be fairly or very safe in every parish, with the exception of St. Helier (78%).
Perceptions of safety after dark	55% across the Island considered their town centre to be either a bit unsafe or very unsafe after dark.	Jersey Annual Social Survey, 2007	 In 2005 70% considered their town to be either a bit unsafe or very unsafe after dark and so there has been an improvement in perceptions of safety after dark since 2005.	Not applicable.
Economy				
Status of the aquaculture industry	Fish farming is a key sector of the fishing industry. Fish farming is concentrated in the	Fisheries and Marine Resources, Annual Report, 2007	 There was no change in the	Not applicable.

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
	east and south east of the Island's intertidal and subtidal zone. There is a subtidal concession in St. Aubin's Bay. The species farmed are: Pacific Oyster *Crassostrea gigas* (most significant part of the industry, mussel, *Mytilus edulis*, the scallop, *Pecten maximus* and the ormer, *Haliotis tuberculata*. In 2007, the area used for aquaculture in the intertidal area was 62.88ha and the sub-tidal area – 166ha.		area used for aquaculture between 2006 and 2007. Overall shellfish production increased slightly from 2006 to 2007.	
Gross National Income (GNI) per capita (this is derived from total GVA by subtracting income earned by non-Jersey owned businesses and adding income earned overseas by Jersey businesses and resident individuals)	Data for 2007 Jersey – $62,000 Luxembourg - $64,000 UK - $34,000	Jersey in Figures 2008 and 2007.	⟺ GNI per capita is Jersey is one of the highest in the world. In 2006, GNI per capita was $63,000 in Jersey and so has stayed largely constant between 2006 and 2007.	Comparative data provided.
GVA by sector	*Date for 2007 (in millions)* Agriculture - £48 Manufacturing - £47 Electricity, gas and water - £33 Construction - £190	Jersey in Figures 2008 and 2007 and Jersey Economic Digest	*Date for 2006 (in millions)* Agriculture - £46 Manufacturing - £50 Electricity, gas and water - £33 Construction - £177	Comparative data not available.

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
	Wholesale and retail - £232 Hotel, restaurant and bars - £107 Transport, storage and communications - £141 Finance - £1,952 Other business activities - £669 Public administration - £247		Wholesale and retail - £220 Hotel, restaurant and bars - £107 Transport, storage and communications - £138 Finance - £1,799 Other business activities - £609 Public administration - £237 Jersey's economy has seen steady growth in the finance and other business activities sectors, as well as growth in construction and retail. There have been declines experienced in the manufacturing and electricity, gas and water sectors. Between 1998 and 2007 there has been a continuous decline in the agricultural sector and manufacturing has also seen year on year declines. However, despite the decline in the agricultural industry it still covers more than half of Jersey's land area.	
Visitor Expenditure	Between 2006 and 2007, the number of staying visitors increased by 2%. On Island	Jersey in Figures, 2008.	No trend data available.	Not applicable.

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
	expenditure was £234 million, an average of £317 per visitor.			
Average length of visitor stays and number of staying leisure and total visitors	Between 1997 and 2007 the total number of visitors to the Island has fallen from 985,000 to 739,000 in 2007. There has also been a decline in the number of staying visitors from 590,000 in 1997 to 376,000 in 2007.	Jersey in Figures, 2008.	No trend data available.	Not applicable
Data about rural diversification schemes.	No data is available.			It is recommended that the number of rural diversification schemes implemented should be monitored in future.
Number of Persons Per Household	2007 – 2.33	Housing Needs Survey, 2007	 2001 – 2.38. There has been a gradual decrease in average household size.	Not applicable.
Ratio of House Prices to Earnings	Ratio of approximately 15 when comparing mean average income with mean average house prices (not median). This ratio is from 2008.	Information from States of Jersey Officer	No trend data available.	There are significant issues across the Island associated with housing affordability.
Property type and housing needs by property type	Approximately 40% are flats/maisonettes, 32% detached houses/bungalows,	Housing Needs Survey, 2007	No trend data available.	Comparative data not applicable.

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
	28% are semi-detached/terraced. The Housing Needs Survey 2008 – 2012 identified that whilst the overall supply of houses over the next five years is likely to be marginally higher than demand, there are shortfalls for specific property types. Overall 1 bedroom units show potential surpluses whilst larger sized units (2, 3 and 4 bedroom) exhibit potential shortfalls. The largest potential shortfall is in 3 bedroom houses, 670 units. The sum of all potential shortfalls of dwelling units over the next five years is 1,395.			
Mix adjusted average price of dwellings sold in Jersey	2007 – 2008 (in £,000) 2007 Q3: 421 2007 Q4:435 2008 Q1: 474 2008 Q2:480 2008 Q3:508 2008 Q4: 480 2009: 507	Jersey House Price Index	 House prices have increased between 2007 and 2008.	*Data for UK* 2007 – 2008 (in £,000) 2007 Q3: 219 2007 Q4:219 2008 Q1: 219 2008 Q2:217 2008 Q3:211 2008 Q4: 200 House prices in Jersey are almost double those for the UK.

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
Employment by Sector	*Data for December 2008* Education, health and other services – 9% States, no trading departments – 12% Agriculture and fishing – 4% Manufacturing – 3% Electricity, gas and water – 1% Construction and quarrying – 9% Transport, storage and communications – 5% Wholesale and retail trade – 15% Hotels, restaurants and bars – 11%	Jersey Economic Digest, 2008	Over the past nine years there has been a shift towards an increasingly service oriented economy. Between 1996 and 2008 there were declines in the percentage employed in agriculture, manufacturing and tourism sectors. Over the last 12 months there have again been increases in employment in the finance sector and small decreases in the hotels, bars and restaurants sector.	The majority of people are employed in the finance and wholesale and retail trade sectors.
Employment Levels	Employment levels are generally high. The Annual Social Survey revealed that in the summer of 2008, 85% of the working age population was economically active. This is consistent with the rise in total employment recorded in Jersey in 2008.	Jersey Economic Digest, 2008	 2001 – 82% of the working age population was economically active. This equates to 1.24 full-time equivalent employees per household.	In 2001 only 78% of the UK population was economically active. This equates to 0.96 full-time equivalent employees per household. The economic activity rate in the UK for the three month period June to August 2008 was 79% (comprising rates of 84% for men and 74% for women). There is quite a lot of

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
				seasonality in the employment in Jersey with more employed during the summer than the winter months, this is largely driven by the agricultural and tourism sectors. However, the seasonality of the employment has decreased in recent years as a result of the decline in the agriculture and tourism sectors.
Unemployment	The number of people registered as unemployed was 440 in June 2008.	Jersey Economic Digest, 2008	The number of unemployed is higher than over the past 12 months, although the increase is believed to be largely related to the introduction of a new Income Support System in 2008, as claimants do not have to register as unemployed if classified as jobseekers or in receipt of Long-Term Incapacity allowance or actively seeking work and not receiving benefit. During 2005 and 2006, unemployment levels were relatively stable and they fell in 2007 and early 2008 before rising again.	Comparative data not available.
Average Earnings by Sector	In June 2008 the average weekly earnings per sector ranged from £820 in financial	Jersey Economic Digest, 2008	No trend data available.	Comparative data not available.

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
	services to £340 in hotels, restaurants and bars. Overall the average weekly earnings were approximately £600.			
Primary and Secondary Education Opportunities	There are 23 non-fee paying primary schools with a combined capacity of over 5,642. There are also two fee paying States' primary schools (Victoria College Preparatory School and Jersey College for Girls Preparatory School) and seven private primary schools. There are four non-fee-paying 11-16 secondary schools in Jersey with a combined capacity of (3,150). In addition to the non-fee-paying secondary schools, there are two fee-paying 11-18 States' secondary schools (Victoria College and Jersey College for Girls), one non-fee-paying 14-18 secondary school (Hautlieu School) and two private 11-18 secondary schools (de la Salle College and Beaulieu Convent).	Draft Jersey Island Plan	No trend data available.	There is a falling trend in the school roll and it is not anticipated that new secondary school provision will be required during the Plan period. The number of children entering secondary school peaked in 2003 and has now levelled out and this is expected to fall over the plan period. In the primary sector there has been a reduction in pupil numbers spread evenly across the parishes. There are no particular schools believed to be at risk.
Educational Attainment at	In 2008, 66% of all GCSE	Jersey in Figures, 2008.		In 2008, 64% of all GCSE entries achieved five or more

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
GCSE and A'Level	entries achieved five or more grades A* to C. In 2008, 84% of all A Level entries achieved Grades A to C.		 Between 1997 and 2008, there has been a gradual increase in attainment at GCSE level, peaking at 68% in 2006 and 2007.	grades A* to C. In 2008, 72 of all A Level entries in the UK achieved Grades A to C.
Open space distribution across the island	There is 23.45 hectares of open space per 1,000 population comprising natural greenspace, beaches, amenity greenspace, parks and outdoor sports facilities. The largest contributor to the open space provision on the island is natural greenspace and beach. Areas of natural greenspace are distributed across the Island. However, the only parishes where natural greenspace access is more limited is in St. Saviour, St. Clement and St. Helier. However, in St. Helier there is access to the beach. The majority of parks are situated in the southern parishes of St. Helier and St. Brelade. Generally, there is an	The Outdoor Open Space, Sport and Recreation Study, July, 2008.	No trend data available.	Natural greenspace contributes significantly to the high quality environment of Jersey and also acts as a valuable recreational resource for the Island's population. Analysis demonstrates that nearly all the population has access to a publicly accessible open space (larger than 1 vergee) within 500m or 10 minutes walk from their home. This highlights the importance of protecting this resource.

Population (to include housing and socio-economic information)				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
	undersupply of parks across the Island and this is considered an issue in the parishes with larger urban settlements. The Outdoor Open Space, Sport and Recreation Study indicates that St. Clement is the only parish on the Island with an overall under supply against standards. The parish has significant urban areas and a large population and so additional provision should be provided.			

Human Health				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
Percentage of people rating their health as 'good' or 'fairly good' over the previous 12 months	Data for 2008 *16 – 24 years:* 64% good, 34% fairly good, 2% not good. *25 – 34 years:* 66% good, 26% fairly good, 8% not good. *35 – 44 years:* 64% good, 29% fairly good, 7% not good. *45 – 54 years:* 65% good, 25% fairly good, 10% not good. *55 – 64 years:* 58% good, 29% fairly good, 13% not good. *65 – 74 years:* 56% good, 33% fairly good, 11% not good. *75 years or over:* 37% good, 43% fairly good, 19% not good.	Jersey in Figures, 2008	 Since 2005 there has been a slight decrease in the percentage of people who considered their health over the previous 12 months to be 'good' from 70% in 2005 to 61% in 2008.	Comparative data not required.
Life expectancy for males and females	Average age at death *2000 – 2004:* 79 for females, 72 for males. 1995 – 1999: 79 for females, 72 for males. 1990 – 1994: 78 for females, 72 for males.	Jersey in Figures, 2008	 Life expectancy in Jersey has increased over the last 50 years. Life expectancy is approximately seven years higher for women than men.	Comparative data not required.
Social Deprivation	This is measure in Jersey using	Our Island, Our Health 2007,	No trend data available.	For social deprivation, Jersey is

Human Health				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary and Comparative Statistics**
	Jersey Census Data and the Carstairs Index which covers: low social class; lack of car ownership; overcrowding; and male unemployment. There are social deprivation differences across the island with St Helier achieving the worst score.	Chapter 1, Statistics.		more affluent than England and Wales.
Deaths from key diseases per 100,000 population	*For period 2004 – 2006* Circulatory disease - 188 Cancer - 171	Our Island, Our Health 2007.	No trend data available.	*For period 2004 – 2006 England average* Circulatory disease - 205 Cancer - 177 There is very little difference between the rates in England and Jersey.
Incidence of teenage pregnancy (under 18 years)	This is often a very good indicator of overall deprivation. Between 2005 and 2007, the rate for Jersey was 15 per 1,000 population.	Our Island, Our Health 2007.	No trend data available.	Between 2005 and 2007, the rate for England was 42 per 1,000 population indicating that this is a greater issue in England than in Jersey.

Soil and Land quality				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
Land Cover by Parish	The most built up parishes are: St.Brelade, St. Helier, St. Clement and St. Saviour. Cultivation land area is highest in St.Ouen, Trinity, St. Martin, St. Lawrence, St. Mary and St. John. Natural vegetation cover is highest in St. Brelade (37%) and is second highest in St. Ouen (20%). These statistics reflect the more urbanised nature of the southern parts of the Island. Overall, land cover for the Island is broken down as follows: Built environment – 24% Cultivation – 54% Natural vegetation – 16% Miscellaneous – 4% Inland water – 1% This highlights the rural nature of the Island.	Jersey in Figures, 2008	No trend data available.	Comparative data not required.
Total area farmed	2007 – 6,320 ha	Jersey in Figures, 2008	 2006 – 6,570ha	Comparative data not required.

Soil and Land quality				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
			2005 – 5,860ha 2004 – 5,790ha There has been a decrease in the amount of agricultural land covering the Island by 250 hectares between 2007 and 2006 but an increase compared to 2004/5 levels.	
Contaminated land	Jersey does not have a history of heavy industrial activities to leave a legacy of sites. However, a number of key sites are affected by contamination, and certain historic and current practices have caused and have the potential to cause contamination of land. No specific data is available about the location of contaminated land across the Island.			
Number of new developments per annum on greenfield land	Monitoring data is not available for this issue but it is recommended that this data is gathered in the future.			
Area of land under Countryside Renewal Scheme (CSR) management	The CRS is increasingly successful in conserving and enhancing Jersey's landscape and environment. During 2007 the following environmental benefits were created: Green cover after maize vg - 519.9 Crops for wildlife vg - 74 Grassland management vg- 440.5 Heathland management vg – 177.4	States of Jersey Website	In 2006 the following environmental benefits were created: Green cover after maize vg - 448.1 Crops for wildlife vg – 99.8 Grassland management vg- 473.3 Heathland management vg – 150.2 Organic land vg – 1,621.60 Cider orchards vg - 4 Access km – 0.43	The CRS was launched in 2005 and offers grants to support environmental projects. Funding is offered to farmers, landowners and managers. To ensure the budget is being spent wisely, the Environment Division continually improves its monitoring programme which looks at the impact of the Scheme upon local wildlife populations, the landscape and water quality.

Soil and Land quality				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
	Organic land vg – 2,049 Cider orchards vg - 8 Access km – 0.47 Hedges km – 3.5 2m habitat strips – 9.2 6m habitat strips km – 4.1		Hedges km – 1.7 2m habitat strips – 13.5 6m habitat strips km – 8.4	

Minerals and Waste				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
Waste generation statistics and disposal routes	Jersey produced 470,000 tonnes of waste in 2008, of which 73% was inert waste, mostly construction rubble and soil. Most of this is landfilled at the La Collette reclamation site. The majority of commercial and household refuse (approximately 70%) is sent for incineration and energy is recovered. However, the amount of residual waste being sent to Bellozane for incineration has reduced by about 6% since 2004.	Draft Island Plan	 33% increase in total waste generated in the period 2004-8.	Waste generation stable 2004-7 at around 350,000 t p/a. Large increase in 2008 due to a 50% rise in inert waste, largely as a result of work on Castle Quays development (this was mostly inert waste).
	Municipal waste totalled 103,231 tonnes in 2008	Draft Island Plan	 This represents a 7% increase on 2004 levels (in 2004, 96, 629	
Municipal waste production per head	2001 – 475kg per annum (significantly higher than the EU target of 300kg).	Draft Island Plan	No trend data available.	480kg per annum for the UK.
Location and type of waste facilities	Waste management facilities/operations are concentrated in the Bellozanne Valley:	Draft Island Plan Green Paper	Bellozanne has been operating since 1979 and is nearing the end of its operational life. La Collette landfill in operation	A replacement for the Bellozanne EfW plant to be built at La Collette has been approved in principle, and work

Minerals and Waste				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
	Energy from Waste (EfW) plant at Bellozanne handling the majority of non-inert waste Temporary re-use and recycling centre Other waste disposal facilities including: hazardous waste collection and storage; clinical waste incinerator; sludge drier; oil recovery operation; temporary site for receiving green waste; ash separation and treatment plant and ferrous and non-ferrous metal extraction. Other facilities are situated at the La Collette Reclamation Site: Green waste composting facility – open windrow system Landfill facility for inert waste and ash from EfW plant – open since 1996 Hazardous waste is stored in Jersey and exported to the UK for disposal in specialist waste management facilities.		since 1996 but capacity due to be reached by 2015.	on a new in-vessel composting facility is ongoing.
Waste management	Total waste incinerated at	Draft Island Plan		No comparative data required.

Minerals and Waste				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
	Bellozanne EfW plant = 72,843 tonnes in 2008. Landfill at La Collette comprised 273,750 tonnes of inert waste and 15.657 tonnes of ash from Bellozanne.		 6% decrease in waste to EfW 2004-8, with corresponding 4% decrease in ash forwarded to La Collette.  35% increase in inert waste to landfill in same period.	
Recycling rates	Recycling of normal commercial and household refuse = 29.8% in 2008. The largest single contribution is green waste sent for composting. Approximately 11,000 tonnes of green waste were recycled in 2008 (approximately 11% of the non-inert waste arising).	Draft Island Plan	 The proportion of normal refuse being recycled rose from 20.6% in 2004.	Levels of municipal solid waste recycling are broadly consistent with levels in the UK but considerably lower than other European countries.
	69,369 tonnes of aggregates recycled in 2008.		 Percentage of aggregate recycled up 150% 2004-8.	
Implementation of kerbside recycling schemes	Kerbside collection schemes for paper, glass, cans and plastic bottles operating in the parishes of St John, St Lawrence, St	Draft Island Plan States of Jersey website	 Three new schemes commenced operation March-	No comparative data required.

Minerals and Waste				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
	Mary and Trinity. Glass collected elsewhere, except St Helier. There are a number of Bring Banks situated across the Island in close proximity to residential/community centres.		May 2009. Trials taking place elsewhere.	
Liquid Waste Disposal Routes	Main foul sewer network covers a large proportion of Jersey and about 86% of properties are connected to it. The other 14% are served by private treatment plants. The principal sewage treatment works is located in the Bellozane Valley. Final treated effluent is discharged into St Aubin's Bay.	Draft Island Plan	No trend data available.	Under high/storm flow conditions, the sewage treatment works experiences difficulties and it struggles to meet its discharge conditions and would fail to meet nitrogen content standards required for compliance with the EU Urban Wastewater Treatment Directive.
Mineral extraction facilities	The only minerals currently actively worked on the island are sand and stone. Two major quarries located at Ronez and La Gigoulande (this is situated in a Countryside Zone) supplying loose stone, asphalt, concrete products and ready mixed concrete. One smaller quarry at La Saline	Draft Island Plan Jersey Mineral Strategy 2000-2020	 One further site, belonging to LE Moon, closed in the early 2000s.	

Minerals and Waste				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
	supplying buildings stone. This site is situated in a 'Zone of Outstanding Character' and 'Green Zone' on the north coast. Simon Sand and Gravel extract sand from St Ouen's Bay.			
Mineral Output	Primary aggregate output estimated at 371,000 t p/a when averaged over the past 5 years	Green Paper	 Present output represents a decrease from levels of early 1990s which reached over 500,000 t p/a.	These statistics do not include recycled aggregates.
Recycled Aggregate Outputs	There has been a rapid increase in the output of recycled aggregates from the La Collette facility which increased from 30,000 tonnes in 2003 to 69,000 in 2008.	Draft Island Plan	No trend data available.	Data about the output of recycled aggregates from development sites and smaller recycling facilities is not available.

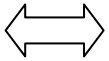
Water				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
Designated bathing water beaches and recreational water quality data for 2007	The designated bathing water beaches across the island are: Archinondel; Beauport; Bouley Bay; Bonne Nuit; Green Island; Greve de Lecq; Grouville; Havre des Pas; La Haule; Le Braye; Piemont; Portelet; Rozel; St. Brelad's Bay; Victoria Pool; Watersplash. EC Directive[5] Imperative standards for total and faecal coliforms were met at all sixteen bathing water monitoring locations. Seven of the 16 monitoring locations achieved the more stringent Guide Standard.	Assessment of Bathing Water Quality for the States of Jersey, 2007.	⇩ During the previous bathing season, 11 of the beaches achieved the more stringent Guide Standard.	The decrease in quality recorded during the 2007 season is attributed to the very wet weather experienced during the bathing season.
Surface Water Quality	The major surface water streams run from North to South through the centre of the Island. However, there are many other small streams that flow to the coast from other parts of the Island. The EC Drinking Water Directive (98/83/EC) set a maximum admissible concentration of 50mgl (nitrate) in potable water supplies. This standard has been recognised	Surface water quality team at the States of Jersey.	⇩ There was a reduction in nitrate concentrations from 75.1mgl^{-1} in 2000 to 60mgl^{-1} in 2008.	Historically there have been nitrate contamination issues in surface waters as a result of the agriculture industry. However, recent improvements have shown a downward trend in nitrate levels. Soil erosion as a result of the use of inappropriate land management practcies has also historically caused water quality problems.

[5] EC Bathing Water Directive

Water				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
	as good practise for Jersey's surface water. Between 2000 and 2008, the mean annual nitrate concentrations in surface water exceeded the EU maximum admissible concentration. However, an overall decline in the mean annual nitrate concentration is evident.			
Pesticide Breaches	The results for 2008 show a decrease in the number of pesticide breaches being reported by Jersey Water to Environmental Protection compared to 2007 (45 compared to 53). The maximum breach value also decreased in 2008 compared to 2007.	Surface water quality team at the States of Jersey.	⇩	Jersey Water sample surface waters on a monthly basis. The sum of all pesticide breaches cannot exceed the concentration of 0.5 μgl^{-1} and therefore, pesticide breaches detected in untreated surface water of above 0.5 μgl^{-1} are investigated by an Environmental Protection Officer.
Number of Pollution Incidents	In 2008 there were 111 pollution incidents. In recent years oil incidents have accounted for approximately half of all reported incidents.	Jersey in Figures, 2008	⇩ There has been a fluctuation in the number of pollution incidents between 2001 and 2008. The number of incidents in 2007 was 65 and so there has been a decrease.	No comparative data required.

Water				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
Maximum daily water demand	Maximum daily water demand in 2007 was 24.5 million litres, compared to 27 million litres in 1996.	Jersey in Figures, 2008.	⇔ Although there has been a significant increase in the number of connections to the mains water supply network, the consumption of water across the Island has remained relatively stable.	No comparative data required.
Water Supply Network Information	There are 8 raw water stream abstraction points across the Island used for water supply. The amount of water that can be collected from each stream varies according to its catchment area, level of rainfall and the water quality. Stream flows are highest in autumn and winter but can completely dry up in summer. There are a series of groundwater boreholes at St Ouen's Bay. There are six raw water storage reservoirs across the Island: Val de la Mare, Millbrook, Dannemarche; Handois; Queens' Valley; Grands Vaux. Each reservoir has a catchment area which is dependent upon the geography of the surrounding countryside. In Jersey, a number of the catchment areas generate more water than can be	Jersey Water Website	No trend information available.	Stream flows often dry up in the summer months.

Water				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
	stored in the respective reservoir. To overcome this issue a series of raw water mains has been developed to enable the movement of water between catchments. There are a series of treated water storage reservoirs in St Helier, Trinity and St Lawrence. There is also a desalination plant to treat sea water. However, 96% of water supply is from surface reservoirs.			
Fluvial flood risk	There are no significant problems associated with watercourse based flooding on the island. However, there have been some very localised problems linked to areas with poor surface water run-off or flooding of existing marshy areas. This has historically been a problem in St. Helier which has been resolved through an underground storage area and separation of surface water and sewerage drains.	Green Paper	No trend data available.	No comparative data required.
The Marine Protection Area	A Marine Protection Area applies from the Mean High Water Mark (MHWM) to the extent of the territorial limits. Within this zone a precautionary principle applies severely restricting development.	Green Paper	No trend data available.	No comparative data required.

Water				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
Aquaculture industry	In 2007, 63ha in the intertidal area and 166ha in the subtidal area was used for farmed shellfish production. The aquaculture industry is focused upon the south eastern and eastern coasts of the Island. There are potential threats to the south east Ramsar site linked to this industry. Overall shellfish production was 791 tonnes in 2007 which was an increase of 3% compared to 2006.	Fisheries and Marine Resources Annual Report	 The area used for the aquaculture industry in 2007 was the same as in 2006.	No comparative data required.

Landscape				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
National Park Details	St Ouen's Bay is the potential location for a National Park. It was designated a 'special place' in 1978 and positive land management initiatives have been implemented to enhance and maintain its character. However, there are believed to be pressures upon its character as a result of inappropriate land use and land development.	States of Jersey Website	No trend data available.	NA
Distribution of Character Areas and Types	Five high level Character Areas identified (Cliffs & Headlands, Coastal Plain, Escarpment, Enclosed Valleys, Interior Agricultural Land), each sub-divided into a number of geographically specific Character Types. Three offshore Types (Cliff Edge and Deep Sea, Bays with Inter-Tidal Flats, Offshore Reefs and Islands)	Jersey Countryside Character Appraisal 1999	No trend data available.	Details from the appraisal (for example information about the key attributes of each character area and type) have not been reproduced in this table but have been consulted when undertaking the assessment of the Island Plan as part of the SEA.
Seascape Information	It is essential that the seascape character is protected. The character of the Island is significantly influenced by the visual relationship of the sea and the land and the view and perception of it from low-lying coastal areas and the sea. Seascape	Making the Most of Jersey's Coast – Integrated Coastal Zone Management Strategy	No trend data available.	NA

Landscape				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
	and the quality of the coastal environment were considered as part of the Countryside Character Appraisal.			
Number and extent of landscape designations –	2002 Island Plan established three tiers of designation with increasing levels of protection, namely: ▪ Countryside Zone: much of the interior and south-east ▪ Green Zone: most of the north of the island inland from the coast and interior valleys ▪ Zone of Outstanding Character: the north and south-west coasts These designations are being reviewed as part of the Island Plan update including the consideration to designate a Coastal National Park. The Island Plan includes policies that will protect the following areas: the Coastal National Park, the Green Zone and the Marine Zone. The Green Zone essentially protects all of those areas of countryside outside of the Coastal National Park.	Island Plan 2002	No trend data available.	Zones are based upon units of land delineated by the Countryside Character Appraisal 1999

Cultural Heritage				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
Cultural Heritage Designations	There are different types of designation for Registered Buildings: Sites of Special Interest (2570) proposed Sites of Special Interest (697), Buildings of Local Interest (3349), Archaeological Sites (52) and Areas of Archaeological Potential. A review is currently being undertaken of the Protection Regime on the Island. It is hoped that the process will be streamlined to help ensure community buy in and better standards of professional engagement as part of development proposals.	Historic Environment Officer, States of Jersey	No trend data available	Some debate as to whether the number of listed or registered buildings is too great
Number and location of Historic Character Areas	The introduction of area based protection to parts of the Island's historic built environment is a longstanding proposal having been mentioned in both the 1987 and the 2002 plans. Potential Conservation Areas have been identified in St. Helier. The designation of Conservation Areas and the identification of other potential locations for Conservation Areas across the Island will be identified over the Island Plan period.	Island Plan	No trend data available.	Historic Character Areas still being established across the Island, beginning in St Helier.

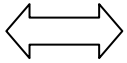
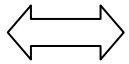
Travel and Transport				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
Distribution of major transport systems	Jersey Airport and St Helier Harbour are the two gateways to the Island. Comprehensive road network connects settlements – it is primarily a north south network. There is no rail network on Jersey.	Integrated Travel and Transport Plan Mapping	No trend data available.	
Bus network and bus patronage	There is a comprehensive bus network across the Island. The southern routes (1 and 15) serve the areas of high population density.	Integrated Travel and Transport Plan	 Bus passenger journeys are increasing, they increased by 4% in 2005 and 7% in 2006.	
Cycle Network	There is an island wide cycle network. There are 96 miles of way marked routes.	States of Jersey		
Passenger arrivals by mode	1,161,000 arrivals in 2008 of which 800,000 were by air and the remainder by sea	Jersey in Figures 2008	 Represents a fall of 4,000 in arrivals from 2007 levels	85% of air arrivals in 2008 were from the mainland UK
Travel to work by mode	Car – 60% Walk – 22% Cycle – 8% Motorcycle – 5% Bus – 5%	Jersey in Figures 2008	No trend data available.	Car travel figures break down into those who drive (55%) and those who are passengers in another car (5%).
Car Ownership	111,861 registered vehicles at 31st December 2008	Jersey in Figures 2008		Will be higher than the actual number of vehicles on the road

Travel and Transport				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
			Continual increase over last 30 years. 3,900 more vehicles in 2008 than previous year.	but useful for year-on-year comparisons.
	Average of 1.57 cars/vans per household	Jersey Social Survey 2008	Increase from 1.53 in 2005	

Biodiversity , Flora & Fauna				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
Number and location of designated sites, including Sites of Special Interest and Ramsar sites	4 Ramsar sites designated – South East Jersey and three offshore sites: Les Ecrehous & les Dirouilles, Les Minquiers and Les Pierres de Lecq. The South East Jersey Ramsar is one of the largest intertidal reef sites in Europe and is very important wintering habitat for waders and wildfowl. A key threat to the site is inorganic waste disposal and sewage discharge. The Les Ecrehous & les Dirouilles site consist of two reefs. The area is fed by clean, well-oxygenated water which together with the range of habitats and the biogeographical position supports a wide range of	Biodiversity: A Strategy for Jersey JNCC		All of the Ramsar sites support a diverse range of habitats and species and must be protected. A marine Protection Zone identified in the 2002 Island Plan extends from the Mean High water mark to the territorial limits and seeks to ensure the sustainable use of the marine environment.

Biodiversity , Flora & Fauna				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
	biotopes. Les Minquiers is an extensive shoal area. At low tide various habitats are exposed including reefs, boulder fields, sandy shores and single banks. Recreation is a threat to the site. Les Pierres de Lecq is situated due north of Greve de Lecq on the north west coast of Jersey. At low tide an extensive reef is uncovered and the site has one of the largest intertidal ranges in the world. One further Ramsar site proposed at St Ouen's Bay (also a potential National Park). *Sites of Special Interest* To date 10 ecological SSIs and 12 geological SSIs have been added to the List. A further 3 ecological sites and 10 geological sites scheduled to be designated by the end of the year. No Sites of Nature Conservation Importance have been designated to date. The designation of such areas could help increase protection to valuable habitats in Jersey.			

Biodiversity , Flora & Fauna				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
Key Biodiversity Action Plan Habitats & Species	10 Key Habitats 42 Key Species (19 plants, 7 insects, 2 amphibians, 3 reptiles, 5 mammals, 5 birds, one fish) The majority of the key habitats across the Island are linked to its coastal and marine environment including: Coastal heathland and cliff slopes; Sand dune; Intertidal – this is of international importance; Marine. Coastal heathland is distributed along the northern coast of Jersey and in isolated areas in the south west. Sand dune habitat lies along the western coast of Jersey, interidal and marine sand and intertidal and marine rock occur along the southern and eastern coasts.	Biodiversity Action Plans for Jersey	No trend data available	It is recognised in the Biodiversity Strategy that there have been significant pressures upon habitats across the Island. For example, sand dunes at Grouville Bay have been lost to golf course development and there are similar pressures at St Ouen's Bay on Les Blanches. Whilst sand dune habitats are protected by SSI designation, development up to the boundaries of such sites is adversely affecting some habitats. Key threats to the intertidal habitat include: coastal defence construction and maintenance, rising sea levels, land reclamation and pollution and contamination including nutrient enrichment.

Energy and Climatic Factors				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
Jersey's total final energy consumption by fuel type	Data for 2007 Petroleum products – 65% Gas - 5% Coal and other solid fuel – 1% Electricity – 29%	Jersey in Figures, 2008	 Total final energy consumption has not changed significantly over the last 6 years.	In recent years the largest change in the consumption of petroleum products in Jersey has been the decline in oils (fuel oil and gas oil) used to generate electricity following the construction of the enhanced interconnector to import electricity from the Continent. There is a heavy reliance on petroleum products.
Total Primary Energy Supply by Fuel Type (Total Primary Energy Supply (TPES) is the energy which a country makes from its own natural resources and includes any energy imported)	Electricity – 26% Petroleum Products – 73% Coal and other solid fuel – 1%	Draft Energy Policy for Jersey Consultation Document 2007	No trend data available.	The vast majority of total primary energy supply was imported with only 1% produced in Jersey through electricity generated from the energy from waste plant at Bellozane. Jersey has no known natural resources of fossil fuels.
Energy Consumption by User	Data for 2007 Government – 6% Domestic – 33% Transport – 34% Industry and Commerce – 27%	Jersey Energy Trends, 2005 and 2008	 Data for 2005 Government – 5% Domestic – 33% Transport – 33% Industry and Commerce – 29%	There has been very little change in energy consumption patterns.

Energy and Climatic Factors				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
Electricity Use	Electricity use has grown steadily over the last 16 years by approximately 2% per year and total consumption in 2007 was 37% higher than in 1991.	Jersey in Figures, 2008	 There has been a significant growth in imports. During the 1990s, imports accounted for between 40% and 60% of public electricity supply and in 2007 imported electricity accounted for 89% of the total.	No comparative data required.
Energy related carbon emissions 1991 – 2007 and also by source for 2007	Energy related carbon emissions for Jersey have fallen between 1991 and 2007 from 156,000 tonnes to 116,000 (decrease of approximately 26%). This reduction can be attributed to a switch from on-Island generation to importing electricity (low carbon sources) from the continent. However, this is a one-off reduction that cannot be achieved again. Data for 2007 Energy from waste plant – 16% Total road transport – 27% Domestic and commercial – 12% Electricity generation – 45%	Jersey Energy Trends, 2007	No trend data available.	There is no specific carbon reduction target set for Jersey. Jersey's emissions will form part of the UK's.

Energy and Climatic Factors				
Baseline Indicator	**Data**	**Source**	**Trend**	**Comparator and Commentary**
Renewable Energy Schemes across Jersey	There is currently no data available about domestic developments of this type as it is exempt in Jersey. No commercial schemes have been applied for.	States of Jersey	No trend data available.	NA

Air Quality				
Baseline Indicator	**Data**	**Source**	**Trend**	**Commentary/Comparative Statistics/Additional Information**
Air Quality Statistics	Nitrogen dioxide is the key pollutant of concern. However, there were no exceedances of the UK NO_2 annual mean limit in 2005.	Integrated Travel and Transport Plan for Jersey 2007-2011	No trend data available.	The nitrogen dioxide pollution hot-spots are at Georgetown in St Saviour, Beaumont in St Peter and in St Helier: First Tower, the Weighbridge area, Broad Street and La Pouquelaye.
Key polluting industries and their location	Bellozanne Energy from Waste plant – does not comply with European emissions regulations. Jersey Electricity Company power station – only operational for 1-2 months per year.	States of Jersey website: Air pollution	Electricity is now supplied to the Island by a permanent connection to the French national grid. Jersey power station only operates at periods of exceptional demand, and as a result, on-Island emissions of SO_2 have reduced dramatically.	Bellozanne plant due to be replaced by new facility that would be compliant with air quality standards.

Appendix C

Assessment of the Waste Options

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
1) To protect and enhance terrestrial and freshwater biodiversity	?	*General Commentary* Landfilling of former mineral workings would provide opportunities to restore sites and to create new ecological habitats. However, the benefits achieved would depend upon whether some recolinisation has already happened at the mineral workings and if the landfilling activities would cause new disturbance to ecological resources.	+	This option could indirectly protect terrestrial and freshwater biodiversity by promoting reclamation rather than terrestrial landraising. This would offer some indirect protection to designated sites such as existing and proposed ecological SSIs.
	?	*Simon Sand and Gravel* Landfilling at the Simon Sand and Gravel mineral works could cause some disturbance to the existing habitats that have established associated with the large open water body that currently characterises the site which is believed to be used by a variety of bird species. However, restoration could also provide opportunities to restore dune habitats in this area and provide linkages with the Blanches Banques SSI to the south. Effects at this site are, therefore uncertain and would need to be the subject of further studies.		
	+	*La Gigoulande* An Environmental Impact Assessment has been undertaken which confirmed that there would be no adverse effects associated with landfilling and restoration of this quarry. Restoration of the site could improve the overall biodiversity of the site.		
	+	*Ronez* This site is already a worked quarry that is situated in		

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
		close proximity to the Sorel Point Geological SSI. As the site is already worked it is considered that the landfilling and subsequent restoration of the site would provide opportunities to improve the biodiversity potential of the site.		
2) To protect and enhance coastal and marine biodiversity	+	Undertaking terrestrial landfilling activities could indirectly protect marine biodiversity by reducing the likelihood of land reclamation being pursued.	- -	Further land reclamation in close proximity to the existing La Collette site could pose significant long-term, adverse risks to the South East Jersey Ramsar site. The site is one of the largest intertidal reef sites in Europe and is very important wintering habitat for waders and wildfowl. A key threat to the site is inorganic waste disposal and sewage discharge. Land reclamation could result in direct loss of Ramsar habitat, there could also be pollution and contamination risks which could compromise the integrity of the site, as well as potential modifications to hydrology, saline flow and sediment transport. The coastal habitats of jersey including intertidal and marine rock which dominate the area near to La Collette. As well as loss of habitat within the Ramsar site there could be adverse effects upon habitats outside of the Ramsar site if the reclamation works lead to changes to coastal processes. Alteration to coastal process is identified as a key threat to this habitat in the Biodiversity Strategy. Loss of such valuable habitat is not sustainable. The 2002 Jersey Island Plan also established a Marine Protection Zone which extends from the Mean High Water Mark to the territorial limits and seeks to ensure the sustainable use of the marine environment. Land reclamation would not be consistent with this policy.
	+/-	*Simon Sand and Gravel* The long-term restoration of the site could present opportunities to restore sand dune habitats and improve linkages between the restored site and the Blanches Banques SSI which is Jersey's last remaining sand dune system. However, the site is currently used by a variety of species of bird associated with the large water body that currently occupies the site and so there could be some short-term adverse effects associated with disturbance if landfilling were pursued.		
	+	*La Gigoulande* This is not a coastal site and so this could indirectly protect coastal and marine biodiversity by reducing the likelihood of reclamation occurring.		
	?	*Ronez* This site is situated in a coastal location and there is a possibility that the existing mineral site is used by coastal bird populations. Therefore, landfilling activities could cuase adverse effects. However,		

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
		landfilling and subsequent restoration of the site could present an opportunity to restore the site to complement the coastal heathland habitat that dominates the northern coast.		
3) To provide good quality affordable housing that meets the requirements of the local population?	**0**	There would be no contribution to meeting the housing needs of the Island.	**0**	There would be no direct contribution to meeting the housing needs of the Island. However, in the long term the reclamation process could help to make land available in other locations for housing development, for example, additional reclamation could help to facilitate the relocation of the port.
4)To encourage the development of sustainable communities	**0**	Whilst there are unlikely to be any significant benefits or disbenefits, the landfill sites could be restored to a recreational use in the long-term.	**0**	There is no clear link between this option and the objective.
5)To promote sustainable economic growth	**+**	For all sites landfilling could provide further revenue for the site in the short to medium term.	**+**	Additional land reclamation in the vicinity of the existing La Collette site could help to facilitate the long-term expansion of the port facilities of the Island. However, such benefits could only be realised a long time into the future. The option would not offer any benefits from a rural diversification perspective but could help to protect agricultural resources from the threat of landraising.

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
6)To reduce crime, disorder and fear of crime	**0**	There is no clear link between the option and the objective.	**0**	There is no clear link between the option and the objective.
7)To improve physical and mental health for all and reduce health inequalities	**+/-**	Generally, landfilling activities can create nuisance issues for nearby populations, for example, dust generation, noise, contamination which can all affect both physical and mental well-being. However, all of the sites proposed for land raising have been used for mineral extraction and so it is considered unlikely that landfilling of inert materials would increase levels of nuisance above those historically or currently experienced.	**+**	The process of land reclamation is unlikely to have any direct or indirect health benefits, nor would it help to reduce health inequalities. However, there are presently issues surrounding the siting of the fuel farm and there is the potential that further reclamation at La Collette could help to facilitate the movement of the fuel farm from its present location which could have indirect health and safety benefits.
	+/-	*Simon Sand and Gravel* The landfilling and restoration of the Simon Sand and Gravel site could indirectly benefit health and safety by deterring some of the existing birdlife at the site and reducing the likelihood of bird strike with incoming and outgoing aircraft at the airport. However, there could also be negative effects for nearby residents of St. Brelade associated with the traffic movements needed to deliver the inert waste to the site. There could also be potential adverse effects upon water quality if contamination of the underlying sand aquifer occurs through the landfilling of the waste. There are a number of boreholes at St. Ouen's Bay used for water supply purposes. Contamination of this water resource could have adverse impacts upon water supply with resulting		

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
		human health effects.		
	+	*La Gigoulande* The EIA indicated that there would be no adverse effects as a result of landfilling and restoration.		
	+/-	*Ronez* There is an existing mineral extraction process at this site on the northern coast which is not situated close to any particular settlements and so significant nuisance issues are considered unlikely. There could potentially be some nuisance caused by transport movements in close proximity to St. John's village to deliver the inert waste.		
8) To guard against land contamination and encourage the appropriate re-use of brownfield sites	+	For all options there would be positive use of an existing mineral workings site which would mean the re-use of a brownfield site. However, there is a potential risk that contamination could occur in the absence of inappropriate mitigation.	+/-	This option indirectly helps to protect greenfield land from the potential contamination that would be generated by landfilling activities. However, landfilling of inert waste would be introducing a source of contamination into a new, currently uncontaminated location.

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
9) To protect soil functions	+	This option could help to indirectly protect soil resources across the island by avoiding the need for landraising in other locations that are currently undisturbed. The option would also lead to the use of an area of land that is already blighted.	+	This option could indirectly protect soil resources inland by avoiding the need for future land raising activities.
10)To protect and enhance the quality and availability of water resources	-	In principle, this option has the potential to cause new contamination and so effects are assessed as minor negative.	+	There is the potential for this option to cause the pollution of marine waters. However, it could also indirectly help to protect water supply as it would avoid the need for terrestrial landfilling which could lead to the contamination of streams (approximately 96% of water supply comes from surface reservoirs).
	-	*Simon Sand and Gravel* There is a potential risk of contamination of the underlying sand aquifer through landfilling at this site which could have adverse effects in the long-term and contaminate drinking water. This issue would need to be thoroughly investigated and the types of waste landfilled would need to be carefully considered.		
	0	*La Gigoulande* The EIA indicated that there would be no adverse effects as a result of landfilling and restoration.		
	-	*Ronez* Effects are unknown at this stage although there is potential for pollution to occur.		

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
11) To protect and enhance coastal, intertidal and marine waters	+	This option could indirectly protect coastal, intertidal and marine waters. However, the Ronez site is situated in a coastal location and so the works would need to be carefully designed to avoid adverse effects.	- -	Significant adverse effects could occur as a result of this option, as reclamation could lead to modifications to tidal flows, hydrology, saline flows and sediment movement which could all cause long-term changes in the coastal, intertidal and marine environment both at the reclamation site and further along the southern coast. For example, the development of La Collette II caused adverse sedimentation impacts upon St. Aubin's Bay.
12) To protect and improve air quality	0	Landfilling activities typically generate dust and this is likely to be an existing issue owing to the mineral extraction activities. However, there is also potential for there to be adverse air quality effects associated with the movement of waste to the sites.	0	Landfilling activities typically generate dust and this is likely to be an existing issue owing to the current landfilling activities. However, in the long-term, the co-location and concentration of multiple waste facilities in one main location could benefit air quality through potentially reducing vehicle movements compared to a dispersed waste strategy. The prevailing winds are south westerly or north westerly and south westerly winds could lead to some air quality nuisance for the nearby residents of St. Helier.
	-	*Simon Sand and Gravel* Whilst the actual landfilling activities are unlikely to generate more dust than the mineral working activities, the transport of the waste to the site could create adverse air quality effects for residents of St. Brelade.		
	0	*La Gigoulande* The EIA indicated that there would be no adverse effects as a result of landfilling and restoration.		
	0	*Ronez* It is considered unlikely that there would be adverse air quality effects as this is a coastal site and there have historically been mineral working activities undertaken.		

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
13) To limit and adapt to climate change	-	The landfilling of waste in the proposed mineral workings could actually lead to increased transport distances to move the waste to the sites (this assumes that most inert waste is generated in and around St. Helier) which could increase carbon dioxide emissions from transportation sources.	-	The effects of this option upon coastal/tidal movements are uncertain. There could be adverse effects upon erosion and potentially flood risk issues in the long-term, if high tide levels increase as predicted[6]. The co-location of waste facilities at La Collette could help to reduce transport movements which could reduce contributions of transportation to carbon dioxide emissions.
14) To increase energy efficiency and require the use of renewable energy sources	-	Whilst there are unlikely to be significant impacts upon this objective as a result of the implementation of the option, the use of these particular mineral workings could actually lead to increased distances for transporting waste which could increase fuel use in the long-term.	+	There are unlikely to be significant impacts upon this objective as a result of the implementation. In the long-term there could some efficiencies achieved through a reduction in transport movements achieved through the co-location of facilities at La Collette.
15) To protect and enhance the cultural heritage resource	+	It is considered unlikely that there would be significant effects upon cultural heritage resources as the sites have already been used for mineral extraction.	+	This option would not result in adverse effects upon known cultural heritage resources. There is a very low likelihood of damaging unknown archaeological resources.
16) To protect and enhance landscape, seascape and townscape character and quality	+	In the long-term there could be beneficial effects, as the currently visually intrusive mineral sites would be restored to a use appropriate to the adjacent landscape.	+/-	Reclamation would have adverse effects upon this part of the costal landscape and there would be long-term changes to the seascape. Whilst industrial activities already affect this coastal landscape, this option would lead to further permanent changes to the landscape.
	+	*Simon Sand and Gravel*		

[6] HR Wallingford, Working with Water (April, 2007) Climate Change Jersey, Effects on Coastal Defences

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
		This mineral working is presently a significant blight on the landscape and restoration has the potential to positively influence this part of Jersey in the long-term.		However, this option would indirectly protect the valuable countryside and wider landscape of the Island by avoiding the need for terrestrial landfilling and landraising, although in some locations where there are existing mineral workings there would be benefits associated with landfilling and site restoration.
	+	*La Gigoulande* The EIA indicated that there would be no adverse effects as a result of landfilling and restoration. It is assumed that restoration would result in positive landscape effects.		
	+	*Ronez* This mineral working is presently a significant blight on the coastal landscape and restoration has the potential to positively influence this part of Jersey in the long-term.		
17) To minimise waste, increase re-use and recycling and to promote sustainable resource use	**0**	Whilst the option would not actually minimise waste generation, it is not intended to. However, there should be a clear focus upon recycling and reducing waste generation where possible to reduce the need for landfilling of inert waste.	**0**	Whilst the option would not actually minimise waste generation, it is not intended to. However, there should be a clear focus upon recycling and reducing waste generation where possible to reduce the need for landfilling of inert waste.

Environmental Objective	Option 1 – Terrestrial Landfill Landfilling former mineral workings, for example, La Gigoulande, Simon Sand and Gravel or Ronez.		Option 2 – Land Reclamation Potential extension to La Collette II to create a further reclamation site.	
18) To promote the use of more sustainable modes of transport	**0**	There is no clear link between the option and the objective.	**+**	Whilst landfilling directly will not increase use of more sustainable modes of transport, in the long-term reclamation could lead to the provision of more developable land in close proximity to St. Helier where there are a range of services and facilities and more public transport opportunities. There could be very minor benefits in the long-term.
Overall Summary	The assessment demonstrates that the terrestrial landfill option is the more preferable long-term option for the Island particularly from a marine biodiversity perspective as it would avoid adverse effects upon the South East Jersey Ramsar Site and wider aspects of the marine environment. Reclamation could also introduce risks associated with changes to coastal hydrology, sediment transport and also saline flows, all of which could affect the wider coastline and not just the location where reclamation occurs. Other potential negative effects associated with reclamation are linked to long-term changes to the seascape and landscape. Conversely, the terrestrial landfill option is likely to offer long-term landscape benefits as it would help to facilitate the restoration of existing mineral workings which currently cause adverse visual effects. The three potential mineral workings considered for the landfill option all have potential benefits and disbenefits and it is evident that further assessment work would be needed before any of them could be pursued to ensure that potential site specific environmental effects are thoroughly assessed and mitigated. One of the potential adverse effects of terrestrial landfill is the distances that may have to be travelled to dispose of the waste. A large amount of the inert waste generated originates in St Helier and this settlement is closer to La Collette which would reduce the distances travelled to dispose of waste.			

Appendix D

Assessment of Policies