

STRATEGIC ENVIRONMENTAL ASSESSMENT

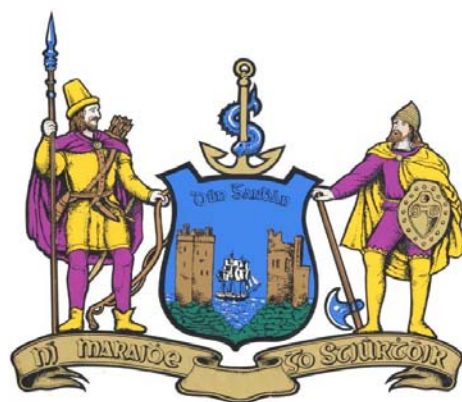
ENVIRONMENTAL REPORT

FOR

DUNGARVAN TOWN DEVELOPMENT PLAN

2012-2018

April 2012



**Dungarvan Town Council
Baile Dhún Garbhán**

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1 NON-TECHNICAL SUMMARY

1.1 INTRODUCTION

Strategic Environmental Assessment (SEA) is a formal process that is being carried out in parallel with the review of the Town Development Plan for Dungarvan 2012-2018. It is a valuable tool that informs decision making in the consideration of the Plan, improving the environmental sustainability of the Plan and raising awareness of the potential environmental consequences of its implementation so that these consequences may be mitigated or avoided altogether. It also gives the public and other interested parties an opportunity to comment and to be kept informed on decisions that may impact on the environment and how they were made.

In accordance with the legislation, a ‘scoping’ exercise was carried out to determine the range of environmental issues and level of detail to be contained in the Environmental Report. This involved consultation with the relevant Environmental Authorities:

- The Environmental Protection Agency
- The Department of the Environment, Heritage and Local Government
- The Department of Communications, Energy and Natural Resources

The main output of SEA is the Environmental Report, which outlines the findings of the assessment process. This is the Environmental Report for the Town Development Plan 2012-2018 and proposed amendments that has been prepared in accordance with the Planning and Development (Strategic Environmental Assessment) Regulations 2004. This report should be read in conjunction with the Town Development Plan 2012-2018 , Report on Proposed Material Amendments to the Draft Dungarvan Town Development Plan 2012-2018 and the Appropriate Assessment Screening Report on the Plan and proposed amendments

1.2 CONTENTS AND MAIN OBJECTIVES OF THE TOWN DEVELOPMENT PLAN

The Town Development Plan provides a strategic planning framework for the development of Dungarvan Town. The Plan is prepared under the requirements of Section 10(2) of the Planning and Development (Amendment) Act 2010 and provides for the proper planning and sustainable development for Dungarvan for the years 2012-2018. It contains a number of Strategic Goals. These goals then form part of each of the chapters which go on to define specific policies and objectives for housing, settlement strategy, environment, infrastructure, heritage and community.

1.3 CURRENT STATE OF THE ENVIRONMENT

1.3.1 Flora, Fauna and Biodiversity

There are a number of diverse habitats found in and adjacent to Dungarvan. Some habitats are of national importance and are recognized through designation as Natural Heritage Areas or Proposed Natural Heritage Areas (pNHAs). Other habitats are of European Importance and are designated Special Areas of Conservation (SACs) for their habitat or plant/animal species value or Special Protection Areas (SPAs) for birdlife. Dungarvan Harbour including the River Colligan Estuary is designated a Special Protection Area. In addition to legally designated sites there are many other important sites for wildlife such as wetlands and hedgerows.

Key issues for conservation of biodiversity in Dungarvan are; maintenance of good water quality for water dependant habitats and species, protection of coastal habitats and control of invasive species.

1.3.2 Population and Human Health

The Census of 2006 shows the population of Dungarvan grew by 12.2 % from 7,452 to 8,362 between 2002 and 2006. Key issues for population and human health include water quality involving drinking water, waste water treatment, recreational bathing waters, quality of fisheries and shellfish waters.

1.3.3 Water

The main legislation governing water quality in Ireland is the EU Water Framework Directive. The WFD aims to achieve “good” status of all water bodies by 2015. Key issues for water are; provision of adequate waste water treatment infrastructure, maintenance of good quality drinking water for protection of human health, protection of groundwaters, restoration of surface and coastal water, and protection and restoration of water quality for water dependant habitats and species.

1.3.4 Air Quality and Climate

Air quality monitoring is carried out by the EPA. Dungarvan is in Zone D.

The National Climate Change Strategy Review published in April 2007 sets out a series of measures that will reduce Ireland’s greenhouse gas emissions by over 17 million tonnes of carbon dioxide equivalent in the period 2008-2012.

Currently there are no significant concerns with regard to air quality in Dungarvan. However, climate change presents real challenges to future land use and location of development in the county. Predicted impacts from projected temperature rises include more concentrated periods of higher rainfall, more exposure to flood risk and increasing coastal erosion.

1.3.5 Geology and Soils

Dungarvan is located in an area of Waulstorian Limestones consisting of Massive unbedded lime-mudstone. The Soils of Ireland Map (1995) indicates that Acid Brown Earths, Mineral Alluvium and Gleys occur in Dungarvan. The geological heritage of Ireland is surveyed and evaluated by the Geological Survey of Ireland. The Irish Geological Heritage Programme has identified Shandon Cave as a County Geological Site of Interest in Dungarvan. An audit of Geological Heritage Sites was carried out for Waterford County Council in 2011.

1.3.6 Landscape

Dungarvan is characterised by the River Colligan and Dungarvan Bay. The diversity of landscapes and natural heritage enables views and prospects of areas of natural beauty from the town. The coastal landscapes is of key importance to Dungarvan's and the county's tourism industry. Development of infrastructure, including energy networks, wind energy and tourism developments, all have the potential to impact on landscape.

1.3.7 Cultural Heritage

Dungarvan contains 5 Recorded Monuments protected under the National Monuments Act 1930-2004. An Archaeological Inventory prepared by the National Monuments Service of the DoEHLG is available for County Waterford.

A number of buildings and other structures are considered to be of interest for reasons of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest and are listed in the Record of Protected Structures in the Town Development Plan. The National Inventory of Architectural Heritage is also an important resource for listing further structures for protection. The maintenance and conservation of Dungarvan's cultural heritage is key in order to maintain an irreplaceable resource, sense of identity for the town and as a source of visitor interest and tourism revenue. Key issues include the conservation of built heritage and streetscapes, protection of archaeological sites and monuments and promotion and enhancement of access to these sites.

1.3.8 Material Assets

Material assets is taken to include infrastructure and utilities including road, water supply and wastewater treatment facilities. It also includes economic assets such as agricultural lands, coastal and water resources which support fisheries and tourism industry. Shellfisheries are located in Dungarvan Bay. Key environmental pressures on material assets are land use and climate change and water pollution.

1.4 EXISTING ENVIRONMENTAL ISSUES

Environmental issues relate to water quality including protection of surface waters in Dungarvan Bay, Shellfish waters at Dungarvan Bay, continued monitoring of public water supplies and provision of sufficient capacity in waste water treatment plants. The need to

maintain water quality is key to conservation of biodiversity and water dependant habitats and species. Climate change impacts involving floodrisk and coastal erosion will also require to be considered in future land use and development patterns.

1.5 CONSIDERATION OF ALTERNATIVE STRATEGIES

Alternative strategy options are explored in the main report along with the do-nothing scenario. These are:

1. Alternative Strategy Option 1- Continue with existing zoning in Current Town Development Plan.
2. Review zoning including phased zoning of lands.

In the interests of the future settlement strategy for the town and wider county and in compliance with the Core Strategy and Regional Planning Guidelines and in terms of environmental infrastructure to support a sustainable pattern and rate of future growth the preferred strategy is option 2.

1.6 ENVIRONMENTAL PROTECTION OBJECTIVES

The Environmental Protection Objectives provide a standard against which the goals, policies and objectives of the Town Development Plan can be measured in order to highlight those with the potential for environmental impact. They are as follows:

1.6.1 Biodiversity, Flora and Fauna

B1: Protect, conserve and enhance the diversity of habitats, species and areas of national or international importance, including aquatic habitats and species and promote the sustainable management of habitat networks.

1.6.2 Population and Human Health

P1: Facilitate a good standard of health for Dungarvan's population through ensuring high quality residential, recreational and working environments.

P2: To reduce the risk of flooding and harm to people, property and the environment

1.6.3 Water Resources

W1: Protect and where possible enhance the quality of surface and ground waters as sources of drinking water and as valuable assets for amenity and recreation.

W2: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contamination to waters.

1.6.4 Air and Climate

AC1: Support Implementation of the National Climate Strategy 2007-2012.

AC2: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journeys

1.6.5 Cultural Heritage

C1: Protect and conserve features of architectural and archaeological heritage.

1.6.6 Landscape

L1: Protect and conserve the quality, character and distinctiveness of landscape including waterway corridors and coastal landscapes and minimise negative visual impacts.

1.6.7 Soil and Geology

S1: Conserve the quality of and prevent erosion of soils and protect geological sites.

1.6.8 Material Assets

MA1: Maintain the quality of and access to assets such as open spaces, water resources and all other physical and social infrastructure.

1.7 LIKELY SIGNIFICANT EFFECTS ON THE ENVIRONMENT OF IMPLEMENTING THE PLAN AND MITIGATION MEASURES

The full matrix and assessment of the Town Development Plan policies and development objectives against environmental objectives is included in Appendix One of the Environmental Report. Appendix 1B details the environmental assessment of the proposed amendments to the Plan.

Assessment of the policies and development objectives in the Town Development Plan and proposed amendments shows that these policies and development objectives will not pose a significant adverse impact on the environment. Many of the policies and objectives are considered positive, setting out to manage and protect aspects of the environment such as water quality, landscape, heritage resources and management of flood risk. The plan is particularly strong on policies supporting sustainable travel with associated positive implications for human health through accessible public transport and pedestrian access. Due to the strategic nature of the plan some of the broad range objectives cannot be accurately appraised to infer a definite positive or negative impact and so have been assessed as “uncertain” as a lower level tier assessment will be more appropriate to determine the precise nature of the impacts involved.

The finding of “uncertain” impacts in the SEA matrix will be determined at a lower level of environmental assessment largely through EIA at the project level. These assessments will involve application of Appropriate Assessment, Landscape appraisal, archaeological and architectural heritage appraisal and flood risk assessment to accurately determine the impacts under the range of environmental headings detailed above.

The findings of uncertain impacts on Natura 2000 sites from the Appropriate Assessment screening process are carried through the Environmental Report and have been addressed through the incorporation of amendments to Plan policies where required.

1.8 MONITORING PROPOSALS

Measures were proposed as part of this SEA process to monitor the effects on the environment of implementing the Town Development Plan and these are presented in the Environmental Report in terms of the achievement of the environmental protection objectives and the impact on the environmental factors that the SEA legislation requires to be considered. Measurable indicators are included and targets are set. Monitoring for SEA will be carried out as part of the overall monitoring of implementation of the Town Development Plan and using existing assessment frameworks such as the SE River Basin District Management Plan, Pollution Reduction Programmes, and Article 17 Habitats Directive Assessment.

2. INTRODUCTION

2.1 BACKGROUND

The objective of the Town Development Plan is to provide for the proper planning and sustainable development for Dungarvan for the years 2012-2018. The area to which the Plan relates is the defined Dungarvan Town boundary, which measures a total of 553 ha.

The purpose of this environmental report is to identify and evaluate the likely significant impacts on the environment of adopting the Town Development Plan 2012-2018.

2.2 Strategic Environmental Assessment

Strategic Environmental Assessment (SEA) is defined as ‘the formal, systematic and comprehensive process of evaluating the effects of a proposed policy, plan or programme or its alternatives, including the written report on the findings of that evaluation, and using the findings in publicly accountable decision making’.

SEA is a process for evaluating at the earliest appropriate stage, the environmental quality, and potential consequences, of policies, plans or programmes and to ensure that any potential consequences are assessed during their preparation and before they are adopted. Its overall purpose is to contribute to sustainable development. SEA is intended to provide a framework for influencing decision-making at an early stage; to improve the environmental sustainability of the Plan and to raise awareness of the potential environmental consequences of its implementation so that these consequences may be mitigated or avoided altogether. It also gives the public and other interested parties an opportunity to comment and to be kept informed on decisions that may impact on the environment and how they were made.

The SEA process includes the following outputs:

- Scoping Report – stating how the scoping responses of the environmental authorities were taken account of in preparing the Environmental Report;
- An Environmental Report (a report containing the findings of the SEA) on the likely significant effects of implementing the Town Development Plan 2012-2018.
- A SEA Statement (identifying how environmental considerations and consultation were integrated into the final adopted Town Development Plan).

This is the Environmental Report for the Town Development Plan 2012-2018 for Dungarvan and proposed amendments and has been carried out in accordance with Schedule 2B of S.I. 436 of 2004, which sets out the information that is required to be included in SEA and Environmental

Reports. This report should be read in conjunction with the Dungarvan Town Development Plan 2012-2018, Report on Proposed Material Amendments to the Draft Dungarvan Town Development Plan 2012-2018 and Appropriate Assessment Screening Report.

2.3 The Contents and Main Objectives of the Town. Development Plan 2012-2018

The current Town Development Plan was adopted on 20th November 2006 and runs until November 2012. Under Section 11 (1) of the Planning and Development Act 2000 this Plan is subject to review and sets the context for the Development Plan for the period 2012-2018.

The Town Development Plan 2012-2018 has been prepared in accordance with the requirements of Section 10(2) of the Planning and Development Act 2000 and provides for the proper planning and sustainable development for Dungarvan for the years 2012-2018. It contains a number of Strategic Goals. These goals then form part of each of the chapters which go on to define specific policies and objectives.

The strategic goals of the Town Development Plan are as follows:

- Consolidating and strengthening our settlement by achieving critical mass;
- Facilitating balanced economic development;
- Creating a sustainable and vibrant communities and providing an attractive place to live and work;
- Providing for the wellbeing of the residents of Dungarvan Town through social and recreational initiatives;
- Encouraging and facilitating enterprises and employment;
- Ensuring the timely provision of infrastructure in line with residential and economic development;
- Building upon strengths in enterprise, tourism, local services, land and marine based natural resources; and
- Enhancing and protecting our built and natural environment.

2.4 RELATIONSHIP OF THE TOWN DEVELOPMENT PLAN WITH OTHER RELEVANT PLANS

2.4.1 Introduction - Hierarchy of Strategic Actions

The t Town Development Plan is situated within a hierarchy of strategic actions, policy and guidance; higher-level strategic actions direct the Town Development Plan while the Town Development Plan in turn, will direct lower strategic actions. In accordance with the SEA legislation in this regard, the Environmental Report shall include the information that may reasonably be required taking into account a number of factors, one of which is “the extent to which certain matters are more appropriately assessed at different levels in the decision-making process in order to avoid duplication of environmental assessment”.

In accordance with this provision, potential environmental impacts that arise from the implementation of policies and objectives where dictated by higher-level policy, will not be assessed in this SEA. Furthermore, certain objectives will be more site-specific than strategic. Where such situations arise, they will undergo assessment for their impacts through a more appropriate appraisal, such as EIA. As required in the legislation, the Town Development Plan (and accompanying Environmental Report) shall, so far as is practical, be consistent with national and regional plans, policies and strategies, and any guidelines issued by the Minister of the Environment, Community and Local Government, which relate to the proper planning and sustainable development of the area covered by the Town Development Plan 2012-2018.

2.4.2 National and Regional Policy and Guidance

Ireland has ratified a range of national and international agreements in relation to our environment; such agreements place legal obligations on the State in relation to the maintenance of prescribed standards of environmental quality and the conservation and management of designated heritage sites and species. Relevant policy and guidance from regional, national and international levels are outlined in the following sections.

National Spatial Strategy, 2002

The NSS was published in 2002 and is a 20-year planning framework designed to deliver more balanced social, economic and physical development between regions. In 2009, the Department of the Environment, Heritage and Local Government carried out an NSS Update and Outlook comprising of a detailed analysis of NSS implementation to date and ongoing challenges, effectiveness of planning and delivery mechanisms at central, regional and local levels and identification of critical investments necessary to grow the gateways’ and regions’ economic performance and competitiveness.

In view of the current challenges facing Ireland and planning for the medium to long term, the Update and Outlook is focused on how the NSS can contribute to economic renewal and competitiveness, through:

- enhanced prioritisation of infrastructure investment;
- strengthening governance arrangements in gateways; and
- improved integration of environmental considerations within the planning process.

National Development Plan 2007-2013

The National Development Plan 2007-2013 (€184 billion) focuses on a number of key themes including sustainable development and linking future growth to the NSS. The concept of sustainability underpins the plan. The NDP includes the following objectives;

1. Decisively tackle structural infrastructure deficits.
2. Greatly enhance enterprise development, science and technology and innovation, working age training and skills provision.
3. Integrate regional development within the National Spatial Strategy framework.
4. Invest in long-term environmental sustainability.

Regional Planning Guidelines for the South East Region 2010-2022

The objective of the Regional Planning Guidelines is to provide a long-term strategic planning framework for the development of the South-East region (South Tipperary, Waterford, Carlow, Kilkenny and Wexford). The guidelines are intended to be a framework for local authority development plans by enhancing the strategic dimension of planning at regional and local levels and building upon the approach taken by the National Spatial Strategy. The Guidelines address issues such as settlement, transportation, industrial development, community facilities and environmental protection.

2.4.3 International Conventions and Agreements

Ireland has ratified a range of International Agreements in relation to our environment. Such agreements place legal obligations on the State in relation to the conservation and management of our environment and heritage. Table 2.1 below details the range of EU environmental legislation and policies and how they are transposed into Irish law.

Table 2.1 Legislation and Policy directing environmental standards and objectives in Ireland

Topic	Policy, Plan or Programme	Objectives
Biodiversity	UN Convention of Biological Diversity (1992)	Maintain and enhance biodiversity.
	The Ramsar Convention The Convention on Wetlands of International Importance (1971 and amendments)	Objectives include protection and conservation of wetlands, particularly those of importance to waterfowl as Waterfowl Habitat
	European Union Directive (92/432/EEC) on the conservation of natural habitats and of wild flora and fauna	Lists certain habitats and species that must be given protection.
	European Communities (Natural Habitats) Regulations, SI 94/1997, as amended SI 233/1998 and SI 378/2005	These Regulations give effect to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and the Minister to designate special areas of conservation (endangered species and habitats of endangered species) as a contribution to an EU Community network to be known as NATURA 2000.
	EU Directive (EU/79/409) on the conservation of wild birds	Designation of Special Protection Areas for birds.
	Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities (2009)	Guidance on carrying out AA on plans and Projects as required under Article 6 of the Habitats Directive
	National Biodiversity Plan 2010	To secure the conservation, including where possible the enhancement and sustainable use, of biological diversity in Ireland
	European Communities Environmental Objectives (Freshwater Pearl Mussel) 2009	Measures to protect the conservation status of Freshwater Pearl Mussel
	Freshwater Pearl Mussel Sub-Basin Catchment Management Plans (Rivers Blackwater, Clodagh and Licky)	Catchment based management plans for the protection and conservation of Freshwater Pearl Mussel populations
	Irish National Forest Standards (2000)	Aims to ensure sustainable forest management
	Ospar Convention (1992) The Convention for the Protection of the Marine Environment of the North East Atlantic	Protection of the Marine Environment
	EU Marine Strategy Framework	Aims to achieve good

	Directive 2008 (Yet to be adopted in Ireland)	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.
	EU Freshwater Fish Directive (78/659/EEC)	Objectives seek to protect those freshwater bodies identified by Member States as waters suitable for sustaining fish populations. For those waters it sets physical and chemical water quality objectives for salmonid waters and cyprinid waters.
Water	EU Water Framework Directive (2000/60/EC) 2000	Establishes a framework for community action in the field of water policy. Aims to prevent any deterioration in the status of any waters and to achieve at least "good status" in all waters by 2015.
	The Groundwater Directive (1980/68/EC) 1980	Seeks to maintain and enhance the quality of all ground waters in the EU.
	EU Urban Waste Water treatment directive (91/271/EEC) 1991	Sets targets dates for the provision of specified waste water treatment infrastructure and services.
	EU Floods Directive (2007/60/EC)	The Floods Directive applies to river basins and coastal areas at risk of flooding and provides for the prevention and management of flood risk and preparation of Flood Risk Management Plans
	DoEHLG Guidelines on Flood Risk Management and the Planning System (2009)	Seeks to prevent development that is sensitive to the effects of flooding in flood prone or marginal areas. Must not reduce the flood plain or restrict flow across floodplains.
	The Nitrates Directive (91/676/EEC)	This Directive has the objective of reducing water pollution caused or induced by nitrates from agricultural sources and preventing further such pollution.
	Drinking Water Directive (80/778/EEC) as amended by Directive 98/83/EC	The primary objective is to protect the health of the consumers in the European Union and to make sure drinking water is wholesome and clean.
	The Local Government (Water Pollution) Act, 1977 (Water	Rivers of good quality to be retained as such, rivers of poor

	Quality Standards for Phosphorous) Regulations, 1998	quality to be improved
	European Communities Environmental Objectives (Surface Waters) Regulations, 2009	Transposes into Irish law the measures needed to give effect to Article 4 of the Water Framework Directive relating to the protection of surface waters including the requirements of Directive 2008/105/EC on environmental quality standards.
	Managing Ireland's Rivers and Lakes: Catchment based Strategy Against Pollution (1997)	This document details a strategy to protect water quality against pollution by phosphorus from all sources.
	River Basin Management Plans for River Basin Districts (RBDs)	Seeks to establish an integrated monitoring and management system for all waters within an RBD, to develop a dynamic programme of management measures and to produce a River Basin Management Plan, which will be continually updated.
	Bathing Water Directive EC Directive 2006/7 EC Repeals existing Directive (71/160/EEC) with effect from 31 December 2014	Sets out standards for bathing water quality to protect health and the environment
Human Health	WHO Air Quality Guidelines (1999) and Guidelines for Europe (1987) Non Statutory	Seeks to eliminate or minimise certain airborne pollutants for the protection of human health.
	The Stockholm Convention (2001)	Objectives seek to protect human health and the environment from persistent organic pollutants (POPs).
	The EU CAFÉ Programme Commission communication of 4 May 2001 "The Clean Air for Europe (CAFE) Programme: Towards a Thematic Strategy for Air Quality".	Seeks to prevent and reduce air pollution and impacts on human health from air pollution.
	EU Shellfish Directive (79/923/EEC)	Objectives seek to maintain those coastal and brackish waters, which need protection or improvement, in order to allow shellfish to develop and to contribute to the high quality of shellfish products intended for human consumption.
	Pollution Reduction Programmes for Dungarvan Bay	To ensure compliance with standards and objectives of the 2006 Quality of Shellfish Waters Regulations

	The EU Environment and Health Strategy 2004-2010	Seeks to prevent and reduce the impacts pollution on human health.
Climate / Air	Kyoto Protocol (1997)	Aim of the UN Protocol is to combat climate change. Industrialised countries will have to reduce their combined greenhouse gas emissions by a minimum of 8% by 2012.
	Second European Climate Change Programme (ECCP II) 2005	Seeks to develop the necessary elements of a strategy to implement the Kyoto protocol.
	White Paper on 'European transport policy for 2010', COM (2001) 370	Seeks to develop a modern sustainable transport system.
	"The IPPC Directive" Directive 96/61/EC concerning integrated pollution, prevention and control	Seeks to minimise pollution and maximize resource efficiency in industry through licensing and guidance.
	Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004).	Objectives include the reduction of certain airborne pollutants for the protection of human health and the environment.
	"Air Framework Directive" Directive on Air Quality Assessment and Management (Framework Directive) (1996/62/EC)	Seeks the prevention and/or reduction of airborne pollutants for the protection of human health and environment.
	Directive on national emission ceilings for certain atmospheric pollutants (2001/81/EC)	Seeks to limit the national emissions of certain airborne pollutants for the protection of human health and the environment.
	EC Directive 2008/50/EC on ambient air quality and cleaner air for Europe	Replaces the air framework directive and the first three daughter directives. Sets standards and target dates for reducing concentrations of fine particles, which are among the most dangerous pollutants for human health.
	Adopting to climate change in Europe – options to EU action {SEC(2007) 849}	Seeks to initiate a Europe-wide public debated and consultation on developing responses to climate change at EU level
	National Climate Change Strategy 2007-2012	Established measures by which Ireland can meet its 2008-2012 targets in respect to green house gas emissions
	Delivering A Sustainable Energy Future for Ireland	Government Energy Policy Framework 2007-2020 to deliver a sustainable energy future for Ireland.
Cultural Heritage	European Landscape Convention 2000	Encourages public authorities to adopt policies at local, national

(Landscape Architecture Archaeology)		and international level to protect and manage landscapes.
	Policy Paper on Ireland's Landscape and the National Heritage, The Heritage Council, (2002)	Policy paper sets out a vision for the Irish landscape to allow people to harness the landscape for economic benefit whilst acknowledging that in the long run such benefits can only be sustained through an appreciation and awareness of the contribution of that landscape to our quality of life.
	Landscape and landscape and Assessment, Guidelines for Planning Authorities -2000	Sets out how a landscape character assessment should be conducted.
	Granada Convention for protection of the Architectural Heritage of Europe 1985	Established common principles and strategy, informed Part IV of the 2000 Planning and Development Act 2000-2004
	European Convention on protection of the Archaeological Heritage 1992	Requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process
	Architectural Heritage Protection- Guidelines for Planning Authorities 2004	The protection of structures, or parts of structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest, and; the preservation of the character of architectural conservation areas.
	National Heritage Plan 2002	Plan forms the basis of a strategic approach to the protection and management of heritage up to 2007
	National Inventory of Architectural Heritage	To establish inventory of buildings of value
	Framework and Principles for the Protection of the Archaeological Heritage (1999)	This document sets out the archaeological policies and principles which should be applied by all public bodies when undertaking or authorising development.
Soil	2006 Proposal for an EC Directive establishing a framework for the protection of soil	Still under discussion. Proposes to establish a common strategy in Europe for the protection and sustainable use of soil.
	Sewage Sludge Directive (86/278/EEC)	To encourage the use of sewage sludge in agriculture and to regulate its use in such a way as

		to prevent harmful effects on soil, vegetation, animals and man
	Directive 2004/35/EC on Environmental Liability with regard to the prevention and remedying environmental damage	Prevention and remediation of environmental damage
Sustainable Development	Agenda 21 (1992). Action for Sustainable Development	Aims to promote sustainable development at a local and regional level by taking into account environmental protection in the development process.
	“The Gothenburg Strategy” Communication from the Commission on Sustainable Europe for a Better World” 2001	Seeks to make the future development of the EU more sustainable.
	The Sixth Environmental Action Programme (EAP) of the European Community 2002-2012 Statutory	Seeks to make the future development of the EU more sustainable.
	The SEA Directive (2001/42/EC)	Objective 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, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.
	Guidelines for Planning Authorities on Sustainable Rural Housing 2005	To address the issue of sustainable rural housing
	Sustainable Residential Development in Urban Areas 2008	Addressing sustainable design and services in urban areas
	Wind Energy Guidelines 2004	To ensure a consistency of approach in the identification of suitable locations for wind farm development and the treatment of planning applications for wind farm developments
	Sustainable development- a strategy for Ireland 1997	To promote the consideration of sustainable principles in drafting and implementation of the Guidelines

	Green Paper on Sustainable Energy 1999	The paper sets out how Ireland will progress to meeting its energy requirements. It concentrates on Ireland's need to limit CO2 emissions under the Kyoto Protocol.
	Transport 21 (2005)	Seeks to develop an integrated transport system across Ireland
	Traffic Management Guidelines (2003)	Provides guidance on a number of traffic management issues including public transport
	Smarter Travel- A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020	Promotion of sustainable transport
	Delivering A Sustainable Energy Future For Ireland – The Energy Policy Framework 2007 – 2020	Seeks to reduce energy demand and energy related emissions
	Directive 2004/35/EC on Environmental Liability with regard to the prevention and remedying environmental damage	Seeks to establish a common framework for the prevention and remediation of environmental damage
Waste	The Waste Framework Directive” Council Directive 75/442/EEC of 15 July 1975 on waste “the Waste Framework Directive” and amending acts.	Seeks to minimise the quantities of waste production in the EU, reduce the environmental impacts from the management of these wastes and defines what constitutes a waste or hazardous waste.
	“The Landfill Directive” Council Directive 99/31/EC of 26 April 1999 on the landfill of waste	Seeks to reduce the environmental impact from the landfilling of waste & divert certain quantities and types of waste from European landfills.
	“The WEE Directive” Directive 2002/96/EC of 27 January 2003 on waste electrical and electronic equipment	Seek more environmentally sensitive management of waste electric and electronic equipment.
	National Waste Prevention Programme	Seeks to decouple waste generation from economic activity in Ireland
Major Accidents	EU Major Accident (Seveso) Directive (96/82/EC) 1996	Seeks to avoid and minimize the effects of major accidents

3 SEA METHODOLOGY

3.1 STEPS IN THE SEA PROCESS

The Environmental Report is an important element of the SEA process. The report is generated from a series of distinct steps taken in the assessment of the likely potential impacts of the proposed variation being implemented.

The steps taken in the execution of this SEA process follow the layout of this document, and are as follows:

1. Introduction to and familiarisation with the SEA process.
2. Setting out the Background to the Town Development Plan 2012-2018.
3. Consultation with the Environmental Authorities, the public and officials with a range of expertise within the Local Authority.

Scoping was carried out with the three environmental authorities prescribed in the legislation with the Environmental Protection Agency (EPA), Department of the Environment, Heritage and Local Government, and, the Department for Communications, Energy and Natural Resources. These were all consulted in order to determine the scope and the level of detail to be included in the environmental report. A scoping document was submitted to the authorities to facilitate this consultation. A scoping report has been prepared to show how the responses received from these authorities were taken account of when preparing the Draft Town Development Plan and Environmental Report and this is contained in the Appendix 2.

4. Establishment of Environmental Baseline and Trends for the Town:

Baseline data were collected based on the information included in the scoping report as well as having regard to the requirements of the SEA Directive. The various factors used to describe the current state of the environment included landscape, soils and groundwater, noise, air quality, built heritage, natural heritage and bio-diversity. Much of the data were extracted from existing data sources.

5. Identifying significant Existing Environmental Issues in Dungarvan.

This was facilitated by the various forms of consultation that took place as part of the SEA process.

6. Drafting of Environmental Protection Objectives from regional, national and international environmental policy, consideration of the significant environmental issues facing Dungarvan specifically and from best practice.

7. The Likely Significant Effects of implementation of the Town Development Plan 2012-2018 were established through the identification of conflicts between the Town Development Plan policies and objectives and environmental objectives (assessed in matrix format).

8. Where conflicts are identified, opportunities to prevent, reduce, or offset the adverse environmental effects were explored and policies altered or augmented where necessary to address / mitigate the effects.

9. Where the conflicts and consequent adverse impacts cannot be prevented, reduced or offset, mitigation measures were proposed.
10. Alternatives strategies were considered.
11. Monitoring measures were identified in order to quantitatively assess the consequences of the identified impacts.
12. Consultation. The Environmental Report and the Town Development Plan 2012-2018 were made available for public consultation as per the statutory process provided for under the Planning and Development Amendment Act 2010 from 15th August 2011 until 24th October 2011. Along with prescribed bodies the documents was made available to neighbouring local authorities. The proposed amendments top the Plan were placed on public display from 6th January 2012 to 3rd February 2012.

3.2 Difficulties Encountered in Compiling the Required Information

The SEA Guidelines produced by the DoEHLG in 2004 state that the SEA process “does not require major new research”. As such, the Environmental Report was prepared and informed by many already available data sources.

Data sources that were used include; research that was carried out within the local authority, by the Central Statistics Office, by the Environmental Protection Agency and WFD River Basin District Management Plans and also the Heritage Data that has been collated by the DoEHLG.

Difficulties encountered in compiling data include the availability of spatial data for human health. Table 3.1 details gaps in data sources relating to the Environmental Protection Objectives.

Table 3.1 Environmental Protection Objectives and Data Gaps

Biodiversity, Flora and Fauna	Data Gaps
B1: Protect, conserve and enhance the diversity of habitats, species and areas of national or international importance, including aquatic habitats and species and promote the sustainable management of habitat networks.	Good data available
Population and Human Health	
P1: Facilitate a good standard of health for Dungarvan’s population through ensuring high quality residential, recreational and working environments.	Spatial data on human health
P2: To reduce the risk of flooding and harm to people, property and the environment.	Good data available
Water Resources	
W1: Protect and where possible	Good data available

enhance the quality of surface and ground waters as sources of drinking water and as valuable assets for amenity and recreation.	
W2: Achieve and maintain required water quality standards in the South East River Basin Management Plan and associated Programme of Measures and reduce discharges of pollutants or contamination to waters.	Good data available
Air and Climatic Factors	
AC1: Support implementation of the National Climate Strategy 2007-2012	Data available
AC2: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journeys.	Data available
Cultural Heritage	
C1: Protect and conserve features of architectural and archaeological heritage.	Good data available through Record of Monuments and Places and Record of Protected Structures
Landscape	
L1: Protect and conserve the quality, character and distinctiveness of landscape including waterway corridors, coastal landscapes and minimise negative visual impacts	Scenic views indicated in Town Development Plan.
Soil and Geology	
S1: Protect the quality of soils, and prevent erosion of, soils and geological heritage sites in Dungarvan.	Data available through Teagasc Soil Mapping Project and Geological Survey Ireland
Material Assets	
MA1: Maintain the quality of, and access to, assets such as open spaces, water resources and all other physical and social infrastructure	Details on public amenity areas available

4. CURRENT STATE OF THE ENVIRONMENT

4.1 INTRODUCTION

Ireland's Environment 2008, the Environmental Protection Agency's fourth state of the environment report provides an overall assessment of Ireland's environment. The overall conclusion of the report is that the quality of Ireland's environment is relatively good but there are some key environmental challenges facing Ireland and these include;

1. Limiting and adapting to Climate Change
2. Reversing Environmental Degradation
 - preventing eutrophication and other water pollution
 - protecting natural habitats and species populations
 - remediation of contaminated land
3. Complying with Environmental Legislation and Agreements.
4. Mainstreaming Environmental Considerations

The Assessment reports that there are two primary areas where unsatisfactory conditions are extensive- eutrophication and other water pollution and the unsatisfactory conservation status of natural habitats and species. Remediation of contaminated land is also an important issue. Ireland faces a difficult challenge in meeting many of its environmental protection obligations under both European legislation and other internationally binding legal agreements. Financial penalties are a potential consequence of failing to meet our environmental protection commitments.¹

Remediation of unsatisfactory quality in groundwater, rivers, lakes and estuaries is one of the main environmental challenges.

Biodiversity loss is a serious threat to the quality of Ireland's environment as habitat degradation and species loss are often irreversible. Many of Ireland's most important habitats afforded protection under the EU Habitats Directive were assessed in 2008 as having bad conservation status². Certain species particularly those of wetland and aquatic environments such as the Atlantic Salmon, Otter and Freshwater Pearl Mussel are considered to be of poor conservation status.

The provision and maintenance of sufficient infrastructure in the areas of wastewater treatment, water supply, flood prevention and control, renewable energy, sustainable transport and waste management are critical to ensure maintenance of a good quality environment. The following baseline details the current status of the environment in Dungarvan in relation to these issues.

¹ Irelands Environment 2008, EPA

² The Status of EU Protected Habitats and Species in Ireland, 2008, NPWS

BASELINE AND RELEVANT ENVIRONMENTAL PROBLEMS

4.2. Flora, Fauna and Biodiversity

The need to conserve biodiversity is underlined in the National Biodiversity Plan and Convention on Biological Diversity which Ireland signed and ratified in 1996. Conservation of biodiversity in Ireland is directed by the EU Birds Directive, EU Habitats Directive (transposed into Irish law by the Natural Habitat Regulations amended by SI 233/1998 and SI 378/2005) and the 1976 and 2000 (Amendment) Wildlife Acts. A Local Biodiversity Plan was published for County Waterford in 2008 (encompassing the town of Dungarvan) with the aim of maintaining and enhancing biodiversity in the county through raising awareness, addressing information gaps and developing best practice through policy and work practices. A habitat map of Dungarvan will be carried out in 2011.

4.2.1 Designated Sites

The landscape of Dungarvan provides the setting for a range of wildlife habitats and species and Dungarvan Harbour including the River Colligan estuary is designated a proposed Natural Heritage Area and Special Protection Area. These designations are in place to protect habitats and the favourable conservation status of species identified in the Birds Directive.

Dungarvan Harbour is a significant wetland in County Waterford and attract large populations of wintering waterfowl and is considered the 15th most important wetland site in Ireland and the second most important wetland in the South-East after Wexford Harbour. The site supports two species that occur in internationally important numbers: Light Bellied Brent Goose and Black-tailed Godwit. The average number of Bar-tailed Godwits is close to the international threshold. Dungarvan Harbour is recognised as a wetland of international importance under the Ramsar Convention of 1971.

4.2.2 Sites of local biodiversity interest

Linear features such as hedgerows, woodlands and streams provide “ecological corridors” along which species can move and disperse. Trees provide great amenity value in the landscape and are also an important wildlife habitat. The corridor role of hedgerows in facilitating the movement and distribution of wild flora and fauna through the landscape is believed to be enhanced significantly if hedgerows link into other habitat features. Roadside and townland boundary hedges generally contain a higher diversity of species than other hedges. Hedgerows also function as carbon sinks, pollution filters and sound barriers between busy roads and housing.

Collation of a habitat map was commenced by Waterford County Council in 2009 and includes spatial data on wetlands, woodlands, grasslands, bridges containing bat roosts and significant trees in the county. Saltmarsh habitat has low % representation in the County but small areas occur along the railway walk at the eastern end of the Dungarvan Town Plan boundary. The habitat map of Dungarvan will highlight ecological corridors and sites of local biodiversity in the Town Plan area.

4.2.3 Invasive Species

Invasive species represent one of the greatest threats to biodiversity, second only to that caused by direct habitat destruction. They do this by competitively excluding or out-competing our less robust native species, by preying on native species or by altering the natural aquatic or riparian habitat in which they reside. Invasive Species of concern in Dungarvan include Japanese Knotweed and ongoing efforts are being made by Dungarvan Town Council to identify its occurrence and prevent further spread of the plant.

Also of concern is the spread of the Grey Squirrel which competes for food and habitat of the native Red Squirrel. Grey squirrel were first recorded in County Waterford as recently as December 2006 having crossed the River Suir. The control of and promotion of awareness on Invasive Species such as Grey Squirrel is being prioritised by a number of agencies and organisations based in County Waterford including Waterford County Council, Waterford Institute of Technology and the National Biodiversity Data Centre through an INTERREG funded project MISE (Mammals in a Sustainable Environment).

4.2.8 Existing Environmental Pressures/problems; Biodiversity, Flora and Fauna

The following issues are identified in the Co. Waterford Local Biodiversity Action Plan as threatening biodiversity in the wider county; drainage and infilling of wetlands, excess input of nutrients and silt into rivers, spread of Invasive Species, infilling and dumping on sensitive coastal habitats such as saltmarsh which has low habitat cover in the county, and loss of hedgerow habitat.

In December 2007, the first baseline assessments of conservation status for all 59 habitats and c.100 species listed for protection by the EU in Ireland was prepared by the National Parks and Wildlife Service as required under Article 17 of the Habitats Directive. The report is the first such comprehensive compilation of the status of habitats, animals and plants in Ireland which have protected status under national and EU law. The report found that only 7% of the habitats examined were in good status, with 46% inadequate and 47% bad. Many habitats associated with water were considered to be in bad condition. Even moderate declines in water quality makes rivers and lakes unsuitable for many fish and invertebrate species. Coastal habitats were found

to have declined in quality, often as a result of recreation and development pressure over the past 20 years. Roughly 50% of the species examined were in good status, while 10% were considered bad. Species such as bat, seals, dolphins and whales are considered to be in good condition.

Wetlands are subject to a number of damaging activities that undermine their important functions. This includes arterial drainage, infilling, dumping and land development. Habitats and species dependent on aquatic ecosystems are threatened by less than adequate water quality due to nutrient enrichment (eutrophication), siltation and drainage.

The remaining area of saltmarsh along the railway walk and at Tournore are zoned for open space and amenity. Some infilling has occurred at the edge of the coastal strip near the Sports Centre.

4.3 Population and Human Health

The Census of 2006 shows the population of Ireland increased by 8.1% from 3,917,203 in 2002 to 4,234,925 in 2006 an actual increase of 317,722 persons. This four-year period has experienced the highest annual growth rate on record. Over this time, the population of County Waterford grew by 5.3% from 46,736 to 49,213. Dungarvan’s population grew from 7,452 to 8,362.

Table 4.1. Census 2006: Population of County Waterford and Dungarvan 2002-2006.

Area	Population		% Change	
	2002	2006	Actual	Percentage
County Waterford	46,736	49,213	2,477	5.3%
Dungarvan	7,452	8,362	910	12.2%

County Waterford is part of the South East Regional Authority and the Town Development Plan must have regard to the SERA Regional Planning Guidelines 2010-2022. The main aim of the RPGs is to develop the designated gateway in the region (Waterford City) in support of the aims of the National Spatial Strategy. The promotion of balanced regional development is a priority for the Guidelines. Population targets set for the growth of Dungarvan in the SERPGs are as follows;

2010- 10,000 **2016-**11,600 **2022-**13,400

The projected housing and zoning requirements for Dungarvan are 571 residential units required over the period 2010-2016 and 43 ha. of zoned land for housing.

4.3.1 Human Health

Human health protection is a fundamental aspect of environmental protection. Availability of spatial data on human health on a county and a local basis is limited. Key issues with population and human health are the interrelationships of human health and water quality including drinking water, waste water treatment, recreational bathing waters, fisheries and shellfish waters. The expansion of residential development without full infrastructure requirements being developed for waste, wastewater, drinking water and transport can give rise to environmental pressures on water quality and is associated with increases in commuting distances, travel times and emissions of pollutants to air.

4.3.2 Existing Environmental Pressures/problems; Population and Human Health

Generally, issues that may impact on human health such as water quality, air quality and quality of life including areas of recreation and amenity are of a high quality in Dungarvan.

4.4 Water

An overview of water quality in Ireland is provided in the 2008 EPA report "Water Quality in Ireland 2004-2006". This report shows that on a national basis approximately 71% of river channel, 92% of lake area and 81% of estuarine and coastal waters monitored were of a satisfactory quality. During the review period, over 96% of the marine bathing waters monitored complied with the minimum mandatory standards set by the EU Bathing Waters Directive and national regulations. The main findings of the report were that there was an overall improvement in the quality of water in the state since the previous assessment period and that nutrient enrichment causing eutrophication is the main threat to these systems.

4.4.1 Surface Waters

From the 2008 EPA "Water Quality in Ireland" report river water quality in Ireland between 2004 and 2006 showed some improvement over the 2001-2003 period with 71.4% unpolluted, 18.1% slightly polluted, 10.0% moderately polluted and 0.6% seriously polluted. Table 2 details summary of river water quality in County Waterford in 2008 extracted from the EPA report *River Water Quality in Southeast Ireland 2008*.

Table 4.2 River Water Quality in County Waterford

River	Remarks
<p>Araglin (Colligan)</p> <p>Tributary of the Colligan/Dungarvan Harbour</p>	Results for 2008 are satisfactory
<p>Colligan</p> <p>(Freshwater Reaches) The lower tidal/saline reach is incorporated into the sampling programme for Dungarvan Harbour</p>	Water quality is generally satisfactory
<p>Brickey</p> <p>Discharges to Dungarvan Harbour. Tidal in the lower reaches</p>	<p>The upper reaches have been drained and now comprise mainly drainage ditches and sluices. The Brickey is eutrophic and slow flowing- there is abundant weed growth and nitrates are elevated.</p> <p>Overall quality is mediocre</p>

The results show that the River Colligan has satisfactory water quality.

4.4.2 Groundwater

Groundwater is an important source of drinking water but also makes an important contribution to river flows. The area within and adjoining Dungarvan Town supports a Regionally Important Diffuse Karst Aquifer with associated aquifer vulnerabilities ranging from moderate to extreme. Dungarvan’s public water supply comes from two separate sources, two boreholes at Ballinamuck and a spring source located near the roundabout at the Spring. These are high production wells. Water supply and distribution does not present problems and there is sufficient capacity for potable water supply for the foreseeable future.

Since 2003, the Department of Environment, Heritage and Local Government has recommended that groundwater protection schemes are incorporated into County Development Plans³. Groundwater Protection Schemes are county-based projects that are undertaken jointly between the GSI and the respective Local Authority. The overall aim of the groundwater protection scheme is to preserve the quality of groundwater, particularly for drinking water purposes. A Groundwater Protection Schemes was prepared for Waterford in the 1990s.

4.4.3 Drinking Water Quality

The European Communities (Drinking Water) Regulations (No. 2) 2007 came into force in March 2007. In accordance with these regulations, the local authority must notify the EPA

³ (Circular Letter SP 5/03 – Groundwater Protection and the Planning System)

where there has been a failure to meet a quality standard. The EPA Report- *The Provision and Quality of Drinking Water In Ireland- A Report for the years 2007-2008* records the overall compliance rate of drinking water in the county in 2007 at 95.2% and below the national average although an improvement from a rate of 94.2% in 2006.

As part of their report the EPA also publish a **Remedial Action List (RAL)** which details water supplies requiring improvement in water quality standards. Inclusion of a public water supply on this list does not mean that the water produced by the supply is unsafe to drink but that some environmental criteria are unsatisfactory. The list is a working list with the possibility of supplies being added or removed as work is completed and further information becomes available.

Dungarvan Water Supplies are not included in the RAL.

4.4.4 Waste Water

The most recent report on *Urban Waste Water Discharges in Ireland Population Equivalents Greater than 500 persons - A Report for the Years 2006 and 2007* was published by the EPA in 2009. This is the first report on urban waste water since the Waste Water Discharge Regulations were introduced in 2007 to tighten controls over local authority operated waste water treatment plants. The report provides a baseline prior to the implementation of the new EPA licensing system for local authority waste water treatment plants. According to the report, continued investment in waste water treatment is required as well as a dramatic improvement by local authorities in the operation and monitoring of existing waste water treatment infrastructure.

A wastewater treatment plant at Ballinacourty with a population equivalent of 25,000 treats all effluent generated by the town of Dungarvan along with sewer extensions serving suburban areas of the town. There is sufficient capacity at the plant which incorporates secondary treatment for the current and projected population of Dungarvan.

4.4.5 Estuarine and Coastal Waters

As detailed in the EPA *Ireland's Environment 2008* Report the waters surrounding Ireland support a rich diversity of marine life. According to this report the extensive offshore areas are generally not affected by pollution, while inshore, water quality in most estuarine and coastal waters remains high. A number of estuaries, however mainly in the south-east and south of the country continue to display symptoms of nutrient enrichment and have been classed as eutrophic. Levels of PCBs, dioxins and other contaminants in fish and shellfish are very low and the overall quality of Irish seafood produce remains high. The quality of bathing waters is high and while the bacteriological quality of shellfish in shellfish growing waters is reasonably good, it is likely that additional measures will be required to prevent further deterioration in certain areas. The challenge of implementing an ecosystem- based approach to ensure the sustainable management

of Ireland’s marine environment as envisaged by the new EU Marine Strategy Directive will be made even more difficult by climate change which is likely to add further complexity to the task of understanding how these systems function.

Summary statistics for Estuaries and Coastal Waters 2007-2009 published by the EPA in 2010 report that trophic status of Colligan Estuary is Eutrophic while Dungarvan Harbour is Intermediate. In the Ireland’s Environment 2008 Report the status of Colligan Estuary was described as Intermediate.

Table4.5. Estuarine and Coastal Water Quality (Trophic Status) in Dungarvan (Water Quality In Ireland 2007-2009, EPA)

Site	Trophic Status
Colligan Estuary	Eutrophic
Dungarvan Harbour	Intermediate

4.4.6 Shellfish Growing Areas

Dungarvan Bay is a shellfish growing areas as delineated by the Sea-Fisheries Protection Authority. The Sea Fisheries Protection Authority is responsible for classifying shellfish production areas as required under Directive 991/492/EEC) and by the 1996 Regulations (SI No 147 of 1996). Dungarvan Bay is classified as Class B – requiring purification for 48 hours before shellfish can be placed on the market. The DoEHLG published a Draft Pollution Reduction Programme for Dungarvan Bay in November 2009 to ensure compliance with the standards and objectives established by the Quality of Shellfish Waters Regulations 2006 (S.I. No. 268) of 2001 as amended for the designated Shellfish growing waters.

A system for the licensing or certification by the EPA of waste water discharges from areas served by local authority sewer networks was established in accordance with the requirements of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

In accordance with these Regulations the EPA is not allowed to grant an authorisation for a waste water discharge, which, in the opinion of the EPA, would:

- cause a deterioration in the chemical status or ecological status (or ecological potential as the case may be) in the receiving body of surface water,
- exclude or compromise the achievement of the objectives established for protected species and natural habitats in the case of European sites where the maintenance or improvement of the status of water is an important factor in their protection or which is inconsistent with the achievement of environmental quality standards established under national regulations in relation to designated bathing waters, designated shellfish waters, areas designated for the protection of

freshwater fish and areas designated for the abstraction of water intended for human consumption.

The requirements of the European Communities (Quality of Shellfish Waters) Regulations, 2006 (as amended) have been fully integrated into the EPA licensing process.

The following is the position with the key waste water treatment plants for Dungarvan Harbour: Dungarvan - secondary treatment WWTP was put in place under the current Water Services Investment Programme (Dungarvan and Environs Sewerage Scheme). A licence application was made by Waterford County Council in December 2007 pursuant to the requirements of the Waste Water Discharge (Authorisation) Regulations, 2007.

Ring/Helvick/Ballinagoul – secondary treatment WWTP was put in place under the current Water Services Investment Programme (Dungarvan and Environs Sewerage Scheme). A licence application was made by Waterford County Council in June 2009 pursuant to the requirements of the Waste Water Discharge (Authorisation) Regulations, 2007.

Ballinroad- Ballinroad has secondary treatment for a p.e. of 750 and had been operating over capacity. The plant will be abandoned and connected to the Dungarvan & Environs Sewerage Scheme under the current Water Services Investment Programme from July 2011. Figure 1 below indicates the location of Waste Water Treatment Plants around Dungarvan Bay.



Figure 1. Dungarvan Town Plan area (in blue) in relation to Dungarvan SPA. Waste Water Treatment Plants are located at Ballinroad, Ballinacourty and Ring/Helvick (in red).

4.4.7 Bathing Waters

EC Directive 2006/7/EC came into force on 24 March 2006 and repeals the existing Directive (76/160/EEC) with effect from 31 December 2014 and sets out standards for bathing water quality to protect public health and the environment. The new Directive is implemented in Ireland by the *Bathing Water Quality Regulations 2008 (S.I no 79) of 2000*. The purpose of the Bathing Water Regulations is the protection of human health and local authorities should ensure that where any bathing water fails the mandatory standards that the public are made aware of this fact by means of information posted at the bathing area. From the most recent EPA report on *Bathing Water Quality in Ireland- A Report for the year 2008* overall bathing water quality in

Waterford appears to be good. The closest bathing waters to Dungarvan are at Clonea which is classed as good quality.

Table 4.6. Bathing Water Quality in County Waterford

Site	Compliance
Clonea East	EU Guide Values (Good Quality)

Analysis of bathing water quality in the context of the directive and the associated national regulations is separate from though complementary to the European Blue Flag Scheme a voluntary public information and advice scheme administered by An Taisce. To receive a blue flag, a bathing site must, in addition to maintaining a high standard of water quality meet specified objectives with regard to the provision of safety services and facilities, environmental management of the beach area and environmental education. Clonea Beach has been awarded a Blue Flag for the past 6 years (2006-2011).

4.4.8 Water Framework Directive

The Water Framework Directive marks a new approach for the protection and improvement of water resources. Commenced in 2009, a six year cycle of river basin management plans is being implemented for the purpose of protecting and enhancing all waters- groundwater, rivers, lakes, transitional waters (estuaries) and coastal waters including protection for related terrestrial ecosystems and wetlands. Dungarvan is covered by the South East River Basin District Management Plan. Surface water ecological status is described as moderate in the Plan.

Article 6 of the Water Framework Directive requires each Member State to establish a Register of Protected Areas. These areas are considered to need greater protection because they contain sensitive habitats or wildlife species or the need to protect human health including drinking water sources, shellfish growing areas and bathing areas. Protected areas must achieve standards relevant to their designation which may be stricter than good or high status as defined under the Directive.

Table 4.8. Protected Areas under Water Framework Directive in Dungarvan Town Plan area

Protected Area	Total Designated Areas
Drinking Waters	None
Economically Significant Aquatic Species	None
Recreation and Bathing Waters	None
Nutrient Sensitive Waters	None
Water Dependant SACs	None
Water Dependant SPAs	Dungarvan Harbour

4.4.9 Existing Environmental Pressures and Water

According to the South East River Basin District Management Plan in order to meet the requirements of the Water Framework Directive, surface water quality in Dungarvan Bay needs to be restored by 2015.

4.5 Air and Climate

Air quality in Ireland is generally of a high standard across the country. Dungarvan lies in Zone D.

Global climate change is now recognized as the primary environmental challenge of this century. The European Union is taking the lead in this regard with the adoption of climate changes strategies, including the Kyoto Protocol, aimed at reducing the level of greenhouse gas (GHG) emissions. Under the Kyoto Protocol, the EU has agreed to reduce its GHG emissions by an overall 8%. Ireland's target in the EU "burden sharing" agreement is to limit increases to 13% above 1990 levels by 2008-2012. For the period beyond 2012, the EU Council of Ministers has committed to achieving at least a 20% reduction of greenhouse gas emissions by 2020 compared to 1990 levels.

To ensure Ireland reaches its target under the Kyoto Protocol the Government published a reviewed National Climate Change Strategy 2007-2012. Policy statements such as the White Paper, *Delivering a Sustainable Energy Future for Ireland* sets out the Government's Energy Policy Framework 2007-2020 to deliver a sustainable energy future for Ireland. Local Authorities are working in collaboration with their local energy agencies to implement Climate Change Strategies at local level and a County Climate Change Strategy has been prepared by the Waterford Energy Bureau.

A smarter travel initiative *Go Dungarvan* is currently being developed by Dungarvan Town Council in partnership with Waterford County Council and aims to advance a modal shift from private car to walking, cycling, public transport and carsharing. A number of projects are in the planning stage to facilitate this modal shift including cycle/walk route design, route selection and prioritisation, infrastructure design, review of traffic management, use of innovative and green solutions and integration of behavioural change and infrastructure.

4.5.1 Existing environmental pressures air and climate

Currently there are no significant concerns with regard to air quality in Dungarvan. The development of *Go Dungarvan* will deliver positive benefits for air quality, carbon emissions and human health.

4.6 Cultural Heritage

4.6.1 Archaeological Heritage

Dungarvan is designated an historic town and an area of Archaeological Potential protected under the National Monuments Act 1930-2004. This zone covers the area which corresponds to the Medieval Town, the late Georgian planned town and extends to Abbeyside. This area also includes the town's coastal and inter-tidal zone. Dungarvan's pre- 1700 archaeological heritage includes an early settlement site at Shandon, a Norman motte at Gallow's Hill, the 12th century Augustinian Abbey dating from 1290, as well as buildings that incorporate medieval features. There are 5 Recorded Monuments within the Dungarvan town boundary. This includes the historic town of Dungarvan. Within the historic town, there are 39 sites identified in the Sites and Monuments record. The County Archaeological Inventory for Waterford was published by the National Monuments Service of the DoEHLG in 1999. The annual excavations bulletin accessible at www.excavations.ie details excavations conducted in Dungarvan and is an indicator of the potential for occurrence of subsurface archaeology. The coastal location of the town provides interest in underwater archaeology along with archaeological potential in intertidal areas. A Shipwreck Inventory is being collated by the Underwater Archaeology Unit of the National Monuments Service of the DoEHLG.

4.6.2 Architectural Heritage

There are over 147 structures listed in the Record of Protected Structures for Dungarvan with proposals to add a further 49 in 2011. Parts of the streetscapes contain groups of buildings which make an important contribution to the streetscape. These significant areas of the built environment are designated an Architectural Conservation Area (ACAs).

Dungarvan has been surveyed under the National Inventory of Architectural Heritage and an inventory of architectural heritage was published by the DoEHLG in 2004

4.6.3 Existing environmental pressures/ Cultural Heritage

The maintenance and conservation of Dungarvan's Cultural Heritage is key in order to maintain an irreplaceable resource, sense of identity for the town and as a source of visitor interest and tourism revenue. Key issues include the maintenance and conservation of historic graveyards, conservation and access to archaeological sites and monuments, conservation and additions to Record of Protected Structures and maintenance and future use of historic buildings.

Areas of archaeological potential may exist outside the known RMPs therefore extra vigilance is required regarding development works within the zone of archaeological potential, which approximately corresponds to the medieval/early 19th century town centre.

4.7 Landscape

Dungarvan's landscapes include urban, peri-urban and coastal landscapes. Scenic views are provided around the harbour area.

The European Landscape Convention (ELC) promotes the protection, management and planning of all landscapes including, rural, peri-urban and degraded landscapes. Article 5 of the ELC urges recognition in law that landscape is an essential component of people's surroundings, an expression of diversity of shared cultural and natural heritage, and a foundation of identity. The convention advocates the establishment and implementation of landscape policies aimed at landscape protection, management and planning, and urges the participation of the general public, and local and regional authorities in these policies.

The coastal landscape is an asset for tourism in Dungarvan. Development of infrastructure, including energy networks, wind energy and tourism developments, all have the potential to impact on landscape.

4.7.1 Existing environmental pressures/ Landscape

Good provision of open space such as Walton Park adds to the quality of landscape in Dungarvan. Building heights are not excessive and adequate green space fronts the harbour area. Currently there are no significant concerns with regard to landscape in Dungarvan.

4.8 Geology and Soils

4.8.1 Geology

Dungarvan is located in an area of Waulstorian Limestones consisting of Massive unbedded lime-mudstone.

The Geological Survey of Ireland established the Irish Geological Heritage (IGH) programme in 1998 with the objective of identifying and selecting sites that best represent the geological heritage of Ireland for designation as Natural Heritage Areas. The IGH identified Shandon Cave as a County Geological Site of Interest in Dungarvan. An audit of Geological Heritage Sites was carried out for Waterford County Council in 2011.

4.8.2 Soils

Waterford contains a range of soils, which support various habitats and land uses. The Soils of Ireland Map (1995) indicates that Acid Brown Earths, Mineral Alluvium and Gleys occur in Dungarvan. Teagasc and the EPA have developed a National Soil Mapping project to update and refine previous soil mapping work.

4.8.3 Existing environmental pressures/ Geology, Soils

EU proposals are currently in train for a Directive that lays down a framework for the protection and sustainable use of soil. Issues concerning protection of soil include floodrisk causing run off and siltation in alluvial areas. Eroded soil washed into rivers during heavy rainfall causes an increase in nutrients which can lead to eutrophication of rivers and lakes.

A Nitrates Action Programme has been prepared in accordance with Article 5 of the Nitrates Directive and will be applied to Ireland as a whole.

Coastal erosion arising from Climate Change will be an environmental pressure on geology and soils.

4.9 Material Assets

Material assets is taken to include infrastructure and utilities including road, water supply and wastewater treatment facilities. It also includes economic assets such as agricultural lands, coastal and water resources which support fisheries and tourism industry.

The national route running through Dungarvan is the N25 (National Primary, E30 Euroroute), connecting the west at Youghal to the city boundary in the east, and the N72 National Secondary Route) extending from the N25 junction at Tarrs Bridge north of Dungarvan to the county boundary outside of Tallow. A by-pass is proposed by the NRA for the town of Dungarvan subject to availability of funding.

Coastal defences consisting of rock armour are located around the harbour area.

4.9.3 Existing environmental pressures/ Material Assets

Coastal erosion at Pinewood and between the Abbey and Land's End and the need for coastal protection works will need to be assessed on an ongoing basis.

4.10 Interrelationships between the above environmental factors

The interrelationships between the range of environmental topics is an important consideration in the environmental assessment. Table 4.10 below indicates the interrelationships identified between the environmental topics in this assessment.

Table 4.10 Inter-Relationships between Environmental Topics

Biodiversity, Flora, Fauna	√								
Population/ Human Health	√	√							
Soil	√	√	√						
Water	√	√	√	√					
Air	√	√	√	X	√				
Climate	√	√	√	√	√	√			
Material Assets	√	√	√	√	X	√	√		
Cultural Heritage	X	√	√	√	X	X	√	√	
Landscape	√	X	√	√	X	X	√	√	√
	Biodiversity, Flora, Fauna	Population/ Human Health	Soil	Water	Air	Climate	Material Assets	Cultural Heritage	Landscape

Declining water quality gives rise to associated impacts on population and human health from drinking water supplies (risk of *E-coli*, *Cryptosporidium*), treatment of waster, bathing waters and shellfish waters. Water quality is also linked to soil where inputs of excess nutrients such as nitrates and phosphates into soil cause eutrophication of water and wetlands. Water quality also impacts on biodiversity concerning water dependant habitats and species. Climate change will impact on a range of environmental criteria from population and human health concerning increased incidences of flooding, impacts on habitats and species from changing temperature conditions, soil run off and coastal erosion.

4.11 EVOLUTION OF THE ENVIRONMENT IN THE ABSENCE OF THE PLAN

Under Section 11 (1) of the Planning and Development (Amendment) Act 2010 this Plan is subject to review and thus the absence of a review of the current Town Development Plan would not be in compliance with statutory obligations under the Planning Acts.

In view of the targets set out in the SE Regional Planning Guidelines, the proposed phased zoning of residential areas zoned in the current Town Development Plan is appropriate. A review of zoned land in the current plan indicates there is approximately 131 ha. of land currently zoned as residential but not developed indicating adequate availability of zoned land for the medium-long term.

4.12 Conclusion – Significant Environmental Issues

In summary, key environmental pressures relate to water quality with the need to restore surface water quality in Dungarvan Bay. However this is owing to pressures in the wider catchment rather than impacts solely from Dungarvan. The need to maintain water quality is key to conservation of biodiversity and water dependant habitats and species. Climate change impacts involving floodrisk and coastal erosion will also require to be considered in future land use and development patterns in Dungarvan in combination with the Dungarvan Environs in the County Plan.

4.13 CONSIDERATION OF ALTERNATIVE DIRECTIONS

It is required in the legislation that the Environmental Report must consider “reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme” and the significant environmental effects of the alternatives selected.

Alternative strategies that were considered are outlined below.

Alternative Strategy Option 1- Continue with existing zoning in Current Town Development Plan

A review of the current Town Plan showed that under the existing area of residentially zoned land in Dungarvan approximately 131 ha remains undeveloped indicating adequate availability of residential zoned land for the medium-long term.

Continuation of and extension to existing areas of zoned land may give rise to environmental issues that are contrary to achieving the objectives of the Water Framework Directive, national energy policy, Core Strategy and the SE Regional Planning Guidelines.

Alternative Strategy Option 2- Phase the area of zoned land in the current Town Development Plan

Phased zoning for lands in Ballynamuck East, Parknagappal, Parkatluggera, Duckspool and Kilrush incorporating 5.75 ha R2 lands and 45.275 R3 lands.

Preferred Option- Option 2

The Town Development Plan aims to support growth in existing zoned lands and where existing and proposed infrastructural capacities permit. A review of the current Town Development Plan shows that of the existing zoned land approximately 131 ha. remains undeveloped. The Plan proposes to phase the area of zoned land of approximately 86 ha. at Ballynamuck East, Parknagappal, Parkatluggera, Duckspool and Kilrush providing an area of 45.2 ha. for residential development over the lifetime of the plan 2012-2018.

The Regional Planning Guidelines 2010-2022 set out a requirement of zoned housing land in the town of 43ha for the period 2010-2016 based on the county share out from the population projections established for the South East Region by the DoEHLG. Thus it is in the interests of the future settlement strategy for the county and the town of Dungarvan and in terms of environmental infrastructure to support a sustainable pattern and rate of future growth and accordingly Option 2 is the preferred option.

5 ENVIRONMENTAL PROTECTION OBJECTIVES RELEVANT TO THE TOWN DEVELOPMENT PLAN 2012-2018

5.1 INTRODUCTION

The use of environmental protection objectives fulfils obligations set out in Section F, Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004. The environmental protection objectives are distinct from the Town Development Plan objectives and provide a standard against which the policies and objectives of the Town Development Plan can be measured in order to highlight those with the potential for environmental impact. They are used as a tool to cross check the policies of the Town Development Plan in order to maximise the environmental sustainability of the Town Development Plan. The cross checking process will help identify policies that will be likely to result in significant adverse impacts, so that alternatives may be considered or mitigation measures may be put in place.

The environmental protection objectives for the Town Development Plan have been generated from European, National and Regional Policy and Guidance. Sample objectives are given in Table 4B of the SEA Guidelines produced by the DoEHLG in 2004 and these were amended to reflect the specific issues that are considered relevant to the Plan and the range of issues that are significant within Dungarvan. The scoping process informed the generation of appropriate objectives. The objectives are set out below, under a range of headings, which were taken from the SEA Regulations and the DoEHLG guidelines.

5.2 ENVIRONMENTAL PROTECTION OBJECTIVES

5.2.1 BIODIVERSITY, FLORA AND FAUNA

B1: Protect, conserve and enhance habitats, species and areas of national or international importance, including aquatic habitats and species and promote the sustainable management of habitat networks.

5.2.2 POPULATION AND HUMAN HEALTH

P1: Facilitate a good standard of health for Dungarvan's population through ensuring high quality residential, recreational and working environments.

P2: Reduce the risk of flooding and harm to people, property and the environment.

5.2.3 WATER RESOURCES

W1: Protect and where possible enhance the quality of surface and ground waters as sources of drinking water and as valuable assets for amenity and recreation.

W2: Achieve and maintain required water quality standards and reduce discharges of pollutants or contaminants to waters.

5.2.4 AIR AND CLIMATE

AC1: Support implementation of the National Climate Change Strategy 2007-2012.

AC2: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey.

5.2.5 CULTURAL HERITAGE

C1: Protect and conserve features of architectural and archaeological heritage.

5.2.6 LANDSCAPES

L1: Protect and conserve the quality, character and distinctiveness of landscapes including waterway corridors, and coastal areas and minimise negative visual impacts.

5.2.7 SOILS AND GEOLOGY

S1: Conserve the quality of and prevent erosion of soils and protect geological sites.

5.2.8 MATERIAL ASSETTS

MA1: Maintain the quality of and access to assets such as open spaces, water resources and all other physical and social infrastructure.

5.3 Use of Environmental Protection Objectives

The above Environmental Protection Objectives have been used to carry out the SEA in accordance with the legislation. They provide a standard against which the policies of the Town Development Plan were measured for their environmental sustainability. A crosschecking process has been used whereby the Town Development Plan policies and development objectives and proposed material amendments were proofed against the Environmental Protection Objectives so that any policies/development objectives with the potential for significant adverse environmental impacts were highlighted in addition to significant positive impacts. Alternative strategic options will be considered and mitigation measures proposed to counteract any adverse environmental effects identified, thereby maximising the environmental sustainability of the Town Development Plan 2012-2018.

6 STRATEGIC ENVIRONMENTAL ASSESSMENT OF DUNGARVAN TOWN DEVELOPMENT PLAN 2012-2018

6.1 METHODOLOGY FOR ASSESSMENT AND DETERMINATION OF SIGNIFICANCE OF EFFECTS

Matrices are the mechanism by which conflicts or potential conflicts between the policies of the Town Development Plan and the strategic environmental objectives have been identified. These matrices are provided in Appendix One to this Environmental Report. The likely significant effects that the policies contained in the Town Development Plan and the proposed material amendments will have on the environment were identified in this process.

Each strategic policy and objective and material amendment proposed in the Town Development Plan was assessed against the agreed SEA objectives.

The Draft produced was then formally assessed using the matrix (see Appendix One). The assessment of each was assigned a symbol;

- √ Significant beneficial impact
- ? Uncertain impact
- X Significant Adverse impact
- O No relationship, or insignificant impact

Evaluation of significance requires consideration of various questions, which will establish the importance, or “significance”, of the predicted impact:

1. Will the policies and objectives in the Town Development Plan lead to a risk of environmental standards being breached?
2. Could it lead to failure to achieve environmental policies or targets?
3. Will it affect environmental resources, which are protected by laws or policies, e.g. Natura 2000 habitats, species, landscapes, water resources, agricultural resources and cultural heritage sites, etc.?
4. Could it lead to impacts on environmental resources, which, although not legally protected, are important or valuable?

As a follow on from the preparation and evaluation of the previous sections of the report, i.e. baseline data and trends, existing significant issues, environmental vulnerabilities, the above questions were considered in determining significance of environmental effects identified. Suggested alternatives, mitigation, and offsetting, to the potential identified significant effects were identified and amendments to the Town Development Plan 2012-2018 suggested where required.

6.2 Summary of Likely Significant Effects of Implementing the Town Development Plan 2012-2018 on the Environment and Measures Proposed to Prevent, Reduce or Offset

6.2.1 Introduction

The full matrix and assessment of policies against environmental objectives is included in Appendix One of this report. Appendix 1B details the environmental assessment of the amendments made to the Draft Plan. A summary of the outcome of this assessment is provided in this section.

In accordance with the legislation, the likely significant effects on the environment of implementing the Town Development Plan 2012-2018 are summarised under headings that include all of the issues required to be covered. Potential significant positive environmental effects are highlighted as well as uncertain, potential negative, and neutral impacts and full details of these impacts can be seen in the matrix in Appendix One.

Assessment of the policies and development objectives in the Town Development Plan 2012-2018 shows that these policies and objectives will not pose a significant adverse impact on the environment. Many of the policies and objectives are considered positive, setting out to manage and protect aspects of the environment such as water quality, landscape, heritage resources and management of flood risk. The plan is particularly strong on policies supporting sustainable travel with associated positive implications for human health through accessible public transport and pedestrian access. Due to the strategic nature of the plan some of the broad range objectives cannot be accurately appraised to infer a definite positive or negative impact and so have been assessed as “uncertain” as a lower level tier assessment will be more appropriate to determine the precise nature of the impacts involved. This may relate to strategic policies/objectives concerning specific projects or other framework plans that may also require SEA at their inception.

To qualify “uncertain” impacts the range of issues for consideration under the various environmental topics is detailed below.

6.2.2 Biodiversity, Flora, Fauna

Impacts may be uncertain from policies and development objectives in the Plan in relation to biodiversity where objectives relate to strategic infrastructure projects such as harbours/marinas/energy and communications networks/road developments and these will be more appropriately assessed at the project level by EIA and Appropriate Assessment (e.g. INF2, INF3, INF 15, INF18, ECD10, ECD12,ECD18, ECD21, ECD22, ECD24, ECD25, ENV7, ObjENV1).

In fulfilment of the requirements of Article 6 (3) of the Habitats Directive an Appropriate Assessment Screening was carried out to assess the impacts of the Plan and proposed amendments on the Natura 2000 network. The findings of the Assessment were brought

forward through the Environmental Report and policy amendments as proposed in Appendix 3 of the Appropriate Assessment Screening Report were recommended to be incorporated in order to avoid any adverse impacts on the integrity of Natura 2000 sites and ensure compliance with Article 6 of the Habitats Directive.

Section 8 of the Plan and policy NH 7 provide for compliance with Article 6 of the Habitats Directive.

Any potential impacts on biodiversity will be mitigated by the range of policies contained in Section 8 of the Town Development Plan relating to Natural Heritage.

Positive impacts on biodiversity are identified through policies NH1-NH22 promoting protection for habitats and species at a European, national and local level. The application of habitat mapping as stated in Section 8.29 of the plan will also be a positive development for Biodiversity policy in Dungarvan.

6.2.3 Population and Human Health

Uncertainties in relation to human health arise where impacts on water quality and flood risk are to be determined. Water quality includes drinking water, bathing water and shellfish waters. Generally, impacts on population and human health are positive as the Town Development Plan seeks to provide for growth which can provide benefits and services while promoting enhanced travel choice, protection of heritage and environment, and access to amenity and recreation. Existing and future proposed capacities in water and waste water infrastructure are designed to promote population growth in the interests of avoidance of environmental degradation and damage to human health.

6.2.4 Water

No significant adverse impacts from the Plan policies are arising in terms of water quality or supply. There is adequate capacity for current and future population growth in Dungarvan. However the SE River Basin Management Plan has highlighted the need to restore surface water quality in Dungarvan Bay. However this is owing to pressures in the wider catchment rather than impacts solely from Dungarvan. The need to maintain water quality is key to conservation of biodiversity and water dependant habitats and species.

Ongoing monitoring is required to ensure low levels of water leakage and a water conservation strategy for the future in consideration of possible adverse climate change scenario. Section 6.13.1 of the Plan states the Council will continue to implement a Water Conservation Programme and take measures to redress water leakage rates in the County and Town.

6.2.5 Air & Climate

Determining impacts on the environmental objective for climate may be uncertain whereby objectives for upgrading roads may be conducive to further promoting use of the private car and thus increasing carbon emissions (Policy INF2) but this may be off-set by objectives providing for walkways and cycle paths thus providing services and opportunities that reduce the need for

people to travel increased distances for education, work and leisure. Overall the plan is very strong in its promotion of sustainable travel from policies supporting Smarter Travel and the National Cycle Policy Framework (Policy INF9) to policies encouraging the creation of cycleways and pedestrian areas (Policies INF 4,5,6,7 and 8). Objective ECD 3 seeks to “minimise unnecessary journeys and demand on car parking” while policy ECD 19 seeks to provide high quality and cycling routes in Dungarvan. These policies are positive in terms of environmental objectives for human health and air and climate.

6.2.6 Cultural Heritage

Cultural heritage may be impacted by expanding development and increased recreational pressure subjecting sites and monuments to increased erosion and weathering. Development of urban settlements in areas of archaeological potential will require archaeological assessment and architectural heritage appraisal at the framework plan and project levels to determine impacts on the cultural heritage. Development of harbours, piers and marinas will need to consider impacts on underwater archaeology through archaeological assessment in EIA. Chapter 7 policies provide for the protection and enhancement of Dungarvan’s architectural and cultural heritage and will mitigate for proposals affecting these sites.

6.2.7 Landscape

Impacts on landscapes may arise from a range of developments including communications networks, energy networks, forestry, recreational pressure and tourism developments. The nature and extent of impacts can be determined at project level by landscape impact assessment and landscape capacity studies. The development of a National Landscape Strategy and National and County Landscape Character Assessment will assist in informing such appraisal. Major infrastructure projects will be subject to EIA involving assessment of impacts on landscape.

6.2.8 Soil and Geology

Development of greenfield sites will be subject to environmental assessment through the planning process. The protection of alluvial soils will be enhanced by the required application of Strategic Flood Risk Assessment and flood risk mapping at the Town Development Plan level and by OPW CFRAMS.

6.2.10 Material Assets

Positive impacts for material assets are inferred in policies ECD6, ECD 7, ECD 11, ECD 23, INF1, INF14, INF15, INF16, Obj ENV1, ENV 8, Obj CS1, CS15, CS16, OP1-OP5. These policies seek to maintain and enhance employment opportunity, recreational and amenity space and environmental infrastructure that provide material assets for the town with associated benefits for the town’s population. No significant negative impacts are arising for material assets from the Plan.

6.1.1 Conclusion

SEA assessment of the Development Plan policies and proposed amendments has determined that no significant adverse impacts are predicted from the Plan while positive impacts will be realised through proposed policies for protection of wetlands as sites of local biodiversity interest and protection of floodplains in zoned settlements.

The findings of “uncertain” impacts in the SEA matrix will be determined at a lower level of environmental assessment largely through EIA and AA at the project level. These assessments will involve application of Appropriate Assessment, landscape appraisal, archaeological and architectural heritage appraisal and flood risk assessment to accurately determine the impacts under the range of environmental headings detailed above.

The finding of uncertain impacts on Natura 2000 sites through the Appropriate Assessment process will be addressed through the incorporation of amendments to Plan policies as recommended in Appendix 3 of the AA report.

Table 6.1 below details the relevant policy and section in the Plan that addresses the key Environmental Topics.

Table 6.1

Key Environmental Issue		Relevant Town Dev Plan policy
Water Quality	Surface Waters	ENV 3
	Coastal & Estuarine Waters	ENV 4
	Groundwater	ENV 3
	Drinking Water Quality	INF 11
	Waste Water	ENV 5
	Water Conservation	INF13
Biodiversity	Designated sites	NH4 NH5 NH6 NH7
	Local Biodiversity	NH9 NH10
	Invasive Species	NH20

7 MONITORING

7.1 Introduction

As part of the Strategic Environmental Assessment process, measures envisaged for monitoring the likely significant effects of implementing the Town Development Plan must be included in the Environmental Report. The review of the Town Development Plan 2012-2018 will include monitoring of any significant environmental effects.

Monitoring is often based on indicators, which measure changes in the environment, especially changes which are critical in terms of environmental quality. The Department of Environment Heritage and Local Government SEA Guidelines state that indicators that can be easily and realistically measured should be used. “Environmental indicators are key statistics, which describe an environmental issue. Their purpose is to communicate information on environmental issues in a simplified manner and over time to create a benchmark against which future progress towards sustainable development can be measured. To be effective they should be representative of the issue and be based on scientifically valid information. In this manner they can support policy development and reflect the interrelationship between society, the economy and the environment.”

Several kinds of indicators may be used to fulfil particular functions and measure the quality/quantity of environmental resources:

1. State of the environment indicators reflect environmental quality, or quantity of physical and biological or chemical phenomenon;
2. Stress indicators reflect development effects;
3. Performance indicators may be used to evaluate long-term achievements in environmental management and protection;
4. Sustainable development indicators introduce a new dimension to the provision of information, in that they seek to describe and measure key relationships between economic, social and environmental factors.

In all cases, indicators should both quantify and simplify information, thereby making it more accessible to policy-makers and the public.

Where new or improved monitoring measures come to light during the course of the Guidelines review they will inform monitoring for SEA, to ensure that monitoring of effects during the course of implementing the guidelines can be meaningful and effective.

The following measures are proposed as part of this SEA process, to monitor the effects on the environment of implementing the Town Development Plan 2012-2018, presented in terms of the achievement of the environmental protection objectives and the impact on the environmental factors that the SEA legislation requires to be considered.

7.1.1 Monitoring Proposals and Environmental Indicators

Environmental Objectives, Indicators and Targets

Biodiversity, Flora, Fauna					
Environmental Objectives	Indicators	Responsible Authority	Frequency of Monitoring	Targets	Intervention
B1: Protect, conserve and enhance the diversity of habitats, species and areas of national or international importance, including aquatic habitats and species and promote the sustainable management of habitat networks.	Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive.	NPWS of DAHG	Every 6 years. Next report due in 2014	Maintenance of favourable conservation status ⁴ for all habitats and species protected under national and international legislation. Compliance with Water Framework Directive River Basin District Management Plans.	Loss of favourable conservation status of protected habitats and species Non-attainment of targets set out in RBDMPs

Population and Human Health					
Environmental Objectives	Indicators	Responsible Authority	Frequency of Monitoring	Targets	Intervention
P1: Facilitate a good standard of health for Dungarvan's population through ensuring high quality residential, recreational and working environments.	Provision of employment, services and amenities within Dungarvan.	Central Government, IDA Ireland, Enterprise Ireland County Enterprise Board Dungarvan Town Council	ESRI quarterly index Monthly Live Register CSO Ongoing	Increase in employment opportunities, services and public amenity within the county	Ongoing
P2: To reduce the risk of flooding and harm to people, property and the environment.	Properties at risk of flooding. Number of development applications subject to Flood Risk Assessment. Areas of lands zoned for vulnerable development in lands classified as Flood Zone A or B as defined in DoEHLG Guidelines on Planning and Flood Risk Management.	Dungarvan Town Council OPW	Ongoing	Reduction in incidents of flood damage to properties. Minimal area of land zoned for vulnerable development in flood zones A and B. Completion of CFRAMS for SE River Basin Districts	Flooding incidents that cause damage to people, property and the environment
Water					
Environmental Objectives	Indicators	Responsible Authority	Frequency	Targets	Intervention
W1: Protect the quality of	Water quality monitoring	EPA	Annual	Protect and Restore areas	Deterioration in Water

<p>surface and ground waters as sources of drinking water and as valuable assets for amenity and recreation.</p> <p>W2: Achieve and maintain required water quality standards in the South East River Basin Management Plans and associated Programme of Measures and reduce discharges of pollutants or contamination to waters.</p>	<p>results by the EPA for:</p> <p>Surface Water Ecological and Chemical Status. Trophic Status of Estuarine and Coastal Waters. Bathing Water Quality. Groundwater Quality. Drinking Water Quality.</p> <p>Number of Public Water Supplies on EPA Remedial Action List.</p> <p>EPA data under <i>Urban Waste Water Discharges in Ireland Population Equivalents Greater than 500 persons - Reports for the Years 2008 and 2009 and 2010-2011.</i> Agglomerations over 500 without Secondary Treatment.</p> <p>Number of Discharge Licences granted by EPA.</p> <p>Quality of Shellfish Growing Areas in and implementation of Pollution Reduction Programmes for designated areas.</p>	<p>Dungarvan Town Council</p> <p>Marine Institute Water Quality Section, DoECLG</p>	<p>PRPs reviewed every 3 years</p>	<p>identified in the River Basin District Management Plan required to achieve “good” status, i.e. 4+ for water quality by 2015 in line with the Water Framework Directive objectives.</p> <p>Improvement or at least no deterioration in levels of compliance with drinking water quality standards and promotion to above national average compliance rate.</p> <p>No Shellfish Areas to be graded as Class C.</p> <p>Implementation of Pollution Reduction Programmes for designated areas</p>	<p>Quality Standards Non attainment of WFD standards and River Basin Management Plans</p> <p>Class C shellfish areas</p>
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Air and Climate

Environmental Objectives	Indicators	Responsible Body	Frequency	Targets	Intervention
AC1: Support Implementation of National Climate Strategy 2007-2012.	National Level of Carbon Emissions.	EPA	Annual	20% reduction of greenhouse gas emissions from 1990 levels by 2020.	Ongoing efforts to reduce emissions
	Delivery of County Climate Change Strategy	Waterford Energy Bureau Dungarvan Town Council	5 years	Full delivery of Co. Waterford Climate Change Strategy	Ongoing delivery of Climate Change Strategy
AC2: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey	Average daily motor vehicle flow within town	Dungarvan Town Council	Ongoing	To reduce road traffic in line with DoEHLG policy <i>Smarter Travel A Sustainable Transport Future</i>	Non-attainment of targets set out in <i>Smarter Travel A Sustainable Transport Future</i>
	Proportion of travel by mode	Dept. of Transport		Increase in length of cycle paths and foot paths in Dungarvan	
	Monetary investment in bus and rail, walking and cycling	National Transport Authority			

Cultural Heritage

Environmental Objectives	Indicators	Responsible Body	Frequency	Targets	Intervention
C1 Protect and conserve features of architectural and archaeological heritage.	Number of structures in RPS in relation to Ministerial Recommendations arising from NIAH Dungarvan Inventory	DAHG NIAH Dungarvan Town Council	Ongoing	To increase the number of Protected Structures in line with ministerial recommendations arising from NIAH surveys.	Damage to or loss of Protected Structures
	Number of ACAs designated	Dungarvan Town Council	Ongoing	To increase the number of ACAs.	Damage to or loss of ACAs
	Number of Monuments in the RMP and areas of archaeological potential which have been recorded or subject to exploration as a result of development.	DAHG National Monuments Service	Ongoing	To maintain and increase the number of archaeological features recorded and protected.	
	Number of protected structures or archaeological monuments damaged due to development.	Owners		No damage occurring to structures or monuments due to development.	Damage to or loss of Protected structures or national monuments

Landscape					
Environmental Objectives	Indicators	Responsible Body	Frequency	Targets	Intervention
L1: Protect and conserve the quality, character and distinctiveness of landscape including, waterway corridors, and coastal landscapes and minimise negative visual impacts.	Loss of views to waterway corridor and coastal areas. Loss of features of coastal /natural heritage value.	Dungarvan Town Council	6 yearly at Dev. Plan review Once off	Maintenance of views to River Colligan and Dungarvan Bay. Retention of features of coastal/natural heritage value.	Damage to or loss of scenic landscape value Review of Town Development Plan Damage to or loss of landscape value
Soils and Geology					
Environmental Objectives	Indicators	Responsible Body	Frequency	Targets	Intervention
S1: Protect quality of soils and prevent erosion of soils and geological heritage sites in the county	EPA/Teagasc National Soils Mapping project. Condition of geological heritage site mapped by Geological Survey of Ireland.	EPA/Teagasc GSI	Ongoing Ongoing	Conservation of soil quality re organic matter. Retain condition of of geological heritage site	Loss of soil quality and soil erosion Review of Town Development Plan
Material Assets					
Environmental Objectives	Indicators	Responsible Body	Frequency	Targets	Intervention
MA1: Maintain the quality of and access to assets such as open spaces, water resources and all other physical and social infrastructure.	Access to public amenities and visitor numbers.	Dungarvan Town Council Fáilte Ireland OPW	Ongoing	Increased visitor numbers to cultural heritage sites. Increased usage of Dungarvan Harbour.	Damage to or loss of sites of amenity value

Appendices

Appendix 1 SEA Assessment Matrix of Town Development Policies

	B1	P1	P2	W1	W2	AC1	AC2	C1	L1	S1	MA1
H1	0	√	0	0	0	0	0	0	0	0	0
H2	0	√	0	0	0	0	0	0	0	0	0
H3	0	√	0	0	0	0	0	0	0	0	0
H4	0	√	0	0	0	0	0	0	0	0	0
H5	0	√	0	0	0	0	0	0	0	0	0
H6	0	√	0	0	0	0	0	0	0	0	0
H7	0	√	0	0	0	0	0	0	0	0	0
H8	0	√	0	0	0	0	0	0	0	0	0
H9	0	√	0	0	0	0	0	0	0	0	0
H10	0	√	0	0	0	√	0	0	0	0	0
ECD1	0	√	0	0	0	0	0	0	0	0	√
ECD2	0	√	0	0	0	0	0	0	0	0	0
ECD3	0	√	0	0	0	0	0	0	0	0	0
ECD4	0	√	0	0	0	0	0	0	0	0	√
ECD5	0	√	0	0	0	0	0	0	0	0	0
ECD6	0	√	0	0	0	0	0	0	0	0	√
ECD7	0	√	0	0	0	0	0	0	0	0	√
ECD8	0	√	0	0	0	0	0	0	0	0	0
ECD9	0	√	0	0	0	0	0	0	0	0	0
ECD10	? ⁵	√	0	0	0	0	0	0	0	0	0
ECD11	0	√	0	0	0	0	0	0	0	0	√
Obj Ecd1	0	√	√	0	0	0	√	0	0	0	0
ECD12	? ⁶	√	0	0	0	0	√	0	0	0	0
OBJECD2	0	√	0	0	0	0	√	0	0	0	0

⁵ Uncertain impacts on biodiversity depending on site location. Impacts will be determined at project level through ecological assessment and AA screening.

⁶ Renewable Energy e.g. wind turbines will require AA screening at project level to determine potential impacts on bird activity in Dungarvan Harbour SPA

ECD13	0	√	0	0	0	0	√	0	0	0	0
OBJECD3	0	√	0	0	0	√	√	0	0	0	0
ECD14	0	√	0	0	0	0	0	0	0	0	0
ECD15	0	√	0	0	0	0	0	0	0	0	0
ECD16	0	√	0	0	0	0	0	0	0	0	0
ECD17	0	√	0	0	0	0	0	0	0	0	0
OBJECD4	0	√	0	0	0	0	0	0	0	0	0
ECD18	0	√	0	0	0	0	0	0	0	0	0
ECD19	0	√	0	0	0	√	√	0	0	0	0
ECD20	0	√	0	0	0	√	√	0	0	0	0
ECD21	? ⁷	√	0	0	0	0	√	0	0	0	0
OBJECD5	0	√	0	0	0	0	√	0	0	0	0
ECD22	? ⁸	0	0	0	0	0	0	?	?	0	0
ECD23	0	√	0	0	0	0	0	√	√	0	√
OBJECD6	0	√	0	0	0	0	0	√	√	0	√
OBJECD7	0	√	0	0	0	0	0	√	√	0	√
ECD24	? ⁹	0	0	?	?	0	0	0	0	0	0
ECD25	?	√	0	0	?	0	0	0	0	0	0
ECD26	0	√	0	0	0	0	0	0	0	0	0
INF1	0	√	0	0	0	0	0	0	0	0	√
OBJINF1	0	√	0	0	0	0	0	0	0	0	0
INF2	?	√	0	0	0	0	? ¹⁰	?	?	0	0
OBJINF2	0	√	0	0	0	0	0	0	0	0	0
OBJINF3	? ¹¹	√	0	0	0	0	0	?	0	0	0

⁷ Uncertain impacts on biodiversity from development of coastal walkways will require AA screening at project stage.

⁸ Uncertain impacts on biodiversity will require AA screening at project level to determine potential impacts on bird activity in Dungarvan Harbour SPA.

⁹ ECD24 & ECD25 Uncertain impacts on biodiversity will require AA screening at project level to determine potential impacts on bird activity in Dungarvan Harbour SPA

¹⁰ Policy INF2 supports development of National Road network and by association continued dependence on the private car. However Policy INF9 and Policy ECD seek to promote a modal shift from private transport to more sustainable modes of transport including public transport, cycleways and walkways.

¹¹ Impacts on biodiversity and cultural heritage will depend on site location of road developments and require to be assessed at project level and through AA screening.

INF3	0	√	0	0	0	√	√	0	0	0	0
INF4	0	√	0	0	0	√	√	0	0	0	0
INF5	0	√	0	0	0	√	√	0	0	0	0
INF6	0	√	0	0	0	√	√	0	0	0	0
INF7	0	√	0	0	0	√	√	0	0	0	0
INF8	0	√	0	0	0	√	√	0	0	0	0
INF9	?	√	0	0	0	√	√	0	0	0	0
OBJINF4	0	√	0	0	0	√	√	0	0	0	0
OBJINF5	0	√	0	0	0	√	√	0	0	0	0
OBJINF6	0	√	0	0	0	√	√	0	0	0	0
INF10	0	√	0	0	0	√	√	0	0	0	0
INF11	0	√	√	√	0	0	0	0	0	0	0
INF12	0	√	√	√	0	0	0	0	0	0	0
INF13	0	√	√	√	0	0	0	0	0	0	0
INF14	0	√	√	√	0	0	0	0	0	0	√
INF15	? ¹²	?	0	0	0	0	0	0	0	0	√
1NF16	0	√	0	0	0	0	0	0	0	0	√
1NF17	0	?	0	0	0	0	0	?	?	0	0
OBJINF7	0	?	0	0	0	0	0	?	?	0	0
OBJINF8	0	0	0	0	0	0	0	0	0	0	0
OBJINF9	0	0	0	0	0	0	0	?	?	0	0
INF18	? ¹³	?	0	0	0	?	0	?	?	0	0
BH1	0	√	0	0	0	0	0	√	0	0	0
BH2	0	√	0	0	0	0	0	√	0	0	0
BH3	0	√	0	0	0	0	0	√	0	0	0
BH4	0	√	0	0	0	0	0	√	0	0	0
BH5	0	√	0	0	0	0	0	√	0	0	0

¹² SE Waste Management Plan not subject to SEA or AA Screening so uncertain impacts on biodiversity, landscape and human health. Impacts on these environmental objectives more accurately assessed at project level through EIA and AA process.

¹³ Uncertain impacts on biodiversity, landscape, human health and cultural heritage depending on site location for energy developments. Eirgrid Strategy has been subject to SEA. Impacts on these environmental objectives more accurately assessed at project level through EIA and AA process.

BH6	0	√	0	0	0	0	0	√	0	0	0
BH7	0	√	0	0	0	0	0	√	0	0	0
BH8	0	√	0	0	0	0	0	√	0	0	0
OBH1	0	√	0	0	0	0	0	√	0	0	0
OBH2	0	√	0	0	0	0	0	√	0	0	0
OBH3	0	√	0	0	0	0	0	√	0	0	0
BH9	0	0	0	0	0	0	0	√	0	0	0
BH10	0	0	0	0	0	0	0	√	0	0	0
BH11	0	0	0	0	0	0	0	√	0	0	0
BH12	0	0	0	0	0	0	0	√	0	0	0
BH13	0	0	0	0	0	0	0	√	0	0	0
BH14	0	0	0	0	0	0	0	√	0	0	0
ENV1	√	√	√	√	√	√	√	√	√	√	√
ENV2	√	√	0	0	0	0	0	√	√	0	0
ENV3	√	√	0	√	√	0	0	0	0	0	0
ENV4	√	√	0	√	√	0	0	0	0	0	0
ENV5	√	√	0	√	√	0	0	0	0	0	0
ENV6	0	0	0	0	0	√	√	?	?	0	0
OBJENV1	? ¹⁴	√	0	0	0	√	√	0	?	?	√
ENV7	? ¹⁵	?	0	0	0	√	√	?	?	0	0
ENV8	0	0	0	0	0	0	0	0	0	0	0
ENV9	?	0	0	0	0	√	√	0	?	0	0
ENV10	0	0	0	0	0	√	√	0	0	0	0
ENV11	0	√	0	0	0	√	√	0	0	0	0
OBJENV2	0	√	0	0	0	√	√	0	0	0	0
ENV12	0	√	√	√	√	√	0	0	0	√	0
ENV13	0	√	√	√	√	√	0	0	0	√	0
OBJENV3	0	√	√	√	√	√	0	0	0	√	0

¹⁴ Uncertain impacts on biodiversity and landscape will require landscape appraisal and AA screening at project level to determine potential impacts on bird activity in Dungarvan Harbour SPA

¹⁵ Uncertain impacts on biodiversity will require AA screening at project level to determine potential impacts on bird activity in Dungarvan Harbour SPA

OBJENV4	0	√	√	√	√	√	0	0	0	√	0
OBJENV5	0	√	√	√	√	√	0	0	0	√	0
OBJENV6	0	√	√	√	√	√	0	0	0	√	0
OBJENV7	√	√	√	√	√	√	0	0	0	√	0
OBJCP1	√	√	√	0	0	0	0	0	√	√	√
OBJCP2	√	√	√	0	0	0	0	0	√	√	√
OBJCP3	0	√	0	0	0	0	0	0	√	0	√
OBJCP4	?	√	0	0	0	0	0	0	?	0	√
OBJCP5	√	√	0	√	√	0	0	0	0	0	0
ENV8	√	√	0	0	0	0	0	0	0	0	√
OBJCS1	0	√	0	0	0	0	√	0	0	0	0
CS1	0	√	0	0	0	0	0	0	0	0	0
CS2	0	√	0	0	0	0	0	0	0	0	0
CS3	0	√	0	0	0	0	0	0	0	0	0
CS4	0	√	0	0	0	0	0	0	0	0	0
CS5	0	√	0	0	0	0	0	0	0	0	0
CS6	0	√	0	0	0	0	0	0	0	0	0
CS7	0	√	0	0	0	0	0	0	0	0	0
CS8	0	√	0	0	0	0	0	0	0	0	0
CS9	0	√	0	0	0	0	√	0	0	0	0
CS10	0	√	0	0	0	0	0	0	0	0	0
CS11	0	√	0	0	0	0	0	0	0	0	0
CS12	0	√	0	0	0	0	0	0	0	0	0
CS13	0	√	0	0	0	0	0	0	0	0	0
CS14	0	√	0	0	0	0	0	0	0	0	0
OBJCS1	0	√	0	0	0	0	0	0	0	0	√
CS15	0	√	0	0	0	0	0	0	0	0	√
CS16	0	√	0	0	0	0	0	0	0	0	√
CS17	0	√	0	0	0	0	0	0	0	0	√
CS18	0	√	0	0	0	0	0	0	0	0	0
CS19	0	0	0	0	0	0	0	0	0	0	0

DM1	√	√	√	√	√	√	√	√	√	√	√
DM2	0	√	0	0	0	0	0	0	0	0	0
DM3	0	√	√	0	0	0	0	0	0	√	0
NH1	√	0	0	0	0	0	0	√	√	0	0
NH2	√	√	0	0	0	0	0	√	√	0	√
NH3	√	√	0	0	0	0	0	0	0	0	0
NH4	√	0	0	0	0	0	0	0	0	0	0
NH5	√	0	0	0	0	0	0	0	0	0	0
NH6	√	0	0	0	0	0	0	0	0	0	0
NH7	√	0	0	0	0	0	0	0	0	0	0
NH8	√	0	0	0	0	0	0	0	0	0	0
NH9	√	0	0	0	0	0	0	0	0	0	0
NH10	√	0	0	0	0	0	0	0	0	0	0
NH11	√	√	0	0	0	0	0	0	√	0	0
NH12	√	0	0	0	0	0	0	0	√	0	0
NH13	√	0	0	0	0	0	0	0	√	0	0
NH14	√	0	0	√	√	0	0	0	√	0	0
NH15	√	0	0	√	√	0	0	0	√	0	0
NH16	√	0	0	√	√	0	0	0	√	0	0
NH17	√	0	0	0	0	0	0	0	√	0	0
NH18	√	0	0	0	0	0	0	0	0	0	0
NH19	√	0	0	0	0	0	0	0	√	0	0
OBJNH1	√	√	0	0	0	0	0	0	√	0	0
OBJNH2	√	√	0	0	0	0	0	0	√	0	0
OBJNH3	√	√	0	0	0	0	0	0	√	0	0
OBJNH4	√	√	0	0	0	0	0	0	√	0	0
NH20	√	0	0	0	0	0	0	0	0	0	0
NH21	√	0	0	0	0	0	0	0	√	0	0
NH22	√	√	0	0	0	0	0	0	√	0	√
NH23	√	√	0	0	0	0	0	0	0	0	√
NH24	√	√	√	0	0	0	0	0	0	0	√

NH25	0	0	0	0	0	0	0	√	0	√	0
OP1	0	√	0	0	0	0	0	0	√	0	√
OP2	0	√	0	0	0	0	0	0	0	0	√
OP3	0	√	0	0	0	0	0	0	0	0	√
OP4	0	√	0	0	0	0	0	0	0	0	√
OP5	0	√	0	0	0	0	0	0	0	0	√

Appendix 1B SEA Assessment Matrix of Amendments to Dungarvan Town Development Plan

	B1	P1	P2	W1	W2	AC1	AC2	C1	L1	S1	MA1
ENV7	√	?	0	0	0	√	√	?	?	0	0
ENV8	0	0	0	0	0	0	0	0	0	0	0
OBJ ECD6	0	√	0	0	0	0	0	√	√	0	√
INF18	? ¹⁶	?	0	0	0	?	0	?	?	0	0
OBJENV1	? ¹⁷	√	0	0	0	√	√	0	?	?	√
ENV9	?	0	0	0	0	√	√	0	?	0	0
ENV12	0	√	√	√	√	√	0	0	0	√	0
ECD5	0	√	0	0	0	0	0	0	0	0	0
ECD10	? ¹⁸	√	0	0	0	0	0	0	0	0	0
ECD16	0	√	0	0	0	0	0	0	0	0	0
ECD19	? ¹⁹	√	0	0	0	√	√	0	0	0	0
ECD21	? ²⁰	√	0	0	0	0	√	0	0	0	0
ECD22	? ²¹	0	0	0	0	0	0	?	?	0	0
ECD24	? ²²	0	0	?	?	0	0	0	0	0	0
OP2	0	√	0	0	0	0	0	0	0	0	√
CP2	√	√	√	0	0	0	0	0	√	√	√
NH4	√	0	0	0	0	0	0	0	0	0	0

¹⁶ Uncertain impacts on biodiversity, landscape, human health and cultural heritage depending on site location for energy developments. Eirgrid Strategy has been subject to SEA. Impacts on these environmental objectives more accurately assessed at project level through EIA and AA process.

¹⁷ Uncertain impacts on biodiversity and landscape will require landscape appraisal and AA screening at project level to determine potential impacts on bird activity in Dungarvan Harbour SPA

¹⁸ Uncertain impacts on biodiversity depending on site location. Impacts will be determined at project level through ecological assessment and AA screening.

¹⁹ Potential impacts on biodiversity will be determined through the AA process at project level.

²⁰ Uncertain impacts on biodiversity from development of coastal walkways will require AA screening at project stage.

²¹ Uncertain impacts on biodiversity will require AA screening at project level to determine potential impacts on bird activity in Dungarvan Harbour SPA.

²² ECD24 & ECD25 Uncertain impacts on biodiversity will require AA screening at project level to determine potential impacts on bird activity in Dungarvan Harbour SPA

NH14	√	0	0	√	√	0	0	0	√	0	0
DM10.19	√	0	0	0	0	0	0	√	√	0	0
DM10.32	? ²³	?	0	?	?	0	0	0	0	0	0
DM10.34	0	0	0	0	0	0	0	0	0	0	0
DM10.35	0	?	0	0	0	0	0	?	?	0	0
DM10.37	√	0	0	0	0	0	0	0	0	0	0
DM1	0	0	√	√	√	√	√	√	√	√	√
CS3, CS9, CS 10 CS11	0	√	0	0	0	0	0	0	0	0	0
RPS	0	0	0	0	0	0	0	0	0	0	0
ZONINGS											
KILRUSH	0	0 ²⁴	0	0	0	0	0	0	0	0	0
MONANG	? ²⁵	0	0	0	0	0	0	0	0	0	0
FAIRLANE	0 ²⁶	0	0	0	0	0	0	0	0	0	0

²³ Development Management standards will be applied in accordance with policies and objectives of the plan to ensure best environmental practise.

²⁴ Change in land use zoning not considered to pose environmental impacts due to change from industry to special use which will provide for uses such as retail warehousing/bulky goods.

²⁵ Any development proposed for this site will be subject to AA screening to determine any potential impacts on the adjacent SPA.

²⁶ Impact of loss of open space not considered significant due to small area of land involved and due to value of adjacent wetland amenity area.

APPENDIX 2 SEA SCOPING REPORT

Introduction

Section (15b) of the Planning and Development (Strategic Environmental Assessment) Regulations, 2004 requires that a Strategic Environmental Assessment is carried out on the Draft Town Development Plan. The aim of SEA is to enable better-informed decisions to be made by enabling the structured assessment of environmental impacts of policies and objectives in the Draft Town Development Plan.

In preparation for the SEA process, a SEA Scoping Document was prepared by Dungarvan Town Council and issued to a number of environmental organisations including the three prescribed Environmental Authorities: the Environmental Protection Agency, the Department of the Environment, Heritage and Local Government and the Department of Communications, Energy and Natural Resources. The SEA Scoping Document highlighted the range of environmental issues and level of detail under which these issues would be examined in the SEA process and invited comments on these. One submission relating to SEA of the Dungarvan Town Development Plan 2012-2018 was received from the EPA. The submission included the SEA Pack compiled by the EPA based on current best practice in the SEA process. The EPA recommended that consideration should be given as appropriate to inclusion of the following issues:

- Wastewater Treatment Capacity and Adequacy
- Drinking Water Treatment Capacity and Adequacy
- Landscape Character Assessment
- Appropriate Assessment Screening
- Flood Risk Assessment in line with DoEHLG Flood Risk Management Guidelines (2009).
- Protection of nationally and internationally designated conservation areas.
- Water Conservation and Energy Conservation.
- Adequate and appropriate protection of fisheries and shellfisheries.
- Integrated Regional Coastal Erosion Strategy.
- Waste Management

Appendix 3 Strategic Flood Risk Assessment

1. Introduction

Flooding is a natural process that can happen at any time in a wide variety of locations and plays a role in shaping the natural environment. Flooding from the sea and from rivers is probably best known but prolonged and intense rainfall can also cause sewer flooding, overland flow and flooding from groundwater. Where it impacts on human activities, it can threaten people, their property and the environment. Of increasing concern are the consequences of climate change which is impacting on sea levels, the nature and pattern of rainfall events and general weather patterns. While the exact impacts of change are not known, it is widely agreed that climate change will result in higher risk of flooding of both inland and coastal locations. It is important therefore that this issue is addressed within the Town Development Plan 2012-2018 as decisions on the direction of future growth within Dungarvan can impact on flood risk.

The Department of Environment, Heritage and Local Government and the Office of Public Works (OPW) published Planning Guidelines *The Planning System and Flood Risk Management*, in November 2009. These Guidelines recommend a clear and transparent assessment of flood risk at all stages in the planning process and set out that strategic flood risk assessment and flood management policies are necessary to set a policy framework for Development and Local Area Plans at the local level. Key guiding principles for Flood Risk Assessment are as follows.

- Avoid risk where possible.
- Substitute less vulnerable uses where avoidance is not possible.
- Mitigate and manage the risk where avoidance and substitution are not possible.

This document sets out an overview of flood risk areas in the county and how this risk will be addressed by the Town Development Plan.

2. Strategic Flood Risk Assessment of Dungarvan

Dungarvan covers an area of 555 ha and a coastal length of approximately 1km. The eastern end of the Dungarvan valley contains the small Colligan river which empties into the estuary at Dungarvan

County Waterford including Dungarvan is covered in the main by the South Eastern River Basin District.

2.1 Data Available

The Office of Public Works (OPW) has responsibility for flooding including fluvial flooding, tidal flooding and areas where tidal and fluvial influences interface. A number of flooding related projects have been undertaken by the OPW including the facilitation of a governmental review into flooding issues and management and the preparation of national flood risk maps due to be completed by 2013.

Work is ongoing at a national level on flood risk management and mapping of flood risk areas in fulfilment of the requirements of the 2007 EU Flood Directive. A range of data will be available from the OPW to local authorities to inform flood risk management in the county and includes:

- Predictive Modelling data on flood risk
- Individual area flood studies
- Historical recording in spatial point information from www.floodmaps.ie prepared by the OPW
- Benefitting Land Maps-these are maps indicative of areas possibly prone to flooding from rivers
- Alluvial Soils maps from the Geological Survey of Ireland
- OPW Coastal Protection Study of County Waterford
- Preliminary Flood Risk Assessment

The OPW are currently involved in preparing catchment-based flood risk management plans (Catchment Flood Risk Assessment and Management Studies (CFRAMs) with the relevant local authorities, the Environmental Protection Agency (EPA) and other key agencies, providing an integrated and pro-active approach to flood risk and the mechanism through which predictive flood maps and Catchment Flood Risk Management Plans (CFRMPs) are being developed. These CFRAM studies will establish a prioritised set of flood risk management measures for their relevant areas, including the use of physical and management responses.

Catchment Flood Risk Management Plans will also be prepared for the SE River Basin District. Draft maps for these risk areas will be used by Dungarvan Town Council to inform and review flood risk management policies at a county and local area plan level.

2.2 Assessment

A review of the data sources above (where available) examined the major flood risk from river, estuarine and coastal flooding but did not include an assessment of groundwater or artificial drainage flood events.

2.3 Coastal Flooding

The coastline around Dungarvan Bay is experiencing coastal erosion and some flooding through normal coastal processes and is also at risk in the future from increased storm activity and sea level rise. Parts of the coast are low lying and vulnerable to flooding in the long-term from sea level rise and it is essential that current and future plans and development now do not create significant problems in the future. Continued investment needs to be made in the protection of coastal towns from long term sea level rise and increased storm activity.

Coastal flooding and coastal erosion are issues with serious economic and social impact. In 2002 the Department of Communications, Marine and Natural Resources initiated a National Coastal Protection Strategy Study to review Coastal Protection generally, examine policy options and set out a basis for effective decision making in regard to resource allocation. Information is being assembled on the current and historic position of the coastline, the nature of the coast, its vulnerability to erosion and flooding and the nature of the hinterland in terms of its economic, heritage and environmental assets.

The OPW have published a national set of maps of areas prone to coastal flooding and erosion. These maps are available in draft form. A strategic level flood risk assessment for the coastline study has been completed and predictive floodplain maps prepared showing both the extreme flood outline representing the 0.1% AEP and the indicative floodplain representing the 0.5% AEP. A review of the predictive floodplain maps shows coastal flooding occurring in or near coastal settlements such as Dungarvan. A strategic level erosion risk assessment for the coastline has also been completed and predictive erosion maps prepared for the years 2030 and 2050. In contrast to the assessment of coastal flood risk, the coastal erosion risk assessment along the south coast has indicated that there is generally little risk from erosion in the larger urbanised areas. This is primarily due to the fact that the urbanised coastline is mostly either naturally resilient or protected by man-made defences.

3. Development within Flood Risk Areas

While parts of Dungarvan are vulnerable to fluvial and coastal flooding, wider, effective management of flood risk coupled with wider environmental, sustainability and economic considerations means that it is possible to facilitate the continued development of the existing urban settlement.

In line with the sequential and justification criteria set out in the Department's Guidelines on the Planning System and Flood Risk Management it is considered that the core or centre of the urban area may be encouraged to continue to consolidate and grow in order to bring about a more compact and sustainable urban development form while at the same time managing flood

risk appropriately. The Justification Test is not intended to promote inappropriate development on the outskirts or periphery of existing communities. The section below outlines measures through which both the flood risk and the continued development of Dungarvan can be managed.

4. Flood Risk Management Policies, Objectives and Monitoring

The impact of flood risk within the context of the Town Development Plan and decisions regarding future directions of growth is recognised and has been incorporated into the policies of the Town Development Plan Section 8 (Environment and Heritage Chapter). These policies aim to ensure that flood risk areas targeted for development will follow the sequential approach and will be planned, designed and constructed to reduce and manage flood risk and be adaptable to changes in climate.

As more up to date information and spatial data becomes available through Flood Risk Mapping, CFRAMS and the National Coastal Protection Strategy and where lands are already zoned for housing or other vulnerable development in the flood risk areas identification of flood zones in relevant settlements will be applied through a Stage 2 Strategic Flood Risk Assessment applying the sequential approach and justification test as per the DoEHLG Guidelines (2009). The Town Plan includes a Flood Risk Assessment Map identifying areas vulnerable to Flood Risk. Developments proposed for these areas will be required to carry out a flood Risk Assessment.

