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meath county council

East Meath Local Area Plan 2014-2020

**Bettystown / Laytown / Mornington East / Donacarney /
Mornington**



Strategic Environmental Assessment: Environmental Report



Contents Amendment Record

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TABLE OF CONTENTS

List of Tables.....	v
List of Figures.....	v
List of Maps.....	v
Glossary.....	vi
1.0 Non-Technical Summary.....	i
1.1 Introduction and Background.....	i
1.2 Steps in the SEA Process.....	i
1.3 Content of Environmental Report.....	ii
1.4 Policy Context.....	iv
1.5 Appropriate Assessment.....	iv
1.6 Contents and Objectives of the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020.....	iv
1.7 Current State of the Environment.....	vi
1.8 Strategic Environmental Objectives, Targets and Indicators.....	x
1.9 Alternative Plan Scenarios.....	xii
1.10 Strategic Environmental Assessment of the Plan.....	xiii
1.11 Mitigation Measures.....	xiv
1.12 Local Area Plan Monitoring.....	xiv
2.0 Introduction and Background.....	1
2.1 Introduction and Terms of Reference.....	1
2.2 The Plan Area.....	2
2.3 Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020.....	3
2.4 SEA Definition and Role.....	5
2.5 Legislative and Guidelines Context.....	5
2.6 SEA Process.....	6
2.7 Integration of the Local Area Plan, SEA and Habitats Directive Assessment.....	7
2.8 Implications of SEA for the Plan.....	7
3.0 Methodology.....	9
3.1 Introduction.....	9
3.2 Screening.....	10
3.3 Scoping.....	10
3.4 Statutory Consultation.....	11
3.5 Non- Statutory Public Consultation.....	13
3.6 Environmental Baseline Data.....	14
3.7 Environmental Report.....	15
3.8 Consideration of Alternatives.....	16
3.9 Environmental Assessment of the Local Area Plan.....	16
3.10 Mitigation.....	17
3.11 Monitoring.....	17
3.12 Technical Difficulties Encountered.....	18
3.13 Report Preparation.....	18
4.0 Review of Relevant Policies Plans and Programmes.....	19
4.1 Introduction.....	19
4.2 Planning and Development.....	19
4.3 Environmental Plans and Policies.....	25

5.0	Environmental Baseline of the Plan Area.....	35
5.1	Introduction.....	35
5.2	Technical Difficulties Encountered and Information Gaps	35
5.3	Study Area Overview.....	36
5.4	Population, Human Health and Quality Of Life.....	36
5.5	Biodiversity.....	39
5.6	Soil and Geology	44
5.7	Water	46
5.8	Air and Climate	51
5.9	Material Assets	52
5.10	Cultural Heritage.....	57
5.11	Landscape.....	58
5.12	Interactions	60
6.0	Strategic Environmental Objectives Targets and Indicators	62
6.1	Introduction.....	62
7.0	Alternatives	65
7.1	Introduction.....	65
7.2	Legislative context	65
7.3	Methodology for the Selection of Alternatives	65
8.0	Strategic Environmental Assessment of the Plan	68
8.1	Introduction.....	68
8.2	Environmental Assessment	69
8.3	Human Beings.....	69
8.4	Soil and Geology	69
8.5	Biodiversity.....	70
8.6	Water Quality	70
8.7	Material Assets – Transport.....	71
8.8	Material Assets – Waste Services	71
8.9	Noise	72
8.10	Air Quality.....	72
8.11	Energy	72
8.12	Climate Change.....	72
8.13	Cultural Heritage.....	73
8.14	Landscape.....	73
9.0	Mitigation Measures.....	81
9.1	Introduction.....	81
9.2	How the SEA has Influenced the Local Area Plan.....	81
9.3	Mitigation Measures	81
10.0	Local Area Plan Monitoring.....	85
10.1	Introduction.....	85
10.2	Monitoring Indicators	85
11.0	Conclusion	90

List of Tables

Table 1: Key Stages in SEA process	i
Table 2: Content of Environmental Report	iii
Table 3: Summary of Main Environmental Issues within the Plan Area	viii
Table 4: Strategic Environmental Objectives (SEOs)	xi
Table 5: Key Stages of SEA	10
Table 6: Summary of Scoping Comments	13
Table 7: SEA Report Structure	15
Table 8: Actual and Percentage Population Growth 2006-2011	37
Table 9: Areas Protected under EU and National Legislation.....	41
Table 10: Additional Areas Protected under EU and National Legislation	41
Table 11: Main Rivers in plan area and their WFD Status 2009	47
Table 12 : Landscape Character Areas Ability to Accommodate Development	59
Table 13: Protected Views and Prospects, Meath County Development Plan 2013 – 2019	60
Table 14: Environmental Interactions.....	61
Table 15: Strategic Environmental Objectives.....	64
Table 16: Assessment of Alternative Zonings.....	67
Table 17 : Strategic Environmental Assessment of Policies and Objectives	74
Table 18: Mitigation MeasuresTable 18: Mitigation Measures contd.	82
Table 19: Proposed Monitoring Indicators.....	86

List of Figures

Figure 1: Local Area Plan Context Map	vii
Figure 2: Integrated Local Area Plan and SEA Process	8

List of Maps

MAP A- Context Map
MAP B- Ecological Designations
MAP C- Soils
MAP D- Geology
MAP E: Waterbodies and Flooding
MAP F: Cultural Heritage

Glossary

<i>Appropriate Assessment</i>	An assessment of the effects of a plan or project on the Natura 2000 network. The Natura 2000 network comprises Special Protection Areas under the Birds Directive, Special Areas of Conservation under the Habitats Directive and Ramsar sites designated under the Ramsar Convention (collectively referred to as European sites).
<i>Baseline environment:</i>	A description of the present state of the environment of the P/P area.
<i>Birds Directive:</i>	Council Directive of 2nd April 1979 on the conservation of wild birds (79/409/EEC).
<i>Cumulative effects:</i>	Effects on the environment that result from incremental changes caused by the strategic action together with other past, present, and reasonably foreseeable future actions. These effects can result from individually minor but collectively significant actions taking place over time or space.
<i>Data:</i>	Includes environmental data, proxy data, and any other relevant statistical data.
<i>Designated authority (Designated environmental authority):</i>	An organisation that must be consulted in accordance with the SEA Regulations. For Ireland these are the Environmental Protection Agency (EPA), the Department of the Environment, Community and Local Government (DoECLG) and the Department of Agriculture, Food & the Marine (DoAFM).
<i>Environmental Assessment:</i>	The preparation of an environmental report, the carrying out of consultations, the taking into account of the environmental report and the results of the consultations in decision-making and the provision of information on the decision (in accordance with Articles 4 to 9 of the SEA Directive).
<i>Environmental Characteristics:</i>	Environmental resources, issues and trends in the area affected by the P/P.
<i>Environmental indicator:</i>	An environmental indicator is a measure of an environmental variable over time, used to measure achievement of environmental objectives and targets.
<i>Environmental objective:</i>	Environmental objectives are broad, overarching principles which should specify a desired direction of environmental change.
<i>Environmental receptors:</i>	Include biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage (including architectural and archaeological) and landscape as listed in the SEA Directive. This list is not exhaustive, and can include other receptors which may arise for a particular P/P.

<i>Environmental Report (ER):</i>	A document required by the SEA Directive as part of an environmental assessment which identifies, describes and evaluates the likely significant effects on the environment of implementing a plan or programme.
<i>Environmental targets:</i>	A target usually underpins an objective often having a time deadline that should be met and should be accompanied by limits or thresholds.
<i>Evolution of the baseline:</i>	A description of the future state of the baseline in the absence of a plan or programme assuming 'business as usual' or 'do nothing' scenarios, depending on which is more reasonable for the P/P being proposed.
<i>Habitats Directive:</i>	Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.
<i>Hierarchy of Plans:</i>	Both higher and lower level P/P relevant to the P/P being assessed.
<i>Indirect effect:</i>	<p>Any aspect of a P/P that may have an impact (positive or negative) on the environment, but that is not a direct result of the proposed P/P.</p> <p>May also be referred to as a secondary effect</p>
<i>Interrelationships:</i>	Associations or linkages, related to environmental impact of the proposed P/P usually on environmental receptors.
<i>Issues Paper:</i>	Paper produced as part of the consultation process, usually for Land Use Plans, to facilitate consultation with stakeholders on key issues.
<i>Key environmental issues:</i>	Those significant environmental issues, which are of particular relevance and significance within a P/P area and/or the zone of influence of that P/P. These issues should be identified during SEA Scoping process.
<i>Key environmental receptors:</i>	Aspects of the environment likely to be significantly impacted by the proposed P/P.
<i>Material Assets:</i>	Critical infrastructure essential for the functioning of society such as: electricity generation and distribution, water supply, wastewater treatment transportation etc.
<i>Member States:</i>	Those countries that belong to the European Union.
<i>Mitigation measures:</i>	Measures to avoid/prevent, minimise/reduce, or as fully as possible, offset/compensate for any significant adverse effects on the environment, as a result of implementing a P/P.
<i>Monitoring:</i>	A continuing assessment of environmental conditions at, and surrounding, the plan or programme. This determines if effects occur as predicted or if operations remain within acceptable limits, and if mitigation measures are as effective as predicted. The primary purpose of monitoring is to identify significant environmental effects which arise during the implementation stage against those predicted during the plan preparation stage.

<i>Monitoring Programme:</i>	A detailed description of the monitoring arrangements to be put in place to carry out the monitoring of the impact of the proposed P/P on the environment including; frequency of monitoring, who has responsibility for monitoring, and responses if monitoring identifies significant negative impacts.
<i>Non-technical summary:</i>	A summary of the findings of the ER, summarized under the headings listed in Annex 1 of the SEA Directive that can be readily understood by decision-makers and by the general public. It should accurately reflect findings of ER.
<i>Plan or Programme:</i>	<p>Including those co-financed by the European Community, as well as any modifications to them:</p> <ul style="list-style-type: none">- which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and- which are required by legislative, regulatory or administrative provisions. In accordance with the SEA Directive, P/P that require SEA are those that fulfil the conditions listed in Article 2(a) and Article 3 of the SEA Directive.
<i>Post-mitigation residual impacts:</i>	Environmental effects that remain after mitigation measures have been employed.
<i>Proxy data:</i>	Is a measure of activity resulting from a P/P which provides information on environmental impact without the need for a direct measure of an environmental receptor for example, an increase in the number of vehicles (activity resulting from a P/P) can provide information on the impact on air quality and greenhouse gases without having to measure the concentration of these parameters in the receiving environmental receptor.
<i>Public:</i>	One or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.
<i>Reasonable alternatives:</i>	Alternatives should take into account the objectives and geographical scope of the P/P. There can be different ways of fulfilling the P/P objectives, or of dealing with environmental problems. The alternatives should be realistic, capable of implementation and should fall within the legal and geographical competence of the authority concerned.
<i>Scoping:</i>	The process of deciding the content and level of detail of an SEA, including the key environmental issues, likely significant environmental effects and alternatives which need to be considered, the assessment methods to be employed, and the structure and contents of the Environmental Report.
<i>Screening:</i>	<p>The determination of whether implementation of a P/P would be likely to have significant environmental effects on the environment.</p> <p>The process of deciding whether a P/P requires SEA.</p>

<i>SEA Directive:</i>	Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment'.
<i>SEA Statement:</i>	<p>A statement summarising:</p> <ul style="list-style-type: none">- how environmental considerations have been integrated into the P/P- how the ER, the opinions of the public and designated authorities, and the results of transboundary consultations have been taken into account- the reasons for choosing the P/P as adopted in the light of other reasonable alternatives.
<i>Secondary effect:</i>	Effects that are not a direct result of the P/P, same as indirect effect.
<i>Short-term effects:</i>	These are typical of those effects that may occur during construction stage of a development, for example, the increased traffic going to and from a site during construction, or, the noise associated with construction activities.
<i>Significant effects:</i>	Effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.
<i>Statutory authority:</i>	The authority by which or on whose behalf the plan or programme is prepared.
<i>Statutory Instrument (S.I.):</i>	Any order, regulation, rule, scheme or bye-law made in exercise of a power conferred by statute.
<i>Synergistic effect:</i>	Effects that, when totalled, result in a greater or lesser effect than the sum of the individual effects.

1.0 Non-Technical Summary

1.1 Introduction and Background

The core objective of the process is to assess the Local Area Plan in terms of its overall environmental impact, both positive and negative and to indicate where necessary how improvements can be incorporated into the plan to improve the plans' environmental performance.

This section of the Environmental Report is a Non-Technical Summary. The purpose of the Non-Technical Summary is to ensure that the key findings of the Environmental Report are readily understood by both decision makers and the general public. To this end technical jargon has been avoided wherever possible.

The Planning and Development Act 2000-2013 require that a Strategic Environmental Assessment, (pursuant to the SEA Directive) and an Appropriate Assessment (pursuant to the EU Habitats Directive) be carried out as Part of the Local Area Plan process.

The preparation of the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020 ran in parallel with the Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) and both these processes significantly influenced the preparation of the Local Area Plan.


In this regard environmental considerations have been considered throughout the plan process and have been incorporated in the adopted Plan ensuring a continuation of a qualitative environment.







The Environmental Report is the primary element in the SEA process and is published alongside the adopted Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020.

1.2 Steps in the SEA Process

Table 1 below highlights the key stages in the SEA process and the progress made to date:

Table 1: Key Stages in SEA process

Stage	Description	
Scoping	<p>The Scoping of the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020 was carried out in accordance with Article 5 (4) of the SEA Directive (2001/42/EC).</p> <p>The principal purpose of the Scoping stage is to decide upon the range of issues and level of detail to be included in the Environmental Report. An overview of the relevant environmental issues requiring further analysis are given and consideration in the Environmental Report and ultimately in the Local Area</p>	<p>Completed</p> 

	Plan itself. By highlighting some of the significant issues at an early stage, it ensures that the issues are firmly to the forefront when considering each of the policies and objectives of the Plan and reduces the possibility of relevant issues not being addressed.	
Consultation with the Environmental Authorities	Submissions were received from the EPA, the Department of Communications, Energy & Natural Resources, and the Department of Agriculture, Food and the Marine.	Completed 
Scoping Report	Submissions received from Environmental Authorities were incorporated into the Scoping Report and baseline data was amended.	Completed 
Preparation of ER & BLMEDM LAP	<ul style="list-style-type: none"> • A multi-disciplinary team was established to create policy consistent documents and to examine the effects on the environment of implementing the objectives and policies. • Objectives created in Local Area Plan assessed in ER and proposed zonings for the plan area examined. • Feedback from on-going Plan preparation process & ER preparation • Mitigation measures discussed and chosen. • Monitoring incorporated into existing methods. 	Completed 
Consultation	Consultation on the Local Area Plan and associated Environmental Report and Natura Impact Report.	Completed 
Evaluation of submissions	Evaluation of submissions and observations made on the Local Area Plan, Environmental Report and Natura Impact Report.	Completed 
SEA Statement	Preparation of an SEA Statement identifying how environmental considerations and consultation have been integrated into the Adopted Local Area Plan.	Completed 
Monitoring the Local Area Plan	Monitoring significant environmental effects over the lifetime of the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020	On Going

1.3 Content of Environmental Report

The Environmental Report considers all of the following in accordance with the requirements of the SEA Directive:

1. Population, Human Health and Quality Of Life
2. Biodiversity
3. Soil & Geology
4. Water
5. Air Quality and Climate Change
6. Material Assets
7. Cultural Heritage
8. Landscape

Table 2 below summarises the content of the Environmental Report. In the first instance the Environmental Report details the Current State of the Environment of Bettystown, Laytown, Mornington East, Donacarney and Mornington within each of the sub headings set out above, and interrelationships between each of the environmental topics. The Environmental Report examines significant environmental pressures that may affect each of the environmental topics and the current (Baseline) State of the Environment.

Table 2: Content of Environmental Report

Section	Description
Non-Technical Summary	A brief summary of the Environmental Report, its main points and conclusions.
Introduction	Provides a description of the type of plan involved and a summary of its key aims and objectives. The purpose of the SEA process, SEA requirements, and its benefits and how the LAP and Environmental Reports have progressed are outlined.
SEA Methodology	Highlights the steps taken in preparation of the SEA, the methods used and technical difficulties encountered.
Relationship of the Plan with Other Relevant Plans and Programmes	The relationship of the LAP to other relevant plans and programmes is highlighted.
Baseline	A description of the current environment of the plan area is given, highlighting any existing environmental problems in the plan area. This exercise results in a comprehensive baseline against which the likely effects of implementing the LAP can be examined.
Strategic Environmental Objectives	A number of environmental protection objectives which have been established at international, EU or national Level and are relevant to the plan are listed. Following this a description of how the objectives and any environmental considerations have been taken into account in the preparation of the plan is given.
Alternatives	An assessment of proposed development alternatives in the plan area are considered at this stage.
Assessment	The LAP policies and objectives are examined in terms of their potential effects on the various Environmental parameters.
Mitigation Measures	Should potentially significant effects be discovered, measures to prevent, reduce or offset these effects are proposed and integrated into the LAP.
Monitoring	Proposals for monitoring the significant effects of the LAP on the environment are put forward. A number of indicators of change and targets are identified and existing monitoring arrangements are utilised.
Conclusion	A conclusion with regard to the overall impact on the environment resulting from the implementation of the Local Area Plan.

1.4 Policy Context

The preparation of the Local Area Plan must be considered within the context of a hierarchy of policies, plans and strategies of international, national, regional and local level as detailed in Chapter 4 of the Environmental Report. Other relevant Plans, policies and programmes were considered in this report and are referenced throughout.

1.5 Appropriate Assessment

An Appropriate Assessment (AA) has also been carried out in accordance with Article 6 of the EU Habitats Directive and as required under the Planning and Development Acts 2000-2013. The AA is a separate but parallel process that has overlapped significantly with the SEA process in the drafting of the Local Area Plan, not least because of the prevalence of Natura 2000 sites within and adjacent to the plan area. The Appropriate Assessment specifically assesses the potential impact on Natura 2000 sites (and their conservation objectives) of the implementation of the Plan based on the Natura Impact Report and other supplementary information; the ultimate aim being to avoid significant adverse impacts on these sites. The Natura Impact Report determined that there is no requirement to proceed to Stage 3 of the AA as there is no significant detrimental effect identified as the result of implementation of the Plan to the integrity of any European Site. The Natura Impact Report is published parallel to the Local Area Plan and Environmental Report.

1.6 Contents and Objectives of the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020

The Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020 has been prepared by Meath County Council and RPS under the provisions of the Planning and Development Acts 2000-2013.

The vision statement for Bettystown-Laytown-Mornington East-Donacarney-Mornington as set out in the Local Area Plan is:

The Strategic Vision for Bettystown, Mornington East, Laytown, Donacarney and Mornington is to create a place to live, work and visit which is appealing, distinctive and sustainable, with minimal impact on the environment and drawing on the unique coastal setting.

This vision statement for the plan area is backed up by three development themes which aim to provide a foundation for the Local Area Plan policies and objectives. The three Development Themes are:

Sustainable Communities

SC POL 1: To facilitate the development of new housing in accordance with the targets set out in the County Settlement Hierarchy and Core Strategy in the Meath CDP 2013-2019.

- SC POL 2:** To ensure the availability of community services, recreation and amenity facilities for the existing and future population within the development envelop and to resist the future provision of such services at a remove from central sites.
- SC POL 3:** To encourage development in a sequential manner in accordance with role and function.
- SC POL 4:** To promote a strong sense of community spirit and civic pride.

Sustainable Economies

- SE POL 1:** To strengthen the economy of each Small Town and Village through attracting new investment in employment, services, administration, retail and tourism uses appropriate to their economic role In the Economic Strategy for the County.
- SE POL 2:** To strengthen the role of Laytown/Bettystown as a Level 3 retail centre thereby sustaining its ability to attract new businesses and meeting the retail and service needs of the area in addition to facilitating a high quality of urban design to encourage diverse building styles reflecting the character and setting of the coastal location thereby providing a pleasant environment for shopping, visiting and doing business.
- SE POL 3:** To address the extent of commuting from the area by the resident workforce by facilitating the creation of sufficient local employment opportunities to cater for the existing and future resident population.
- SE POL 4:** To unlock infrastructural constraints and ensuring maximum utilisation of publicly funded infrastructure.
- SE POL 5:** To capitalise on the presence of the railway station at Laytown and bus corridors throughout the plan area. Developing and implementing a cycle and pedestrian strategy to facilitate pedestrian and cyclist movements throughout the plan area.

Sustainable Heritage

- SH POL 1:** To promote the examination of how the area can capitalise on the significant natural heritage appeal and developing specific niche tourism products so as to create sustainable job growth in the tourism sector for the East Meath area and entice greater numbers of visitors to stay and spend.
- SH POL 2:** To ensure adequate water and wastewater infrastructure in the area thereby facilitating the development of the area whilst safeguarding the water quality and qualifying interests of the Boyne River and River Nanny and impacts on European environmental designated sites.

SH POL 3: To protect the importance of the Natura 2000 and environmentally designated sites within the plan area with particular reference to the coastline, beaches and connecting waterbodies and to ensure that any proposals for development or uses which could compromise the conservation objectives of these natural assets are carefully considered and subject to AA as required.

The Local Area Plan is the guiding document for development within the Plan area over the next 6 years. Environmental aspects have been considered throughout the plan-making process and have been incorporated into the Plan with the aim of improving the environment of the plan area. The Environmental Report is the primary element in the SEA process and is published alongside the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020.

1.7 Current State of the Environment

The Meath County Development Plan (CDP) 2013–2019 sets out the overall strategy for the proper planning and sustainable development of the county over a six year period. The plan has a critical role to play in ensuring that the needs of future population growth are planned for. The CDP settlement strategy has been informed by the Regional Planning Guidelines (RPGs) and the environmental sensitivities of the county. It is based on building strong urban centres while protecting the rural hinterlands. The plan also emphasises the need to protect the built heritage, unique landscape, natural heritage and biodiversity of the county for their intrinsic value and as a resource for the tourist economy of the future.

The designation of Bettystown-Laytown-Mornington East as a Small Town and Donacarney-Mornington as a Village is reinforced in the CDP settlement strategy with the towns and villages being targeted for consolidated growth. By consolidating development the towns and villages will develop in a self-sufficient manner, reducing commuting levels and ensuring sustainable levels of population and economic growth, while providing a full range of local services adequate to meet local needs.

Over the last 20 years, Bettystown-Laytown-Mornington East and Donacarney-Mornington have experienced unprecedented expansion in comparison with other settlements in the county. The majority of this development has been residential in nature, and comprising large housing estates. These estates reflect the role of towns and villages as dormitory settlements arising from improved rail and road links to Dublin City. Bettystown-Laytown-Mornington is designated as a town in the most recent census of population therefore the preparation of a local area plan for the area is a statutory requirement of Meath County Council. It is highlighted that Donacarney-Mornington East are included within the definition of Laytown-Bettystown-Mornington as a census town.

The plan area hosts a wealth of environmentally designated sites of national and international importance. It also incorporates a significant proportion of Meath's 10km of coastline which is of both environmental and tourism importance.

Chapter 5 of the Environmental Report describes in detail the current Environmental Baseline of the County using available environmental data. The current state of the environment and its evolution is described as well as any existing environmental problems affecting the area.



Figure 1: Local Area Plan Context Map

Table 3: Summary of Main Environmental Issues within the Plan Area

Topic	Environmental Issue/Pressures
Biodiversity, Fauna and Flora	<p>The natural heritage of County Meath is an important asset and a unique resource. Within the plan area there are a number of areas designated for protection under the Natura 2000 network. The County Meath Wetlands & Coastal Habitats Survey identified littering as a particular problem in and around the coastal sites, especially in the Bettystown/Laytown/Mornington. The area's proximity to Drogheda and north County Dublin mean that it is intensively used for recreation, particularly during summer months. The regular access and use of the beach and dune system in the form of motor vehicles, dog walkers and exercising of race horses - increases the risk of sand blow outs and subsequent erosion, degradation of dune system and impact on species.</p> <p>An apparent decline in the occurrence of rare/threatened and scarce plant species in the plan area and Co. Meath area can be attributed to a degradation of semi-natural habitats within the County that is due in part to changes in agricultural practices, but is also due to development pressures on the land, pressures that are increased by the plan area's close proximity to Dublin.</p> <p>Most relevant to the East Meath area, tourism and recreation pressures along the coast, which is highly sensitive, would not be managed in a combined way which could lead to the significant loss of protected habitats. The Natura Impact Report prepared separately identifies of the types of threats to the integrity of the European sites. These can then be related to the consequences of implementing the Local Area Plan to see if there is any risk of likely significant effects.</p>
Population and Human Health & Quality of Life	<p>There are environmental issues existing with regard to the current population of the plan area. The unprecedented growth of the past fifteen years has placed considerable strain on the areas ability to provide the physical and social infrastructure needed to support its increased population. The settlement pattern in the area has resulted in a pattern of unsustainable commuting which has been shown to have a negative impact on human health and quality of life.</p>
Soil & Geology	<p>Soil is lost annually through the development of agricultural land. The number of hectares, which are rezoned annually on a countrywide basis is not known, nor is the quantity of soil loss through surface sealing. Urban environments have greatly changed in Ireland with the centres of population and towns being subjected to depopulation with growth focused on the periphery of these areas. With urban expansion, agricultural land surrounding towns and settlements as well as green areas within them are subjected to increasing pressures.</p>

Topic	Environmental Issue/Pressures
Water	<p>The coastal facing settlements of Bettystown, Laytown, Mornington East, Donacarney and Mornington are mainly impacted though high sea levels extending up the watercourses which drain the inland area. This issue has been addressed on the Mornington Stream through the flood defence scheme, but causes some risk on the River Nanny, the Stameen Stream and to a much lesser extent the Brookside Stream. The beach and links area/dune systems offer enough protection to the seaward facing periphery against current extreme sea levels. Laytown is at most risk from extreme sea levels and the FEMFRAMS recommends some management measures in this regard.</p> <p>Groundwater status in the majority of the plan area as being 'Good' in 2010. However, there are areas of the plan where the groundwater resource is classified as being of high vulnerability. This presents significant challenges in terms of appropriate land use and the long term protection of vulnerable resources.</p> <p>In the plan area climate change will have the greatest impact in relation to the predicted increase in sea levels and the resulting increase in water levels on the watercourses draining into the River Boyne estuary, River Nanny estuary and the Irish Sea. Results from the OPW PFRA mapping for extreme coastal levels suggests that the most significant increase in risk is limited to the Mornington Stream. The sensitivity of the other watercourses to sea level increase appears to be much lower as a result of a more abrupt drop in level close to the coastal margin.</p>
Air and Climate	<p>Air quality within the Plan area is generally good. Increased greenhouse gas emissions have been linked with climate change resulting in increases in the intensity and frequency of flooding. Of particular concern is the high dependency on the use of the private car within the plan area.</p>
Material Assets – Transportation	<p>The residents of the plan area rely heavily on the use of private cars for transport. Travel patterns show that a high proportion of residents commute long distances by car to school, work, mostly to Dublin.</p> <p>There is a need to improve cycling and pedestrian facilities to provide for the sustainable development of the area. Increasing movements within the area in this regard should be a priority.</p>
- Waste Management	<p>Both public and private waste collectors have a responsibility with regards to meeting Waste Management targets. Increased facilities for recycling should be provided to reduce the levels diverted to landfill.</p>
- Water Supply	<p>The new East Meath, Drogheda and South Louth Water Supply Scheme will cater for the water services needs of East Meath, Drogheda and South Louth up to at least the year 2030. This will include the development of substantial groundwater sources in the East Meath Area to meet the projected water supply needs of the plan area and the Meath environs of Drogheda.</p>

Topic	Environmental Issue/Pressures
- Wastewater	Current capacity, including existing committed load, is sufficient to meet the needs of this LAP. However should development occur at a higher level than anticipated this could cause environmental damage from inadequacy in the capacity of both private and Local Authority systems and the assimilative capacity of receiving waters. Such pressure on infrastructure could affect river and estuarine water quality, ground water, and seawater.
- Energy	County Meath is overly reliant on external and non renewable energy sources. While renewable energy is to be welcomed any new wind farm development within the plan area must be carefully sited and designed so as to avoid negative impacts on the protected views and landscapes of the plan area.
Cultural Heritage	Currently the most immediate threat to the cultural heritage is development pressure which can lead to a loss or impairment of a feature of importance. Furthermore it is recognized that heritage has an economic value particularly in terms of tourism. However unsustainable tourism must be avoided and care taken to ensure a balance is achieved between the economic gain that cultural heritage can bring and the preservation of the structures / sites of interest.
Landscape	<p>Urban areas particularly within commuting distance of the capital have grown rapidly which has eroded the essential character of these towns. Generally the volume of large development within these towns is not in keeping with their character or scale and has created a series of autonomous developments with no reference to their rural setting. Also many settlements have grown at a rate that the historic centres have become detached from the majority of their populations and the relationship between urban areas and landscape setting has been largely lost.</p> <p>Given the significance of the coastal landscape within the plan area development must be considered in terms of its potential impact on landscape and views.</p>
Interrelationship	Cumulative impacts and interaction of above mentioned items can give rise to increased pressure on the environment. The impacts and interactions will obviously vary in extent and nature. In particular, issues regarding water quality, climate change and flooding cross a number of environmental areas. Population increase and changes in peoples' activities and settlement patterns can also impact on a wide range of the topics mentioned above.

1.8 Strategic Environmental Objectives, Targets and Indicators

Strategic Environmental Objectives (SEOs) assist in the prediction, description and monitoring of impacts on the environment as a result of the Local Area Plan. The Objectives are based on the overall strategy of the Planning Authority to safeguard the environmental integrity of the plan area and to develop in a sustainable manner. The Strategic Environmental Objectives are set out in Table 4 below.

Table 4: Strategic Environmental Objectives (SEOs)

Environmental Parameter		Objective
Biodiversity	B1	Conserve and where possible enhance the diversity of habitats and protected species avoiding irreversible losses
	B2	Promote measures to protect biodiversity by creating and improving habitats, where possible
	B3	Provide opportunities for sustainable public access to wildlife and wild places at appropriate locations
	B4	Avoid damage by development to designated wildlife sites and protected species, and associated ecological corridors/ linkages
Population	P1	Improve people's quality of life based on high-quality residential, working and recreational environments and on sustainable travel patterns
Human Health	H1	Minimise noise, vibration and emissions from traffic, industrial processes and extractive industry
Soil	S1	Maintain the quality of soils
	S2	Maximise the sustainable re-use of brownfield lands, and maximise and prioritise the use of the existing built environment rather than developing greenfield lands
	S3	Minimise the consumption of non-renewable sand, gravel and rock deposits
	S4	Minimise the amount of waste to landfill
Water	W1	Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems
	W2	Promote sustainable water use based on a long-term protection of available water resources
	W3	Reduce progressively discharges of polluting substances to waters
	W4	Mitigate the effects of floods and droughts including vulnerability to climate change. (extreme weather, sea level rise, coastal erosion)
Air	A1	Reduce all forms of air pollution
	A2	Minimise emissions of greenhouse gases to contribute to a reduction and avoidance of human-induced global climate change
	A3	Reduce waste of energy, and maximise use of renewable energy sources
	A4	Assess, plan and manage adaptation to climate change impacts
	A5	Reduce the need to travel

Environmental Parameter		Objective
Material Assets	MA1	Maximise use of the existing built environment
	MA2	Avoid flood risk and/or coastal erosion in selecting sites and zoning of lands for development
	MA3	Maintain water abstraction, run-off and recharge within carrying capacity (including future capacity) at environmentally sustainable levels.
	MA4	Maintain the quality of and access to assets such as aquifers, aggregates, ports, motorways, and all physical and social infrastructures.
Cultural Heritage	CH1	Promote the protection and conservation of the cultural, including architectural and archaeological, heritage
Landscape	L1	Conserve and enhance valued natural and historic landscapes and their character and features within them

1.9 Alternative Plan Scenarios

The SEA Directive requires the consideration of SEA Alternatives. This consideration is outlined in Chapter 7 of the Environmental Report.

Particular reference is drawn to the Core Strategy of the Meath County Development Plan which must be complied with. The Core Strategy allocates 100 residential dwellings to the plan area (80 unit housing allocation to Laytown-Bettystown-Mornington East and 20 unit housing allocations to Donacarney-Mornington) to be developed over its lifespan for the years 2013 – 2019 based on their designation within the County Settlement Hierarchy. This 100 residential dwelling allocation includes the 50% headroom.

The Core Strategy also states that the extent of committed units (*i.e.* units for which planning permission has been granted but which have not yet been built) must also be taken into account. There are currently 146 ha of available land zoned in the 2005 East Meath LAP at Laytown-Bettystown-Mornington East and Donacarney-Mornington which allows for residential development. Given that the Core Strategy of the Meath CDP 2013– 2019 allocates an additional 100 housing units over the period of this Plan in addition to the extant planning permissions ((1,414 no. units), it is evident that there is a significant excess of land zoned to accommodate residential development within the plan area.

Seven (7) undeveloped sites located within Laytown-Bettystown-Mornington East and 11 within Donacarney-Mornington were identified and assessed to achieve the most suitable sites for the preferred future development scenario to accommodate growth within the town as required by the Core Strategy.

Sites were rated based on determined factors and ranked in order of preference for zoning to residential use as part of the Local Area Plan preparation process. This assessment has been reviewed and considered in the context of alternatives by the Strategic Environmental Assessment to ensure that the identified environmental factors are in agreement with the findings. Each of the identified sites was assessed on the basis of environmental criteria of

the SEA Environmental Objectives as set out in Chapter 8 of this ER in order to identify any potential negative environmental effects in relation to these sites.

This assessment was undertaken to identify any potential issues in relation to these sites that may not have been identified as part of the initial alternatives assessment ranking procedure. This essentially is a thorough review of the sites from an environmental perspective. This assessment was used to inform the overall residential strategy for zoning of lands to serve the town.

1.10 Strategic Environmental Assessment of the Plan

The SEA aims to highlight the potential conflicts, if they are present, between the stated policies and objectives contained in the Plan with the Strategic Environmental Objectives. Furthermore, the assessment examines the potential impact arising from the implementation of the Plan's policies and objectives on sensitive environmental receptors.

The process of SEA and Local Area Plan formulation is an iterative one and environmental considerations have informed all stages of plan preparation carried out in order for the potential for significant adverse effects arising from implementation of the plan to be minimised. Where the environmental assessment identifies significant adverse effects, consideration is given in the first instance to preventing such impacts. Where prevention is not possible, the plan seeks to lessen or offset those effects through mitigation measures.

In some instances there is little or no relationship between the various Plan Policies/Objectives and the respective environmental receptor. Where this occurs no further discussion is deemed necessary. This has been determined through an initial screening of the Local Area Plan policies and objectives which ascertains if policies are likely to have a positive, negative or neutral impact on the environment. This screening process allows the assessment to focus more efficiently on the pertinent issues.

The preliminary phase of this assessment identifies the quality of the potential impact on the environment as a result of the policies and objectives of the Local Area Plan. Table 17 in the Environmental Report highlights where the impact may be either potentially positive (green); neutral (white); potentially negative (yellow); or uncertain (blue). Where a neutral impact is identified no further discussion is deemed necessary. However it is acknowledged localised issues may arise depending on site specific issues and the type of development proposed. The assessment contained herein deals with strategic issues alone, for potential localised impacts the Mitigation section contained in Chapter 9 should be consulted.

It has been determined that there are a number of policies/objectives where the impact is potentially negative. The significant issues are discussed in the following sections. A comprehensive and detailed set of mitigation measures are provided in Chapter 9 which effectively reduces or eliminates identified negative impacts. Similarly, monitoring the implementation of the plan, as discussed in Chapter 10, will ensure that if any negative impact becomes a reality it will be identified at an early stage and appropriate actions taken by the relevant authority/agency to remedy the situation.

In general terms the Plan, in its current form will have a positive effect on the environment as a whole.

1.11 Mitigation Measures

While every effort will be taken to ensure that the impact of the plan on the environment is neutral to positive, certain unavoidable negative impacts may occur as a result of the implementation of the plan. The Environmental Report details mitigation measures to reduce or eliminate identifiable adverse impacts.

Similarly, monitoring of the plan, in accordance with the Planning and Development Act, 2000 – 2011 will incorporate proposals to monitor various environmental receptors. A schedule of monitoring and reporting is proposed in order to ensure that any unforeseen negative impact is identified at the earliest opportunity and subsequently appropriate mitigation measures are put in place to eliminate or at a minimum limit the level of impact to an acceptable degree. Environmental Indicators, as prescribed in the EPA publication “Ireland’s Environment 2012- An Assessment” are provided where relevant to this plan and presented as a yardstick against which the plans success can be monitored.

In general terms, all proposals for development will be required to have due regard to the environmental considerations outlined in the Local Area Plan. Proposals for development which are deemed contrary to the objectives and policies contained within the Plan will not normally be permitted, and if permitted, not without the appropriate site and development specific mitigation measures. In addition, certain individual applications for developments within the County may be subject to individual Environmental Impact Assessments and Appropriate Assessments.

1.12 Local Area Plan Monitoring

Monitoring of the Local Area Plan and its implications on the environment is paramount to ensure that the environment of the plan area is not adversely affected through the implementation of the plan.

While considerable environmental data is directly available to the County Council such as water quality, recycling rates *etc.*, other sources of information will be accessed to provide a comprehensive view of the effect of the Plan. In this regard the Local Authorities will work with other agencies with environmental mandates to gather data for the purposes of monitoring the implementation of the Plan. Therefore, while monitoring specific elements of the environment is not strictly the preserve of the Council, the Council will continue to liaise and work with the Environmental Protection Agency, The National Parks and Wildlife Service *etc.*, as well as others in the pursuit of environmental conservation and protection through existing environmental monitoring procedures.

It is proposed to base monitoring on a series of indicators which measure changes in the environment, especially changes which are critical in terms of environmental quality, for example water or air pollution levels.

The indicators aim to simplify complex interrelationships and provide information about environmental issues which can be easily understood.

2.0 Introduction and Background

Pursuant to the provisions of Sections 18, 19 and 20 of the Planning and Development Acts 2000 to 2013 Meath County Council prepared a Local Area Plan (LAP) for Bettystown, Laytown, Mornington East, Donacarney and Mornington.

Pursuant to Article 14B of the Planning and Development (SEA) Regulations 2004 and 2013 and Articles 6(3) and (4) of the Habitats Directive, Meath County Council have also carried out a Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) as part of the Local Area Plan preparation process.

Consequently, this Environmental Report has been prepared in tandem with the preparation of the Local Area Plan. In addition the Habitats Directive Assessment has been carried out in parallel with the preparation of the LAP and SEA and is presented as a separate document.

2.1 Introduction and Terms of Reference

The EU Directive on Strategic Environmental Assessment or SEA (Directive 2001/42/EC) came into force in July 2001. The SEA Directive was subsequently transposed into Irish law through S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 and S.I. No. 436 of 2004 (Planning and Development (Strategic Environmental Assessment) Regulations 2004 as amended by S.I. No. 200 of 2011 (European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011) and S.I. No. 201 of 2011 (Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011) respectively.

Under this legislation member States of the EU are obliged to assess the likely significant environmental effects of plans and programmes prior to their adoption thus providing for the assessment of strategic environmental considerations at an early stage of the decision making process.

Article 1 of the SEA Directive states:

“The objective of this directive 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.”

The Directive came into effect in an Irish context in July 2004. Since then SEA must be prepared for plans and programmes, including:

- Regional Planning Guidelines;
- City and County Development Plans;
- Development Plans made by Town Councils, where the population of the area is 10,000 or more; or
- Local Area Plans for towns with a population of 5,000 or more.

The Regulations state that SEA is mandatory for certain plans while screening for SEA is required for other plans that fall below the specified thresholds. Where plans or programmes fall below or outside of the specified thresholds, a screening report is required to be carried out to determine whether the making and implementation of a particular plan will or will not, lead to significant environmental consequences for the plan area.

Laytown-Bettystown-Mornington is designated as a town in the most recent census of population therefore the preparation of a local area plan for the area is a statutory requirement of Meath County Council. It is highlighted that Donacarney-Mornington is included within the definition of Laytown-Bettystown-Mornington as a census town. The location of the LAP area within the context of the County is illustrated in Map A.

The following document is an Environmental Report prepared as part of the Strategic Environmental Assessment (SEA) of the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020. The purpose of this Environmental Report is to identify, describe and evaluate the likely significant effects on the environment of implementing the proposed Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020 and should be read in conjunction with the Plan. The aim of the Environmental Report is to identify:

- Existing environmental issues in the Plan area;
- The likely significant effects on the environment resulting from implementation of the Local Area Plan;
- How the impact(s) on the environment can be prevented or reduced; and
- How to monitor environmental impacts over the lifetime of the Local Area Plan.

This Environmental Report forms an integral part of the SEA process which is carried out in parallel with the preparation of the Local Area Plan and of the Appropriate Assessment of the Plan. The SEA review process also comprises a Scoping Report, a Non-Technical Summary and an Environmental Statement. The Scoping Report was prepared in order to determine the baseline environmental parameter data and issues to be considered in the Environmental Report – this is discussed in more detail in Chapter 3.

The purpose of this Environmental Report is to document the process that has been followed in carrying out the SEA. The SEA process has guided the preparation of objectives and development scenarios for the Local Area Plan with an ultimate goal of achieving sustainable development in the area, and the avoidance of negative impacts on the environment. This Environmental Report provides an explanation of the process of conducting the SEA, identifies the key environmental effects, highlights mitigation and monitoring measures, and provides an opportunity for interested parties to comment on the environmental issues associated with the new Plan.

2.2 The Plan Area

The current Local Area Plan (LAP) for East Meath dates from 2005. Meath County Council proposes to prepare a new LAP for a redefined boundary area to include the settlements of Bettystown, Laytown, Mornington East, Donacarney and Mornington. The remaining towns which were included within the 2005 LAP will now be included by variation within the Meath County Development Plan 2013-2019.

The LAP will shape the future development of Bettystown, Laytown, Mornington East, Donacarney and Mornington. It will identify zones where different land uses are considered to be appropriate.

Bettystown, Laytown, Mornington East, Donacarney and Mornington have developed mainly on the basis of dormitory towns and a facilitating commuting primarily to Dublin. None of these towns and villages are designated in the Regional Planning Guidelines as being strategic growth centres.

The LAP will allow for a period of consolidation of local facilities and infrastructure to serve the local population, facilitating more sustainable communities as envisaged in the Core Strategy of the County Development Plan.

According to the most recent 2011 CSO figure the population of the area was recorded as 10,889 persons. Almost 63% of the population was recorded as aged between 16 and 64 years. Having regard to the intensity of development and construction since 2011 and notwithstanding the current economic climate, it is recognised that the population of the LAP area is not likely to be much higher than that of the 2011 Census figure.

The Core Strategy aims to secure the sustainable growth of towns and villages. Existing and new neighbourhoods should be connected, legible and well designed with a variety of dwelling sizes and types. Good design and quality of material used will deliver a good quality of the built environment.

Bettystown, Laytown, Mornington East, Donacarney and Mornington have a number of designated sites both of EU and national importance. These sites form part of the Natura 2000 European network of designated sites and are safeguarded under legislation.

2.3 Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020

This LAP has been prepared under the provisions of the Planning and Development Acts 2000-2013. The LAP consists of a written statement and maps. Once adopted, the LAP will provide a 6 year statutory framework for guiding development and will assist in ensuring that future development is appropriately managed and occurs in a sustainable manner. The full Plan area is shown in Map A.

The vision statement for Bettystown, Laytown, Mornington East, Donacarney and Mornington as set out in the Local Area Plan is:

The Strategic Vision for Bettystown, Mornington East, Laytown, Donacarney and Mornington is to create a place to live, work and visit which is appealing, distinctive and sustainable, with minimal impact on the environment and drawing on the unique coastal setting.

This vision statement for the plan area is backed up by three development themes which aim to provide a foundation for the Local Area Plan policies and objectives.

The three Development Themes are:

Sustainable Communities

- SC 1:** To facilitate the development of new housing in accordance with the targets set out in the County Settlement Hierarchy and Core Strategy in the Meath CDP 2013-2019.
- SC 2:** To ensure the availability of community services, recreation and amenity facilities for the existing and future population within the development envelope and to resist the future provision of such services at a remove from central sites.
- SC 3:** To encourage development in a sequential manner in accordance with role and function.
- SC 4:** To promote a strong sense of community spirit and civic pride.

Sustainable Economies

- SE 1:** To strengthen the economy of each Small Town and Village through attracting new investment in employment, services, administration, retail and tourism uses appropriate to their economic role in the Economic Strategy for the County.
- SE 2:** To strengthen the role of Laytown/ Bettystown as a Level 3 retail centre thereby sustaining its ability to attract new businesses and meeting the retail and service needs of the area in addition to facilitating a high quality of urban design to encourage diverse building styles reflecting the character and setting of the coastal location thereby providing a pleasant environment for shopping, visiting and doing business.
- SE 3:** To address the extent of commuting from the area by the resident workforce by facilitating the creation of sufficient local employment opportunities to cater for the existing and future resident population.
- SE 4:** To unlock infrastructural constraints and ensuring maximum utilisation of publicly funded infrastructure.
- SE 5:** To capitalise on the presence of the railway station at Laytown and bus corridors throughout the plan area. Developing and implementing a cycle and pedestrian strategy to facilitate pedestrian and cyclist movements throughout the plan area.

Sustainable Heritage

- SH 1:** To promote the examination of how the area can capitalise on the significant natural heritage appeal and developing specific niche tourism products so as to create sustainable job growth in the tourism sector for the East Meath area and entice greater numbers of visitors to stay and spend.
- SH 2:** To ensure adequate water and wastewater infrastructure in the area thereby facilitating the development of the area whilst safeguarding the water quality and qualifying interests of the Boyne River and River Nanny and impacts on European environmental designated sites.

SH 3: To protect the importance of the Natura 2000 and environmentally designated sites within the plan area with particular reference to the coastline, beaches and connecting waterbodies and to ensure that any proposals for development or uses which could compromise the conservation objectives of these natural assets are carefully considered and subject to AA as required.

The Local Area Plan will be the guiding document for development within the Plan area over the next 6 years.

2.4 SEA Definition and Role

Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant effects of implementing a plan or programme. It is undertaken during the preparation period of the plan or programme, and before a decision is made to formally adopt it. The SEA process thereby assists in and improves the quality of the plan making process by:

- Facilitating the identification and appraisal of alternative plan strategies;
- Raising awareness of the environmental impacts of the plan's implementation; and
- Encouraging the inclusion of measurable targets and indicators to aid monitoring.

The objective of SEA 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 throughout the member states of the EU.

2.5 Legislative and Guidelines Context

In 2001 the European Community passed the Strategic Environmental Assessment (SEA) Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment. This piece of legislation established the necessity for SEA to be carried out on plans and programmes, including those of land use planning.

Article 1 of the SEA Directive states:

The objective of this directive 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.

The EU Directive on Strategic Environmental Assessment or SEA (Directive 2001/42/EC) came into force in July 2001. The SEA Directive was subsequently transposed into Irish law through S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 and S.I. No. 436 of 2004 (Planning and Development (Strategic Environmental Assessment) Regulations 2004 as amended by S.I. No. 200 of 2011 (European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011) and S.I. No. 201 of 2011 (Planning and

Development (Strategic Environmental Assessment) (Amendment) Regulations 2011) respectively.

In terms of guidance relating to this legislation the EPA published “Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland – Synthesis report” in 2003. Further to this in 2004, the Department of the Environment, Heritage and Local Government published “Implementation of SEA Directive 92001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment –Guidelines for Local Authorities and Planning Authorities” and the Environmental Protection Agency “EPA Pack” (updated in 2013) have guided this review process.

2.6 SEA Process

The process of carrying out the Strategic Environmental Assessment of the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020 is documented throughout this Environmental Report. The methodology employed is discussed in detail in Chapter 3. The structure of this Environmental Report (from hence referred to as the Report), which is the result of the Strategic Environmental Assessment, is in accordance with Article 1 of the Directive which provides a broad basis for the content of the environmental report. This report therefore identifies, describes and evaluates the likely significant effects on the environment of implementing the plan’s objectives and policies. This report also identifies the reasonable alternatives and in broad terms assesses the alternative ‘philosophies’ guiding the preparation of the Local Area Plan. Annex 1 of the EU Directive (Directive 2001/42/EC) details the information to be included in the report and in broad terms this Environmental Report provides the following:

- An outline of the content and main objectives of the Local Area Plan and the relationship between this and other relevant plans or programmes;
- The environmental characteristics of the area affected by the plan;
- Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (Directive for the Conservation of Wild Birds) and 92/43/EEC (Conservation of Natural Habitats and of Wild Fauna and Flora);
- The environmental protection objectives, established at International, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;
- The likely significant effects on the environment, including issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage and landscape;
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;
- An outline of the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;
- A description of the measures envisaged concerning monitoring in accordance with Article 10;
- A non-technical summary of the information provided under the above headings.

2.7 Integration of the Local Area Plan, SEA and Habitats Directive Assessment

The legislation and guidelines governing the SEA process state that the processes of preparing the Local Area Plan, SEA and Appropriate Assessment (AA) should be integrated and prepared in an iterative manner. The Environmental Report outlines how the SEA process was carried out in tandem with the preparation of the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020 and its accompanying Natura Impact Report (NIR). The SEA process ensured that the Plan was informed by environmental considerations from the outset. The SEA Team were fully involved in the preparation of policies and objectives and were in a position to make suggestions throughout the process of plan preparation to ensure that environmental considerations and environmental effects were considered in the formulation of strategic goals and development objectives. Figure 2 overleaf summarises the integrated nature of the LAP preparation and SEA process.

2.8 Implications of SEA for the Plan

This Environmental Report, which identifies the likely significant effects on the environment of implementing the Local Area Plan should be read in conjunction with the Local Area Plan and the Natura Impact Report. The results of the Environmental Report and Habitats Directive Assessment must be fully taken into account before the Local Area Plan is adopted.

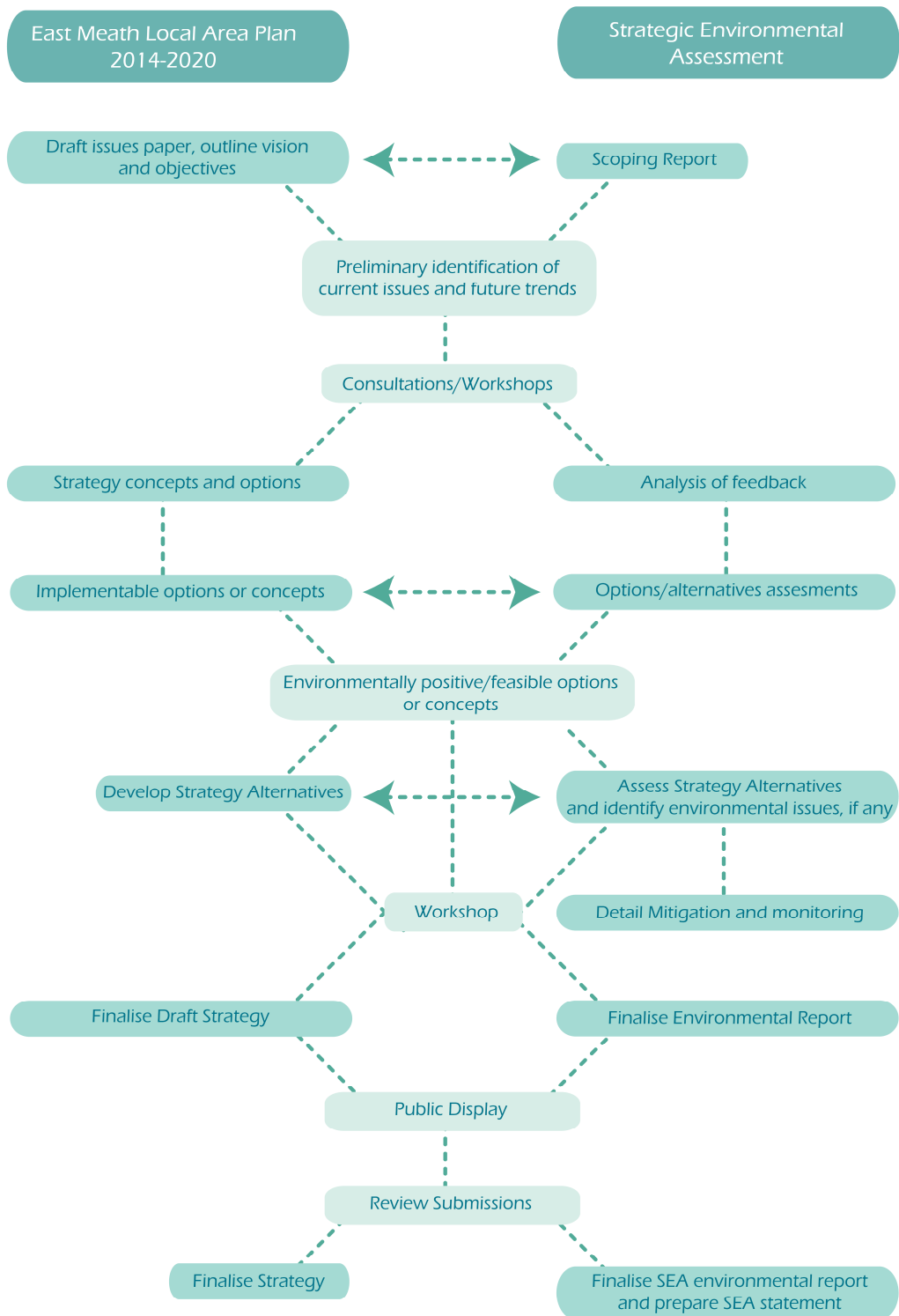


Figure 2: Integrated Local Area Plan and SEA Process

3.0 Methodology

3.1 Introduction

Two amending SEA Regulations were signed into Irish law on 3rd May 2011, amending the original SEA Regulations: European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011, (S.I. No. 200 of 2011), amending the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004), and Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011, (S.I. No. 201 of 2011), amending the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).

The methodology used to carry out the Strategic Environmental Assessment (SEA) of the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020 reflects the requirements of the SEA Directive (2001/42/EC) and SEA Regulations (S.I. 435 & 436 of 2004 and as amended by S.I. 200 & 201 of 2011) and other SEA guidance documentation. The requirements of the recent European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), have also been taken into account in implementing the Plan. These Regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in the CJEU judgements.

Guidance documentation utilised in the preparation of this SEA includes *“Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities”* published by the Department of the Environment, Heritage and Local Government, *“Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland – Synthesis Report”*, published by the EPA in 2003 and the EPA SEA Pack 2013.

This section of the report outlines the key stages in the development of the assessment in accordance with the Directive and the aforementioned regulations.

Stage	Description
Screening	The screening process is the first stage of the Strategic Environmental Assessment. Screening assesses the need to undertake a Strategic Environmental Assessment. Under the Planning and Development Act 2000-2013 full Strategic Environmental Assessment is mandatory for the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020. Therefore no Screening was undertaken.
Scoping	The Scoping of the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020 was carried out in accordance with Article 5 (4) of the SEA Directive (2001/42/EC). The principal purpose of the Scoping stage is to decide upon the

Stage	Description
	range of issues and level of detail to be included in the Environmental Report. An overview of the relevant environmental issues requiring further analysis are given and consideration in the Environmental Report and ultimately in the Local Area Plan itself. By highlighting some of the significant issues at an early stage, it ensures that the issues are firmly to the forefront when considering each of the policies and objectives of the Plan and reduces the possibility of relevant issues not being addressed.
Consultation with the Environmental Authorities	Submissions were received: <ul style="list-style-type: none"> • Environmental Protection Agency • Department of Communications, Energy and Natural Resource
Scoping Report	Submissions received from Environmental Authorities were reviewed and incorporated into the process where warranted.
Preparation of ER & Local Area Plan	<ul style="list-style-type: none"> • A multi disciplinary team was established to create policy consistent documents and to examine the effects on the environment of implementing the objectives and policies. • Objectives created in Local Area Plan assessed in ER and Development options examined. • Feedback from on-going Plan preparation process & ER preparation. • Mitigation measures discussed and chosen. • Monitoring incorporated into existing methods.
Monitoring the Local Area Plan	Monitoring significant environmental effects over the lifetime of the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020.

Table 5: Key Stages of SEA

3.2 Screening

Screening assesses the need to undertake a Strategic Environmental Assessment. Under the Planning and Development Act 2000-2013 full Strategic Environmental Assessment is mandatory for the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020. Therefore no Screening was undertaken.

3.3 Scoping

The Scoping of the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020 was carried out in accordance with Article 5 (4) of the SEA Directive (2001/42/EC).

The principal purpose of the Scoping stage is to decide upon the range of issues and level of detail to be included in the Environmental Report. An overview of the relevant

environmental issues requiring further analysis are given and consideration in the Environmental Report and ultimately in the LAP itself. By highlighting some of the significant issues at an early stage, it ensures that the issues are firmly to the forefront when considering each of the policies and objectives of the Plan and reduces the possibility of relevant issues not being addressed.

The scoping aspect involved consultation with the statutory consultees, providing an opportunity to comment on the highlighted issues and the proposed methodology. Under the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 the list of statutory consultees includes:

- The Environmental Protection Agency.
- The Minister for Environment, Community and Local Government.
- The Minister for Arts, Heritage and Gaeltacht Affairs.
- The Minister for Agriculture, Food and the Marine.
- The Minister for Communications, Energy and Natural Resources.
- Any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a plan, – in this case counties includes Fingal, Kildare, Offaly, Westmeath, Monaghan, Cavan, Louth and Drogheda.

In compliance with the SEA (Amendment) Regulations 2011 Meath County Council gave notice to the aforementioned Environmental Authorities of its intention to prepare a new LAP for the area. A Scoping Report was prepared in order to facilitate consultation with statutory consultees and consultees were requested to review the content of the report and to comment on aspects they believe may require particular emphasis in the Local Area Plan and associated SEA Environmental Report and Appropriate Assessment documentation.

3.4 Statutory Consultation

Submissions were received from the following statutory consultees:

- Environmental Protection Agency
- Department of Communications, Energy and Natural Resource
- Department of Agriculture, Food & the Marine

Table 6 below outlines the issues raised and the response or how the issue was addressed within the preparation of the Environmental Report:

Consultee and Comments	Response
Environmental Protection Agency	
Acknowledges Scoping for Local Area Plan and draws attention to EPA Checklist, Guidance on SEA and SEA Scoping Pack as well as updated SEA Regulations / Circulars. The Agency also lists the Environmental Authorities to be notified.	Noted.
EPA makes specific comments that the Plan should provide for: <ul style="list-style-type: none"> • Protection and improvement as appropriate of water quality (including both surface and ground water) • Protection of designated sites (national and EU), undesignated 	Noted.

<p>sites and ecological corridors / linkages</p> <ul style="list-style-type: none"> • Appropriate zoning and development of lands to ensure sustainable development in accordance with the Regional Planning Guidelines. • In particular the <i>Planning System and Flood Risk Management Guidelines for Planning Authorities</i> (OPW / DEHLG, 2009) should be fully integrated as appropriate. • Consideration should be given in the scoping report to including a map showing the proposed Plan area and highlighting the key environmental sensitivities within and adjacent to the Plan area, as it is unclear in the scoping report what the issues are. • In <i>Section 2.6 Plan Hierarchy</i>, consideration should be given to updating the table of relevant Plans and Programmes to refer to the new guidance <i>Methodology for Local Authority Renewable Energy Strategies</i> (SEAI, 2013). The reference to the EPA's Ireland's Environment Report should be updated to reflect the most up to date publication for 2012. • In addition, there would be merits in referring to the Greater Dublin Area Draft Transport Strategy (National Transport Authority), the Louth County Development Plan and also the Pollution Reduction Programme for the Balbriggan / Skerries Shellfish waters. • Chapter 3 – Environmental Receptors and Key Environmental Issues in the Plan area It is noted that there appears to be a significant excess of zoned lands within the Plan above what is required for development over the Plan period. Consideration, in this context, should be given to phasing, re-zoning, de-zoning, and strategic land reservation of available excess lands to ensure sustainable development is promoted in accordance with the core strategy approach advocated by the Regional Planning Guidelines and the County Development Plan. • While the list of Natura 2000 sites to be assessed for likely significant effects is noted in Section 3.3 Flora and Fauna (Biodiversity), consideration should be given to describing what distance the zone of influence of the plan area covers. • In Section 3.5, consideration should be given to providing specific detail on the actual baseline environment within/adjacent to the Plan area. It is noted that the water quality status of the River Nanny, adjacent to the Plan area is currently classified as being Poor under both the EPA and WFD classifications which should be referred to. Water quality status is also listed as being of poor status. 	<p>Noted.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p> <p>Agreed.</p>
<p>EPA notes that consideration should be given to amending a number of SEOs in Table 2.7 Strategic Environmental Objectives (of the <i>SEA Scoping Report</i>) as follows:</p> <ul style="list-style-type: none"> • Amend B1 "Conserve and where possible enhance the diversity of habitats and protected species..." 	<p>Agreed.</p>

<ul style="list-style-type: none"> Amend B3 <i>“Provide opportunities for sustainable public access to wildlife and wild places at appropriate locations”</i> Amend B4 <i>“Avoid damage by development to designated wildlife sites and protected species, and associated ecological corridors/linkages”</i> Amend S2 <i>“...maximise and prioritise the use of existing environment rather than developing greenfield lands”</i> Amend MA2 <i>“Avoid flood risk and/or coastal erosion in selecting sites and zoning of lands for development”</i> Amend MA3 <i>“Maintain water abstraction, run-off and recharge within carrying capacity (including future capacity) at environmentally sustainable levels”</i> 	<p>Agreed.</p> <p>Agreed.</p> <p>Agreed.</p> <p>Agreed.</p> <p>Agreed.</p>
Department of Communications, Energy and Natural Resources: Geological Survey of Ireland	
<p>Acknowledges Scoping for Local Area Plan.</p> <p>Draws attention to online resource for Geological Heritage Data.</p> <p>Offer to discuss and possible mitigation measures, if applicable.</p> <p>Notes geological data gaps.</p> <p>GSI would welcome complementary data collected as well as copies of reports detailing any site investigation be made available to GSI.</p>	<p>Noted.</p>
Department of Agriculture, Food & the Marine: Climate Change Section	
<p>Acknowledges Scoping for Local Area Plan. No submissions or observations in regard to same</p>	<p>Noted.</p>

Table 6: Summary of Scoping Comments

3.5 Non- Statutory Public Consultation

Pre-Draft Non Statutory Public Consultation

The preparation of the LAP included a number of opportunities for members of the public's involvement and input by making written submissions on the LAP. Section 20 of the Planning Act states that:-

‘a Planning Authority shall take whatever steps it considers necessary to consult the Minister and the public before preparing’... “a local area plan, including consultations with any local residents, public sector agencies, non-governmental agencies, local community groups and commercial and business interests in the area’.

The following measures were taken to consult with the public at this stage of the plan making process.

- An Issues Paper was prepared to stimulate, guide and encourage debate and discussion on the issues in the community and wider environs, to flag important factors and to

encourage and assist the public in making submissions and observations to the Planning Authority in respect of the preparation of the Draft LAP.

- A public notice was placed in the Meath Chronicle stating that a non-statutory pre-draft consultation phase was taking place regarding the new LAP. The intention of this notice was to invite interested parties or individuals to make submissions, observations, suggestions or forward ideas in advance of the preparation of the Draft Local Area Plan. Submissions/observations were to be made either by post or e-mail over a 4 week period.
- A public information event took place in Coláiste na hInse to further engage the general public and other stakeholders in the consultation process. Representatives of the Council were in attendance to answer queries with respect to the LAP process and the specific LAP area.
- The posters from the public information event were available to view on the County Council's website.
- A pro-forma form was prepared for people to make submissions, for convenience.
- In advance of the public information open day, an informal briefing session was held with the Slane Area Councillors.

These measures assisted in providing insights into the local issues and helped to shape the Draft LAP and Environmental Report.

Draft Stage & Alterations to Draft LAP

The Draft LAP was published and placed on display for a minimum 6 weeks during which time submissions and observations were invited from the public and the interested parties. A report summarising the issues raised and the Manager's recommendation was presented to the Elected Members not later than 12 weeks after publication of the notice. The Elected Members considered the report and amended the Draft LAP. Material Alterations to the Draft LAP then went on public display for a further period of not less than 4 weeks. A report summarising the issues raised and the Chief Executive recommendations (formerly referred to as 'manager's recommendations') was presented to the Elected Members and agreed by resolution at the council meeting on 07th July 2014. The LAP came into effect four weeks from that date.

The Strategic Environmental Assessment Environmental Report and Appropriate Assessment Natura Impact Report accompanied the draft LAP and amendments to the Draft LAP during the public display periods. Submissions with regards to the SEA were received from the EPA.

3.6 Environmental Baseline Data

The baseline data, assists in assessing the current state of the environment, facilitating the identification, evaluation and subsequent monitoring of the effects of the plan. Thus, this information creates a platform whereby existing problems relevant to the Plan area can be quantified (where possible) or qualified thereby ensuring that the implementation of the Plan does not exacerbate these problems.

Baseline data has been collected based on the various broad environmental topics described in the SEA Directive *i.e.* biodiversity, population, human health, fauna, flora, soil, water, air, climate factors, material assets, cultural heritage including architectural and archaeological

heritage and landscape. The Directive requires that information be focused upon relevant aspects of the environmental characteristics of the area likely to be significantly affected by the plan and the likely change, both positive and negative terms where applicable. The baseline data was collated from currently available, relevant data sources the SEA Directive does not require major new research to be carried out. Where deficiencies or gaps in the information available are identified this is noted.

3.7 Environmental Report

The type of information to be provided in the Environmental Report is set out in Annex I of the SEA Directive - reproduced in Schedule 2B of the Planning and Development Regulations 2001 (as inserted by article 12 of the Planning and Development (Strategic Environmental Assessment) Regulations 2004). This report contains the sections as outlined in Table 7.

Section	Description
Non-Technical Summary	A brief summary of the Environmental Report, its main points and conclusions.
Introduction	Provides a description of the type of plan involved and a summary of its key aims and objectives. The purpose of the SEA process, SEA requirements, its benefits and how the LAP and Environmental Reports have progressed are outlined
SEA Methodology	Highlights the steps taken in preparation of the SEA, the methods used and technical difficulties encountered.
Relationship of the Plan with Other Relevant Plans and Programmes	The relationship of the LAP to other relevant plans and programmes is highlighted.
Baseline	A description of the current environment of the plan area is provided, highlighting any existing environmental problems in the Plan area and outlining evolution of the environment in the absence of the new Plan. This exercise results in a comprehensive baseline against which the likely effects of implementing the new LAP can be examined.
Strategic Environmental Objectives	A number of environmental protection objectives which have been established at international, EU or national Level and are relevant to the plan are listed. Following this a description of how the objectives and any environmental considerations have been taken into account in the preparation of the Plan.
Alternatives	An assessment of proposed development alternatives in the Plan area are considered at this stage. Scenarios are tested against the environmental objectives and the most appropriate strategy is selected.
Assessment	The proposed LAP policies and objectives are examined in terms of their potential effects on the various Environmental parameters.
Mitigation Measures	Where potentially significant adverse effects are discovered, measures to prevent, reduce or offset these effects are proposed and integrated into the LAP.
Monitoring	Proposals for monitoring the significant effects of the LAP on the environment are put forward. A number of indicators of change and achievable targets are proposed and monitoring arrangements detailed.

Table 7: SEA Report Structure

3.8 Consideration of Alternatives

The SEA Directive (Article 5) recommends that alternative development scenarios for the plan are included for assessment. Alternatives need to be *'realistic and capable of implementation'* and should represent a range of different approaches within the statutory and operational requirements of the particular plan.

The consideration of alternatives was restricted by the statutory requirement to comply with the Core Strategy of the Meath County Development Plan 2013-2019. On this basis, the evaluation of residentially zoned lands identified 7 undeveloped sites located within Laytown-Bettystown-Mornington East and 11 within Donacarney-Mornington which were identified and assessed as the most suitable sites to achieve the preferred future development scenario to accommodate growth within the town as required by the Core Strategy. The sites were ranked based on stated criteria and the most favourable sites to meet the yield required were identified for zoning.

An assessment was undertaken to identify any potential issues in relation to these sites that may not have been identified as part of the initial alternatives assessment ranking procedure. This essentially is a thorough review of the sites from an environmental perspective. This assessment was used to inform the overall residential strategy for zoning of lands to serve the town.

3.9 Environmental Assessment of the Local Area Plan

The assessment described within this Environmental Report aims to highlight the potential conflicts, if they are present, between the stated policies and objectives contained in the Plan with the Strategic Environmental Objectives. Furthermore the assessment examines the potential impact arising from the Plan's implementation of its policies and objectives on sensitive environmental receptors.

Key to assessing the policies and objectives of the Plan is setting a specific set of environmental objectives for each of the environmental topics. The objectives are provided in Chapter 6 and include all aspects of the environment such as Human Beings, Flora and Fauna, Soil, Water, Air and Climate Change, Noise, Material Assets, Cultural Heritage including Architectural and Archaeological Heritage and Landscape.

It is worth reiterating that the process of SEA and Local Area Plan formulation is an iterative process and as such environmental considerations have informed all stages of plan preparation in order for potential for significant adverse effects arising from plan implementation to be minimised. Nonetheless, it is possible that some individual plan objectives will potentially lead to adverse effects of varying severity. Where the environmental assessment identifies significant adverse effects, consideration is given in the first instance to preventing such impacts; where this is not possible for stated reasons, to lessening or offsetting those effects.

In accordance with SEA guidelines the assessment identifies ‘impact’ under the quality of impact using the following terms:

Potential Positive impact:	A change which improves the quality of the environment.
Potential Neutral impact:	A change which does not affect the quality of the environment.
Potential Negative impact:	A change which reduces or lessens the quality of the environment.
Uncertain impact:	The nature of any impact cannot be ascertained at this stage.

The initial stage aims to ascertain the quality, if any, of the potential impact. Each of the Plan’s policies and objectives have been screened for their impact and where a neutral impact is noted no further discussion is provided within this report. This format allows for the ER to focus on the negative and positive impacts and proceed to a discussion on their significance and duration. Thus it is a more robust, more focused approach to understanding the potential impact associated with the Plan’s implementation.

Finally where it has been determined that a policies/objectives may potentially result in a negative impact on an environmental receptor appropriate level mitigation measures are proposed.

Preparation of the Local Area Plan has followed an iterative process to date, involving the environmental and forward-planning team of Meath County Council and RPS, the public, Meath County Council councillors, statutory consultees and the SEA and AA team.

3.10 Mitigation

Section (g) of Schedule 2B of the SEA Regulations require information on the mitigation measures that will be put in place to minimise/eliminate any significant adverse impacts due to the implementation of the Local Area Plan. Chapter 9 of this document highlights the mitigation measures that will be put in place to counter identified significant adverse impacts due to the implementation of the Plan. As stated previously the formulation of the Plan and the development of the SEA is an iterative process and therefore many of the potential negative aspects of the Plan have been removed. Thus the objectives and policies contained within the Plan are considered robust and environmentally sustainable. However some unavoidable residual issues may remain and therefore mitigation measures are required. Chapter 9 details the mitigation measures necessary to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan.

3.11 Monitoring

Article 10 of the SEA Directive sets out the requirement that monitoring is to be carried out of the significant environmental effects of the implementation of the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020 in order to identify at an early stage any unforeseen adverse effects and to be able to undertake appropriate remedial action.

This section outlines the monitoring requirements for the Bettystown, Mornington East, Laytown, Donacarney and Mornington Local Area Plan 2014-2020. Methods of monitoring and indicators of change in the environment have been proposed with set targets to be reviewed over the duration of the LAP.

3.12 Technical Difficulties Encountered

A sizeable volume of information was available given the data collected in the recent review of the County Development Plan. Recent National and County level studies on various aspects of the environment (water, cultural heritage *etc.*) also resulted in a significant amount of data becoming available. However gaps do remain in information available, for instance in relation to complete ecological coverage, *e.g.* habitats, trees, hedgerows *etc.*

3.13 Report Preparation

This report has been prepared by Brady Shipman Martin, Planning and Environmental Consultants and Scott Cawley Ecologists on behalf of Meath County Council.

4.0 Review of Relevant Policies Plans and Programmes

4.1 Introduction

The Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020 is framed within a hierarchy of spatial plans which range from the international down to site specific level. These plans are formed by International, National and Regional level policy guidelines. This hierarchy of plans, programmes, policies, strategies, *etc.* sets the legislative and policy framework by which the Local Area Plan must be formulated. The National, Regional and County strategies and policies play a central role in establishing higher level agendas and the county level plan objectives. The Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020 is required to conform to and translate the objectives of these higher levels plans, in particular the Meath County Development Plan 2013-2019, to a town level basis.

The SEA Directive requires that the SEA process should include a review and discussion of other plans or programmes, which are associated to and concern the assessment of the Local Area Plan. This could include plans or programmes in the same geographical area or in the same sector at different levels. Paragraph (e) of Schedule 2B of the Planning and Development (SEA) Regulations 2004 states that the SEA Report must contain: 'the environmental protection objectives, established at International, European Union or National level, which are relevant to the plan, and the way those objectives and any environmental considerations have been taken into account during its preparation'.

This chapter summarises the International, National, Regional and local legislation and policy documents, strategies and guidelines that are relevant to this SEA process and the East Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020. The purpose of this review is to take into consideration the contextual legislative and policy framework to which the Local Area Plan must comply. The key issue relevant to this section of the SEA is to ascertain whether the plan has taken due consideration of the objectives set out in the legislative and policy framework.

4.2 Planning and Development

4.2.1 National Development Plan (NDP) Transforming Ireland: A Better Quality of Life for All 2007-2013

The NDP 2007-2013 provides for an indicative investment of €184 billion in the broad areas of infrastructure, enterprise, human capital and social inclusion, as well as health services, social housing, education, roads, public transport, rural development, industry, and water and waste services. The vast bulk of this investment (some €143 billion) is being provided by the central exchequer. The objective of this ambitious investment plan is to deliver a better quality of life for all within a strong and vibrant economy that maintains International competitiveness and promotes regional development, social justice and environmental sustainability. The investment priorities are carefully aligned with the specific objectives of the National Spatial Strategy in achieving balanced regional development.

4.2.2 National Spatial Strategy 2002-2020

The National Spatial Strategy (NSS) is a coherent national planning framework for Ireland for the next 20 years. The NSS aims to achieve a better balance of social, economic and physical development across Ireland, supported by more effective planning. The NSS aims to achieve balanced development throughout the country by setting out a range of measures to be implemented at the national, regional, county and local level.

Its focus is on people, on places and on building communities. The NSS is intended to provide an upper-tier of strategic guidance that feeds into general government policy-making and also into the regional and local development planning framework. In order to further these aims, the NSS sets down a series of policies in relation to: employment, housing, rural development, access to services, and quality of life/environmental quality. The strategy identifies a limited number of Regional Gateways and Hubs. Meath is located within the Dublin and Mid East Region as designated by the NSS.

It is noted that in Feb 2013 the Department announced the Government's intention to abandon the National Spatial Strategy and replace it with a revised strategy.

4.2.3 Regional Planning Guidelines for the Greater Dublin Area (2010-2022)

The Regional Planning Guidelines for the Greater Dublin Area 2010-2022 give effect, at a Regional level, to the national planning framework put forward in the National Spatial Strategy (NSS) and National Development Plan (NDP). They provide a Regional framework for the formulation of policies and strategy in the County Development Plan and seek to ensure the proper balance between the different settlements in the region with regard to development, population and services. The Guidelines present an updated Regional settlement strategy. They also set out 'Population Targets' for the region and for each County, including County Meath, which have been formulated having regard to the January 2009 'population targets' issued by the Department of Environment, Heritage and Local Government (DoEHLG) and supplementary guidance of August and October 2009.

Furthermore, the Guidelines outline a range of criteria for Development Plans in the context of population and settlement and identify strategic infrastructure investments for the region, this criteria then feeds from the County Plan through to the preparation of Local Area Plans. This Regional guidance has influenced the development of the settlement strategy for County Meath and in turn the Bettystown, Laytown, Mornington East, Donacarney and Mornington plan area.

4.2.4 Draft Transport Strategy for the Greater Dublin Area - National Transport Authority, (2011-2030)

The draft strategy document constitutes a strategic transport plan for the GDA for the next 20 years. A number of fundamental tenets underlie the draft strategy objectives. These include the adoption of a hierarchy of transport users with pedestrians, cyclists and public transport users at the top of the hierarchy and consequently these users should have their safety and convenience needs considered first. A second key principle is the requirement that land use planning and transport planning need to be considered together in the overall development of the GDA region.

The land use measures set out in the strategy seek to:

- Focus person-trip intensive development, particularly key destinations such as retail and offices, into Dublin City and Designated Town centres within the GDA (for Meath these equate to the Large Growth Towns I identified in the Regional Planning Guidelines for the Greater Dublin Area 2010, *i.e.* Navan and the Drogheda environs); and
- Focus any person-trip intensive development outside Dublin City and Designated Town centres to locations served by stations on the existing and proposed rail network (particularly Metro and DART).

4.2.5 Meath County Development Plan 2013-2019

To ensure that development is co-ordinated with the provision of necessary public infrastructure and implementation of strategic planning policies such as the Regional Planning Guidelines for the Greater Dublin Area, the LAP must comply with the Core Strategy which is contained within the Meath CDP 2013-2019.

Reflecting the development themes of the Meath CDP 2013-2019 and Variation No.1, the purpose of the Core Strategy is to provide a medium to longer term quantitatively based strategy for the spatial development of the towns and villages within the County. With regard to Bettystown-Laytown-Mornington East the strategy outlined in the Meath CDP 2013-2019 provide that this cluster should develop as a '*Small Town*'. Such towns should:

- Reduce the pattern of commuter led development.
- Cater for a greater proportion of local growth.
- Allow for a period of consolidation of local facilities and infrastructure to serve the local population.
- Facilitate more sustainable communities.
- Nurture small and local financed businesses.
- Support economic investment opportunities where sustainable and in keeping with the intended role and function of the town.
- No one proposal for residential development should increase the existing stock generally by more than 15% within the CDP period. In order to meet its Housing Allocation 3.2ha of residentially zoned land is required.

It is an objective of Meath County Council:

- To ensure that Small Towns develop to cater for locally generated development and that growth occurs in tandem with local services, infrastructure and demand. (Meath CDP 2013-2019 SS OBJ 12)
- To ensure that Small Towns grow in a manner that is balanced, self-sustaining and supports a compact urban form and the integration of land use and transport. (Meath CDP 2013-2019 SS OBJ 13)
- To ensure that in Small Towns no proposal for residential development should increase the existing housing stock (including permitted units) of the town by more than 15% within the lifetime of the Development Plan. (Meath CDP 2013-2019 SS OBJ 14)

The Settlement Strategy outlined in the Meath CDP 2013-2019 for Donacarney- Mornington provides that this cluster should develop as 'Villages'. Such Villages should:

- Provide important local services with some small scale rural enterprise.
- Managed so as to cater for local need in line with existing services and infrastructure provision.
- Development should be in keeping with the character of the village.
- Future growth managed in order to safeguard against becoming a catalyst for unsustainable growth patterns.
- No one proposal for residential development should increase the existing stock generally by more than 15% within the County Development Plan period. In order to meet its Housing Allocation 1.0ha of residentially zoned land is required.

It is an objective of Meath County Council:

- To ensure that Villages in Meath cater for a local catchment for service provision. Future population growth in Villages shall be managed to ensure that they do not lead to unsustainable commuting patterns. (Meath CDP 2013- 2019 SS OBJ 15).
- To ensure that Villages grow in a manner that is balanced, self-sustaining and supports a compact urban form and the integration of land use and transport. (Meath CDP 2013-2019 SS OBJ 16).
- To ensure that in Villages no proposal for residential development should increase the existing housing stock (including permitted units) of the village by more than 15% within the lifetime of the Development Plan. (Meath CDP 2013- 2019 SS OBJ 17).

The strategy for the future development of Bettystown-Laytown-Mornington East and Donacarney-Mornington focuses on the principles established in the Core Strategy as contained in the Meath CDP 2013-2019.

4.2.6 Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) (2009)

The aim of these guidelines is to set out the key planning principles which should be reflected in development plans and local area plans, and which should guide the preparation and assessment of planning applications for residential development in urban areas. The guidelines highlight the importance of energy efficiency in building and development and sets out a series of high level aims for successful and sustainable residential development in urban areas. They include:

- Prioritise walking, cycling and public transport, and minimise the need to use cars;
- Deliver a quality of life which residents and visitors are entitled to expect, in terms of amenity, safety and convenience;
- Provide a good range of community and support facilities, where and when they are needed and that are easily accessible;
- Present an attractive, well-maintained appearance, with a distinct sense of place and a quality public realm that is easily maintained;
- Are easy to access for all and to find one's way around;
- Promote the efficient use of land and of energy, and minimise greenhouse gas emissions;
- Provide a mix of land uses to minimise transport demand;
- Promote social integration and provide accommodation for a diverse range of household types and age groups;

- Enhance and protect the green infrastructure and biodiversity; and
- Enhance and protect the built and natural heritage.

In relation to Development Plans the guidelines highlight that plans should include policies and objectives which underpin the creation of sustainable residential development.

4.2.7 Sustainable Rural Housing – Guidelines for Planning Authorities 2005

The Rural Housing Guidelines seek to ensure that sustainable housing development patterns are supported in rural areas and that the policies and practices of planning authorities should seek to:

- (1) Ensure that the needs of rural communities are identified in the development plan process and that policies are put in place to ensure that the type and scale of residential and other development in rural areas, at appropriate locations, necessary to sustain rural communities is accommodated.
- (2) Manage pressure for overspill development from urban areas in the rural areas closest to the main cities and towns such as the gateways, hubs, and other large towns.
- (3) Take account of other related dimensions in relation to rural settlement such as environmental and heritage protection and the need to maintain the integrity of economic resources

The Guidelines suggest that settlement strategies should start by putting forward a development vision for rural areas that:

- Aims to support the sustainable development of these areas in economic, social and environmental terms in a way that supports the rural economy and rural communities,
- Ensures that development of rural areas takes place in a way that is compatible with the protection of key economic, environmental and natural and cultural heritage assets such as the road network, water quality, important landscapes, key identified areas with wind energy potential, habitats and built heritage, and
- Promotes the development and consolidation of key settlements in rural areas.

4.2.8 Delivering Homes, Sustaining Communities, (2007)

This 2007 policy statement provides for an integrated approach to housing and planning in Ireland. The policy recognises that continued strong demand for housing presents major challenges in respect of the planning of new housing and associated services. Sustainable neighbourhoods involve the efficient use of land and quality urban design, effectively integrated with the supply of appropriate physical and social infrastructure by providing a quality environment; sustainable neighbourhoods also contribute to the provision of attractive locations to support the NSS objective for a more coherent form of future regional development.

4.2.9 Quality Housing for Sustainable Communities, (2007)

Design guidelines intended to assist in the implementation of the policies set out in *Delivering Homes Sustaining Communities* (above). The aim of these Guidelines is to identify principles and criteria that are important in the design of housing and to highlight specific design features, requirements and standards that have been found to be particularly relevant.

4.2.10 Sustainable Urban Housing: Design Standards for New Apartments. Guidelines for Planning Authorities (2007)

The primary aim of these guidelines is to promote sustainable urban housing, by ensuring that the design and layout of new apartments will provide satisfactory accommodation for a variety of household types and sizes – including families with children - over the medium to long term.

These guidelines provide recommended minimum standards for:

- floor areas for different types of apartments,
- storage spaces,
- sizes for apartment balconies / patios, and
- room dimensions for certain rooms

4.2.11 Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020

This document represents the transport policy for Ireland for the period 2009-2020

Key goals of this policy are:

- (i) To reduce overall travel demand,
- (ii) To maximise the efficiency of the transport network,
- (iii) To reduce reliance on fossil fuels,
- (iv) To reduce transport emissions, and
- (v) To improve accessibility to transport.

The policy sets out 49 Key Actions for achieving sustainable transport. They can be grouped into the following four themes:

- Actions to reduce distance travelled by private car and encourage smarter travel.
- Actions aimed at ensuring that alternatives to the car are more widely available.
- Actions aimed at strengthening institutional arrangements to deliver the targets.
- Actions aimed at improving the fuel efficiency of motorised transport.

4.3 Environmental Plans and Policies

4.3.1 Water Framework Directive (2000/60/EC) as amended

The Water Framework Directive (WFD) (2000/60/EC) seeks to improve or maintain the ecological and physico-chemical quality of all waterbodies – rivers, lochs, groundwater, transitional waters (estuaries) and coastal waters. When fully operational, the WFD will achieve the level of protection afforded by a number of existing directives, including the Shellfish Waters Directive (and Freshwater Fish Directive), which is scheduled to be repealed in 2013. These objectives will be achieved through the operation of River Basin Management Plans (RBMPs), which incorporate the improvement actions specified within the Shellfish Water PRPs. Its ultimate objective is to achieve “good ecological and chemical status” for all Community waters by 2015.

4.3.2 Floods Directive (2007/60/EC)

Directive 2007/60/EC on the assessment and management of flood risks entered into force on 26 November 2007. The Directive aims to establish a common framework for assessing and reducing the risk that floods within the European Union pose to human health, the environment, property and economic activity. This Directive requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. This includes the preparation and implementation of flood risk management plans for each river basin district. This Directive also reinforces the rights of the public to access this information and to have a say in the planning process.

4.3.3 EC Freshwater Fish Directive, (78/659/EEC) 1978

The aim of the EU Freshwater Fish Directive (78/659/EEC) is to protect fish life from pollution discharge into waters and lays out water sampling and monitoring procedures and definitions. The Directive was ratified by Ireland by S.I. No. 293 of 1988, and aims to protect those fresh waterbodies identified by Member States as waters suitable for sustaining fish populations. The Directive is due to be repealed in 2013 by the EU Water Framework Directive.

4.3.4 The Groundwater Directive, (2006/118/EC) 2006

This directive establishes a regime which sets underground water quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater. The directive establishes quality criteria that takes account local characteristics and allows for further improvements to be made based on monitoring data and new scientific knowledge. The directive thus represents a proportionate and scientifically sound response to the requirements of the Water Framework Directive (WFD) as it relates to assessments on chemical status of groundwater and the identification and reversal of significant and sustained upward trends in pollutant concentrations. Member States will have to establish the standards at the most appropriate level and take into account local or regional conditions.

The groundwater directive complements the Water Framework Directive. It requires:

- groundwater quality standards to be established by the end of 2008;
- pollution trend studies to be carried out by using existing data and data which is mandatory by the Water Framework Directive (referred to as "baseline level" data obtained in 2007-2008);
- pollution trends to be reversed so that environmental objectives are achieved by 2015 by using the measures set out in the WFD;
- measures to prevent or limit inputs of pollutants into groundwater to be operational so that WFD environmental objectives can be achieved by 2015;
- reviews of technical provisions of the directive to be carried out in 2013 and every six years thereafter;
- compliance with good chemical status criteria (based on EU standards of nitrates and pesticides and on threshold values established by Member States).

A public consultation on the review of Annexes I and II of the Groundwater Directive was carried out in 2013 with the aim of collecting opinions on different policy options for the review of the Annexes, and to identify missing options and gather data on impacts.

4.3.5 EC Bathing Water Quality Directive, (2006/7/EC) 2006

This Directive strengthens the rules guaranteeing bathing water quality. It supplements Directive 2000/60/EC on water protection and management.

Each year, the Member States are required to identify the bathing waters in their territory and define the length of the bathing season.

They shall establish monitoring at the location most used by bathers or where the risk of pollution is greatest. Monitoring shall take place by means of sampling:

- four samples, including one before the start of the bathing season.
- three samples only if the season does not exceed eight weeks or if the region is subject to special geographical constraints.

Member States shall communicate the results of their monitoring to the European Commission with a description of the water quality management measures. Monitoring may be suspended exceptionally once the Commission has been informed.

4.3.6 Shellfish Directive, (2006/113/EC), 2006

The Directive concerns the quality of shellfish waters, *i.e.* the waters suitable for the development of shellfish (bivalve and gastropod molluscs).

It applies to 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.

The Directive establishes parameters applicable to designated shellfish waters, indicative values, mandatory values, reference methods of analysis and the minimum frequency for taking samples and measures.

The parameters applicable to shellfish waters are set for pH, temperature, coloration, suspended solids, salinity, dissolved oxygen and the presence or concentration of certain substances (hydrocarbons, metals, organohalogenated substances).

Responsibility for the Shellfish Waters Directive in Ireland transferred from the Department of Agriculture, Fisheries and Food to the Department of the Environment, Community and Local Government on 5 November 2008.

4.3.7 EU Directive on the Conservation of Wild Birds, (2009/147/EC) 1979

This Directive ensures far-reaching protection for all of Europe's wild birds, identifying 194 species and sub-species among them as particularly threatened and in need of special conservation measures. There are a number of components to this scheme:

Member States are required to designate Special Protection Areas (SPAs) for 194 particularly threatened species and all migratory bird species. SPAs are scientifically identified areas critical for the survival of the targeted species, such as wetlands. They are part of the Natura 2000 ecological network set up under the Habitats Directive 92/43/EEC.

A second component bans activities that directly threaten birds, such as the deliberate killing or capture of birds, the destruction of their nests and taking of their eggs, and associated activities such as trading in live or dead birds (with a few exceptions).

A third component establishes rules that limit the number of bird species that can be hunted and the periods during which they can be hunted. It also defines hunting methods which are permitted (e.g. non-selective hunting is banned).

4.3.8 EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, (92/43/EEC), 1992

In conjunction with the Birds Directive, the Habitats Directive forms the backbone of EU nature protection legislation.

Known as the Habitats Directive (92/43/EEC) this legislation was transposed into Irish law by the European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997). The main goal of the Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain, protect or restore natural habitats, animal and plant species to a favourable conservation status, introducing robust protection for those habitats and species of European importance. For Ireland, these habitats include raised bogs, active blanket bogs, turloughs, sand dunes, machair (flat sandy plains on the north and west coasts), heaths, lakes, rivers, woodlands, estuaries and sea inlets. The Directive provides for a network of protected sites known as The Natura 2000 network, which limits the extent and nature of development which may have a detrimental effect on the flora or fauna identified therein. Special Areas of Conservation (SACs) are part of the Natura 2000 Network and as such Ireland is required to propose relevant areas for designation as SACs to ensure the natural habitats and species habitats are maintained and restored if necessary to a favourable conservation status. Animals and plant species that are in need of strict protection are listed in Annexes to the Directive. The Habitats Directive is considered the most important EU initiative to support National and International biodiversity.

4.3.9 European Communities (Birds and Natural Habitats) Regulations 2011

These regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats)(Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in the CJEU judgements.

Articles 6(1) and (2) of the Regulations require Member States to take appropriate conservation measures to maintain and restore habitats and species, for which a site has been designated, to a favourable conservation status. Furthermore the Regulations require Member States to avoid damaging activities that could significantly disturb these species or deteriorate the habitats of the protected species or habitat types. Under these regulations any plan or project likely to have a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects, shall undergo an Appropriate Assessment to determine its implications for the site.

The competent authorities can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site concerned. In exceptional circumstances, a plan or project may still be allowed to go ahead, in spite of a negative assessment, provided there are no alternative solutions and the plan or project is considered to be of overriding public interest. In such cases the Member State must take appropriate compensatory measures to ensure that the overall coherence of the Natura 2000 Network is protected. Article 12 of the Regulations is also important as it affords protection to specific species regardless of their location.

4.3.10 SEA Directive - Assessment of the effects of certain plans and programmes on the Environment, (2001/42/EC) 2001

This Directive requires plan-makers to carry out an assessment of the likely significant environmental effects of implementing a plan or programme before the plan or programme is adopted. There are two statutory instruments which transposed the SEA Directive into Irish Law:

The SEA Directive (2001/42/EEC) came into force in 2004 and was subsequently transposed into Irish law through S.I. No. 435 of 2004 European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 and S.I. No. 436 of 2004 Planning and Development (Strategic Environmental Assessment) Regulations 2004 as amended by S.I. No. 200 of 2011 European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 and S.I. No. 201 of 2011 Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 respectively.

4.3.11 Environmental Impact Assessment Directive (85/337/EEC) (97/11/EC), 1985

The EIA Directive (85/337/EEC) came into force in 1985 and applies to a wide range of defined public and private projects, which are defined in Annexes I and II of the Directive. The Directive has been amended three times, in 1997, 2003 and 2009. Under the Directive Member States are required to carry out Environmental Impact Assessments (EIA) of certain public and private projects, before they are authorised, where it is believed that the projects are likely to have a significant impact on the environment.

The initial Directive of 1985 and its three amendments have been codified by Directive 2011/92/EU of 13 December 2011.

4.3.12 European Landscape Convention 2000

The 2000 European Landscape Convention, adopted in Florence (and was ratified by Ireland in 2002), requires a commitment to introduce policies on landscape protection and management. It promotes the protection, management and planning of EU landscapes as a response to European-wide concerns that the quality and diversity of landscapes were deteriorating. The underlying purpose of the Convention is to encourage public authorities to adopt policies and measures at local, Regional, National and International level to protect and manage landscapes throughout Europe.

4.3.13 Eastern River Basin District River Basin Management Plan (2009 – 2015)

The Eastern River Basin District (ERBD) covers the majority of county Meath and is one of eight river districts within the island of Ireland formed to aid the implementation of the requirements of the EU Water Framework Directive 2000/60/EC. The Directive requires the preparation of management plans for each district.

The ERBD River Basin Management Plan (RBMP) sets out the objectives for the water bodies within the plan area and outlines actions necessary to achieve these objectives. In compliance with the WFD these are to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwaters which:

- a) Prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;
- b) Promotes sustainable water use based on a long-term protection of available water resources;
- c) Aims at enhanced protection and improvement of the aquatic environment, including through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances;
- d) Ensures the progressive reduction of pollution of groundwater and prevents its further pollution, and
- e) Contributes to mitigating the effects of floods and droughts.

4.3.14 Fingal East Meath Flood Risk Assessment and Management Study 2012 (FEM FRAMS)

Fingal County Council along with project partners Meath County Council and the Office of Public Works (OPW) commissioned the Fingal East Meath Flood Risk Assessment and Management Study (FEM FRAMS) in 2008 to investigate the high levels of existing flood risk in the Fingal East Meath area. The study included detailed hydraulic modelling of 23 rivers and streams, 3 estuaries and the Fingal and Meath coastline. The watercourses are defined as High Priority Watercourses (HPW) or Medium Priority Watercourses (MPW) and modelled in according detail.

The FEM FRAMS models consist of 1D river models, 1D-2D linked models and 2D coastal models. The model results were used to map flood outlines for a range of scenarios, including the current and future, defended and undefended scenarios.

4.3.15 The Planning System and Flood Risk Management Guidelines (and Technical Appendices) for Planning Authorities (DoEHLG, OPW), 2009

These guidelines require the planning system at national, regional and local levels to:

- Avoid development in areas at risk of flooding, particularly floodplains, unless there are proven wider sustainability grounds that justify appropriate development and where the flood risk can be reduced or managed to an acceptable level without increasing flood risk elsewhere;
- Adopt a sequential approach to flood risk management when assessing the location for new development based on avoidance, reduction and mitigation of flood risk; and
- Incorporate flood risk assessment into the process of making decisions on planning applications and planning appeals

In relation to planning the guidelines require planning authorities to:

- introduce flood risk assessment as an integral and leading element of their forward planning functions at the earliest practicable opportunity.
- Align strategic flood risk assessment (SFRA) with the SEA process.
- Establish flood risk assessment requirements as part of the preparation of statutory land use plans.
- Assess planning applications against the guidance set out in the Guidelines.
- Ensure development is not permitted in areas of flood risk except where there are no suitable alternative sites.

4.3.16 National Renewable Energy Action Plan, (NREAP) 2010

Submitted under Article 4 of Directive 2009/28/EC this plan sets out Ireland's renewable energy targets to be achieved by 2020. Ireland's overall target is to achieve 16% of energy from renewable sources by 2020. Member states are to achieve their individual target across the heat, transport and electricity sectors and apart from a sub-target of a minimum of 10% in the transport sector that applies to all Member States, there is flexibility for each country to choose how to achieve their individual target across the sectors.

4.3.17 Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities (2009)

Formulated to assist with compliance with Article 6 of the Habitats Directive Article 6(3) states that:

Any plan or project not directly connected with or necessary to the management of a Natura 2000 site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.

Appropriate Assessment is a focused and detailed impact assessment of the implications of the plan or project, alone and in combination with other plans and projects, on the integrity of a Natura 2000 site in view of its conservation objectives.

4.3.18 Wildlife (Amendment) Act 2000

The Wildlife Act is Ireland's primary national legislation for the protection of wildlife. It covers a broad range of issues, from the designation of nature reserves, the protection of species, regulation of hunting and controls in wildlife trading. It is implemented by a series of regulations. The Act provides strict protection for nearly all birds, 22 other animal species, and 86 plant species. These species are protected from injury, or from disturbance / damage to their breeding or resting place wherever these occur. The 2000 Act was amended in 2010.

The main objectives of the Wildlife (Amendment) Act, 2000 are to:

- provide a mechanism to give statutory protection to NHAs;
- provide for statutory protection for important geological and geomorphological sites, including fossil sites by designation as NHAs;
- improve some existing measures, and introduce new ones, to enhance the conservation of wildlife species and their habitats;
- enhance a number of existing controls in respect of hunting, which are designed to serve the interests of wildlife conservation;
- broaden the scope of the Wildlife Acts to include most species, including the majority of fish and aquatic invertebrate species which were excluded from the 1976 Act;
- introduce new provisions to enable regulation of the business of commercial shoot operators;
- ensure or strengthen compliance with international agreements and, in particular, enable Ireland to ratify the Convention on International Trade in Endangered Species (CITES) and the African-Eurasian Migratory Waterbirds Agreement (AEWA).
- increase substantially the level of fines for contravention of the Wildlife Acts and to allow for the imposition of prison sentences;
- provide mechanisms to allow the Minister to act independently of forestry legislation, for example, in relation to the acquisition of land by agreement;
- strengthen the provisions relating to the cutting of hedgerows during the critical bird-nesting period and include a requirement that hedgerows may only be cut during that period by public bodies, including local authorities, for reasons of public health or safety;
- strengthen the protective regime for Special Areas of Conservation (SACs) by removing any doubt that protection will in all cases apply from the time of notification of proposed sites;
- and give specific statutory recognition to the Minister's responsibilities in regard to promoting the conservation of biological diversity, in light of Ireland's commitment to the UN Convention on Biological Diversity.

4.3.19 Architectural Heritage Protection - Guidelines for Planning Authorities (2011)

The 2004 guidelines were reissued in 2011 following the transfer of architectural heritage protection functions to the Department of Arts, Heritage and the Gaeltacht.

Part IV of the Planning and Development Acts 2000 – 2011 sets out the legislative provisions for the protection and conservation of our architectural heritage. The main features of the act in this respect are:

- Local authorities must create and maintain a Record of Protected Structures (RPS) which is to include all structures within the administrative area which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. The RPS must form part of the Development Plan for each county.
- Local authorities must also protect the character of places and townscapes which are comply with the special interests listed above. This is done through the designation of Architectural Conservation Areas (ACAs) which are also to be contained within Development Plans.
- Development plans must include objectives for the protection of such structures and the preservation of the character of such areas to ensure proper and sustainable planning and development.
- Owners and occupiers of protected structures can be held responsible in ensuring that buildings are not endangered either directly or through neglect.

4.3.20 National Climate Change Strategy (2007-2012)

The National Climate Change Strategy 2007 - 2012 sets out a range of measures, building on those already in place under the first National Climate Change Strategy (2000) to ensure Ireland reaches its target under the Kyoto Protocol. The Strategy provides a framework for action to reduce Ireland's greenhouse gas emissions

The Framework for Climate Change Bill published in December 2009 provides for a statutory obligation on the Minister to propose to the Government a National Climate Change Strategy on a 5 year cycle and to review the previous Strategy at the end of this time. The Strategy will set an overall reduction target for the 5-year period within the context of the long-term and annual reduction targets set out in the Bill (as subject to review by the Minister). It will also set the policy context for the Carbon Budget and set out requirements in terms of policy objectives for the various sectors in the economy.

4.3.21 A National Landscape Strategy for Ireland – Strategy Issues Paper for Public Consultation, (Sept 2011)

The Department of Arts, Heritage and the Gaeltacht has issued A National Landscape Strategy for Ireland – Strategy Issues Paper for Public Consultation, which sets out objectives and principles in the context of a proposed National Landscape Strategy for Ireland. This strategy is being prepared in compliance with the European Landscape Convention.

This document sets out Ireland's aims and objectives with regard to landscape and positions it in the context of existing strategies, policies and objectives as well as the framework of the European Landscape Convention.

The National Landscape Strategy, when completed, will add to the suite of national plans (including the National Spatial Strategy 2002-2020 and the National Climate Change Strategy 2007-2012) which will be used to map out the future sustainable development of the country.

The main objective of the Strategy will be to set out a framework which seeks the right balance between management, planning and protection of the landscape.

Its primary aim will be the sustainable management of change affecting landscape: it is not the preservation or "freezing" of the landscape at a particular point in its continuing evolution.

The final strategy is due to be published in 2014.

4.3.22 North East Regional Waste Management Plan (2005-2010)

Meath is located in the North East region of the country in terms of waste management planning. The Waste Management Plan sets out the proposed policy for integrated waste management within the region and places an emphasis on waste prevention and minimisation through source reduction, producer responsibility and public awareness and the management of recovery/recycling/disposal of regional waste.

The Plan sets out targets for waste management to be achieved by 2015:

- 43% recycling
- 39% thermal treatment
- 18% landfill

Following the amalgamation of three waste regions, Dublin, North East and Midlands, Dublin City Council is the lead authority progressing the preparation of a new waste management plan. The public consultation phase for this plan has commenced.

4.3.23 County Meath Heritage Plan (2007-2011)

The first County Meath Heritage Plan sets out 77 actions to be carried out over the five year Plan period to protect, manage and conserve the heritage of the county.

The Heritage Plan seeks to complement the statutory land use plans *e.g.* through the collection of relevant data, and by undertaking actions to ensure that heritage policy is effectively implemented.

The actions were arranged into four strategic themes:

1. Awareness and Education.
2. Baseline Data and Information.
3. Best Practice in Heritage Conservation and Management.
4. Integrating heritage within the Local Authority.

4.3.24 County Meath Biodiversity Action Plan (2008-2012)

The County Meath Biodiversity Action Plan was adopted in April 2010 and provides a framework for the conservation of biodiversity and natural heritage throughout the county. The Biodiversity Action Plan sets out a range of actions in terms of the biodiversity of Meath which have been divided into four strategic themes of:

1. Awareness and education.
2. Best practice in natural heritage conservation and management.

3. Baseline data and information.
4. Integrating biodiversity into the role of Local Authority.

Implementation of the plan is on-going and co-ordinated by the Heritage Officer in partnership with the County Meath Heritage Forum.

4.3.25 County Meath Wetlands and Coastal Habitats Survey

This survey was carried out to determine and map the type, extent and condition of wetlands and coastal habitats in the county. The study focuses on sites which lie outside of designated areas and as such do not currently receive protection from either the Wildlife (Amendment) Act 2000 or under the European Communities (Natural Habitats) Regulations, 1997. This project is an action of the County Meath Heritage Plan 2007-2013

5.0 Environmental Baseline of the Plan Area

5.1 Introduction

The purpose of this section of the Environmental Report is to describe the relevant aspects of the current state of the environment within the Plan area. This baseline information outlines the environmental context within which the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020 will be implemented.

The aim of this chapter is therefore to identify the following parameters;

- The key environmental baseline resources and sensitivities;
- The key environmental threats and trends; and
- The likely evolution of the environment in the absence of the Local Area Plan.

The baseline data allows for the “State” of the environment to be identified in objective terms. Where possible and where data exists a quantitative measurement of the environmental conditions is provided, however where such information is absent, qualitative descriptions of environmental themes are provided instead. Where important information deficits are noted, recommendations are provided in the mitigation measures section to ensure that any absence of critical information will be addressed as part of the ongoing monitoring and review of the Local Area Plan.

The headings provided are in accordance with the legislative requirements of the SEA Directive. An emphasis is placed on the strategic elements of each aspect and where potentially relevant to Plan policy.

The topics addressed are:

- Population, Human Health and Quality Of Life
- Biodiversity
- Soil & Geology
- Water
- Air Quality and Climate Change
- Material Assets
- Cultural Heritage
- Landscape

** Human health is not considered directly in this report, but is instead dealt with through consideration of other environmental issues such as air quality, water quality etc.*

5.2 Technical Difficulties Encountered and Information Gaps

A sizeable volume of information was compiled and collated in relation to the environment of the plan area during the preparation of this SEA. Recent National and County level studies on various aspects of the environment (water, cultural heritage etc.) have resulted in a significant amount of data becoming available. However gaps do remain in information

available, for instance in relation to complete ecological coverage, *e.g.* habitats, trees, hedgerows *etc.*

5.3 Study Area Overview

The Meath County Development Plan (CDP) 2013–2019 sets out the overall strategy for the proper planning and sustainable development of the county over a six year period. The plan has a critical role to play in ensuring that the needs of future population growth are planned for. The CDP settlement strategy has been informed by the Regional Planning Guidelines (RPGs) and the environmental sensitivities of the county. It is based on building strong urban centres while protecting the rural hinterlands. The plan also emphasises the need to protect the built heritage, unique landscape, natural heritage and biodiversity of the county for their intrinsic value and as a resource for the tourist economy of the future.

The designation of Bettystown-Laytown-Mornington East as a Small Town and Donacarney-Mornington as a Village is reinforced in the CDP settlement strategy with the towns and villages being targeted for consolidated growth. By consolidating development the towns and villages will develop in a self-sufficient manner, reducing commuting levels and ensuring sustainable levels of population and economic growth, while providing a full range of local services adequate to meet local needs.

Over the last 20 years, Bettystown-Laytown-Mornington East and Donacarney-Mornington have experienced unprecedented expansion in comparison with other settlements in the county. The majority of this development has been residential in nature, and comprising large housing estates. These estates reflect the role of towns and villages as dormitory settlements arising from improved rail and road links to Dublin City. Laytown-Bettystown-Mornington is designated as a town in the most recent census of population therefore the preparation of a local area plan for the area is a statutory requirement of Meath County Council. It is highlighted that Donacarney-Mornington East are included within the definition of Laytown-Bettystown-Mornington as a census town.

The plan area hosts a wealth of environmentally designated sites of national and international importance. It also incorporates over 50% of Meath's 10km of coastline which is of both environmental and tourism importance.

5.4 Population, Human Health and Quality Of Life

5.4.1 Introduction

This section discusses the impact of the Local Area Plan on the population of the plan area. An overview of the current and estimated future population and the issues affecting quality of life are discussed. Human health data for the area is not readily available. However, impacts on human health and quality of life may derive from any of the environmental parameters discussed throughout this Chapter. Ultimately, all of the effects of a development on the environment impact upon human beings and their quality of life, both positively and negatively. Direct effects relate to matters such as water and air quality, noise, and landscape change. Indirect effects relate to such matters as flora and fauna. Accordingly, the topic of human beings and their quality of life is addressed in this Environmental Report by means of an appraisal of the indirect effects, *etc.* of the Local Area Plan on the other environment parameters, of which human beings and their quality of life are an integral part. Where appropriate, mitigation measures to reduce/avoid adverse

impacts are identified and incorporated into this Report and the Plan under the other environmental parameters.

5.4.2 Population Trends

Three major trends determine population change, namely; the number of births, the number of deaths and migration to and from a location. The 2011 Census results recorded a population of 10,889 in Laytown-Bettystown-Mornington. This constitutes an increase of 17.5% since the previous census in 2006. This compares to the 13% increase experienced across the entire County. Table 8 below shows the actual and percentage population growth within the Plan area relative to the County, Province and State.

	Population 2006	Population 2011	Actual Population Change	% Pop Change
State	4239848	4588252	348404	8.2
Leinster	2295123	2504814	209691	9.1
Meath	162831	184135	21304	13.1
Plan Area	8978	10889	1911	17.5

Table 8: Actual and Percentage Population Growth 2006-2011

As acknowledged in the County Development Plan within Meath, population growth was concentrated in the East Meath area.

5.4.3 Household Sizes

The national trend is one of falling household size from an average of 3.14 persons per household in 1996 to 2.7 in 2011 (Census 2011). County Meath has recorded a slightly higher average of 3 persons per household in 2011 which constitutes the highest average of the counties in the Greater Dublin Area. This suggests family units and demonstrates the County's desirability to this group both as an attractive place to live but also due in part to its relative affordability and proximity to Dublin.

5.4.4 Settlement Strategy

Reflecting the development themes of the Meath CDP 2013-2019, the purpose of a Core Strategy is to provide a medium to longer term quantitatively based strategy for the spatial development of the towns and villages within the County. With regard to Bettystown-Laytown-Mornington East the strategy outlined in the Meath CDP 2013-2019 provide that this cluster should develop as a 'Small Town'. The overarching aim being to allow for a period of consolidation of local facilities and infrastructure to serve the local population, reduce the pattern of commuter led development and facilitate more sustainable communities.

The Settlement Strategy outlined in the Meath CDP 2013-2019 for Donacarney-Mornington provides that this cluster should develop as 'Villages'. Such Villages should provide important local services managed so as to cater for local need in line with existing services and infrastructure provision and facilitate development in keeping with the character of the village.

The strategy for the future development of Bettystown-Laytown-Mornington East and Donacarney-Mornington focuses on the principles established in the Core Strategy as contained in the Meath CDP 2013-2019.

5.4.5 Commuting Patterns and Distance to work

A persons' journey to their place of work or school is a factor in determining their quality of life. In addition it is also a measure of the sustainability of settlements; how does a settlement maximise the proportion of the population working as well as living within them? The commuting patterns, highlighted below, are of some concern as they reflect an unsustainable reliance on private car based travel within the County. Often places of work or education are extensive distances from an individual's places of residence. The AIRO-CSO POWECAR Place of Work Catchment indicates that between 30%-50% of the plan area population are commuting to Dublin.

5.4.6 Radon

Radon is a radioactive gas which is naturally produced in the ground from the uranium present in small quantities in all rocks and soils. Tiny radioactive particles are produced by the gas which when inhaled can cause lung cancer. The risk of contracting lung cancer as a result of Radon depends on how much Radon a person has been exposed to over a period of time. Radon levels in the County have been collated from the Radiological Protection Institute of Ireland. The plan area is in lowest risk area in regards to Radon however a high radon level can be found in any home in any part of the country.

5.4.7 Noise

Environmental noise is described as unwanted or harmful outdoor sound created by human activities, including road, rail, air traffic and industry. EC Directive 2002/49/EC deals with the regulation of environmental noise. It does not apply to domestic noise. The directive is implemented in Ireland by the Environmental Noise Regulations 2006 (SI 140/2006).

The Regulations allow for action to be taken by each member state, with a view to preventing and reducing environmental noise, particularly where exposure levels can induce harmful effects on human health and to preserving environmental acoustic quality where it is good.

The Regulations have designated the relevant local authorities as the bodies charged with development and making of Noise Action Plans. There is no noise mapping available for the plan area.

However it can be reasonably assumed that the noise environment in the plan area varies by location and proximity to the town and village centres and main roads. Noise which would be influenced by local noise sources such as building services equipment, serving shops and restaurants, traffic in rural areas where the noise environment would be influenced by community noise sources such as local traffic, agricultural activity *etc.*

5.4.8 Existing Environmental Issues

There are environmental issues existing with regard to the current population of plan area. The unprecedented growth of the past fifteen years has placed considerable strain on the areas ability to provide the physical and social infrastructure needed to support its increased population. The settlement pattern in the area has resulted in a pattern of unsustainable commuting which has been shown to have a negative impact on human health and quality of life.

5.5 Biodiversity

5.5.1 Introduction

The natural heritage of the plan area is an important asset and a unique resource. The habitats distributed throughout the area are focussed around the Boyne Estuary and along the short coastline which supports a wide range of rare or threatened flora and fauna species. Protecting and conserving these habitats is critically important, not just to the residents of the plan area and the County but also in a national and international context.

Also referred to as flora and fauna; biodiversity has been defined by the Convention of Biological Diversity as:

The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems

Biodiversity supports life on earth; it is a crucial part of all our lives and its economic value is being increasingly recognised. Not only does it underpin important economic sectors such as tourism and agriculture but it provides many other benefits which can be grouped into four main categories:

- **Provisioning services** (production of food and water, etc.)
- **Regulating services** (e.g. the control of climate and disease)
- **Supporting services** (e.g. nutrient cycling and crop pollination)
- **Cultural services** (such as spiritual and recreational benefits)

The importance of protecting our natural heritage has been recognised at an international level and takes into account that the condition of biodiversity within any particular nation cannot be seen in isolation. Changes to biodiversity in one country can have international transboundary implications. (For instance deforestation in one country can lead to flooding in another or loss of habitats for migratory birds).

5.5.2 Designated Habitats

The EU has provided a basis for the legal protection of certain important ecological sites throughout Europe. Natura 2000 was established under the 1992 E.C Habitats Directive and is an EU wide network of such protected areas it provides for the designation and protection of sites that support annexed habitats and species by requiring, among other things, their favourable conservation status to be maintained or restored. The aim of the network is to

assure the long-term survival of Europe's most valuable and threatened species and habitats. The Natura 2000 network is comprised of two main designations:

- Special Areas of Conservation (SAC); designated by Member States under the Habitats Directive, these sites are established for the protection and conservation of habitats and species listed in Annex I (habitats) and Annex II (species – not birds) of the EU Habitats Directive.
- Special Protection Areas (SPA); established under the 1979 Birds Directive these sites are designated for the protection and conservation of Annex 1 (rare and threatened bird species) and regularly occurring migratory species, and for bird habitats.

In addition to SPA and SAC designations Irish legislation contains a further designation for areas that are considered important for their habitats or which hold species of plants and animals whose habitats needs protection – these areas are known as NHAs (Natural Heritage Areas) and are designated under the Wildlife (Amendment) Act, 2000. NHAs are also designated to conserve and protect nationally important landforms, geological or geomorphological features.

Depending on their quality and importance, sites may carry multiple designations such as SAC, SPA, NHA, Ramsar site, Statutory Nature Reserve or Refuge for Fauna. Planning Authorities are obliged by law to ensure that these sites are protected and conserved. The designated habitats within and adjacent to the plan area are shown in Map B, and listed in Table 9.

Designated Site	Site Code	Location	Approximate Distance from Plan Boundary	Reasons for Designation
Boyne Coast & Estuary SAC	001957	Within the plan area	-	Considerable conservation as a coastal complex that supports good examples of 8 habitats that are listed on Annex I of the E.U. Habitats Directive as well as Annex I species
River Boyne & River Blackwater SAC	002299	Adjacent the plan area	Circa 1km	Selected for alkaline fen and alluvial woodlands, both habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for species listed on Annex II.
Boyne Estuary SPA	004080	Within the plan area	-	considerable ornithological importance for wintering waterfowl, with ten species having populations of national importance in addition to two wintering species, Golden Plover and Bar-tailed Godwit which are listed on Annex I of the E.U. Birds Directive.
River Boyne and River Blackwater SPA	004232	Within the plan area	-	Is of high ornithological importance as it supports a nationally important population of Kingfisher, a species that is listed on Annex I of the E.U. Birds Directive.
River Nanny and Shore SPA	004158	Within the plan area	-	It supports five species of wintering waterbirds in numbers of national significance. Two species using the site, Golden Plover and Bar-tailed Godwit, are listed on Annex I of the E.U. Birds Directive.

Boyne Coast and Estuary pNHA	001957	Within the plan area	-	
Laytown Dunes/Nanny Estuary pNHA	000554	Within the plan area	-	

Table 9: Areas Protected under EU and National Legislation

Additional European and non-European sites which fall within 15km of the plan boundary are listed in Table 10 below.

Candidate Special Areas of Conservation	Special Protection Areas
Clogher Head	Skerries Islands
Dundalk Bay	Dundalk Bay
Rockabill to Dalkey Island	Rockabill
Proposed Natural Heritage Areas	Natural Heritage Areas
Balrath Woods	Skerries Islands
Boyne River Islands	
Crewbane Marsh	
Cromwells Bush Fen	
Dowth Wetland	
Rossnaree Riverbank	
Barmeath Woods	
Blackhall Woods	
Bog of the Ring	
Castlecoo Hill	
Clogher Head	
Dunany Point	
King William's Glen	
Knock Lake	
Loughshinny Coast	
Mellifont Abbey Woods	

Table 10: Additional Areas Protected under EU and National Legislation

The qualifying features for the designated sites have been obtained through a review of the Conservation Objectives available from the National Parks and Wildlife Service (NPWS). The importance of these sites is recognised in the existing plan and they will continue to be afforded protection through enforcement of current legislation and through the support of the Local Authority working in conjunction with other state/non-state organisations.

The protection of the integrity of Natura 2000 sites has been further legislated for under Article 6(3) of the Habitats Directive. Under this legislation any plan or project not directly connected with or necessary to the management of a Natura 2000 site but that is likely to have a significant effect on such a site, either individually or in combination with other plans

or projects, shall be subject to an Appropriate Assessment of its implications for the site in view of the site's conservation objectives.

For a proposed plan or project to be approved its Appropriate Assessment must establish beyond reasonable scientific doubt that it will not have an impact on a Natura 2000 site.

5.5.3 Other Habitats

In addition to the areas protected by legislation many other important habitat types exist within the plan area and these sites play a significant role in the natural environment. The County Meath Wetlands and Coastal Habitats Survey (2010) compiled information on approximately seventy undesignated wetlands in the area. Amongst them are:

- Inland waters including rivers, springs, mesotrophic and eutrophic lakes
- Maritime wetlands
- Freshwater Marsh
- Raised Bog
- Cutover Bog
- Turloughs
- Fen and Flush

Furthermore within the County there are a range of other habitat types (broadly described and classified in “A Guide to Habitats in Ireland” published by The Heritage Council, 2000). Some of the habitats identified in this area include:

- Grasslands
- Scrub
- Drainage ditches
- Lakes, Rivers and Canals
- Coastal Zones
- Inland Wetlands
- Agricultural or Cultivated Land
- Horticultural Land

These habitats have an important function in providing shelter and refuge to a host of animal and plant species alike. There is a wide range and type of species that are supported by these habitats in the Plan area.

5.5.4 Existing Environmental Issues

Biodiversity has become an integral part of the conservation of our wild areas. Ireland is one of 193 countries which are party to the Convention on Biological Diversity along with the other EU Member States and the EU itself. In its recent assessment, the Commission states that Europe is seeing the constant loss, degradation and fragmentation of natural habitats and entire ecosystems are also being pushed to the point of collapse.

Nationally, although significant progress has been made in the past decade, biodiversity loss has not been halted in Ireland. The status of many of our habitats and some of our species is judged to be poor or bad (Ireland's Second National Biodiversity Plan).

There are five main pressures causing biodiversity loss:

- habitat change
- overexploitation
- pollution
- invasive alien species
- climate change

The primary mechanism for conserving, protecting and enhancing biodiversity in Ireland is through the Actions for Biodiversity 2011-2016, Ireland's Second National Biodiversity Plan¹, of which a key concept is that local authorities (and other agencies) share responsibility for the conservation and sustainable use of biodiversity.

The Plan states that the principal target is: *"That biodiversity loss and degradation of ecosystems are reduced by 2016 and progress is made towards substantial recovery by 2020."*

It is European and national policy to protect designated areas from development thus ensuring their long term protection. Therefore restrictions must be provided within the plan and indeed close to such areas where such development is incompatible with the site's long term protection. The National Parks and Wildlife Service is preparing management plans for the nations natural assets which is likely to take some time to complete but will become a valuable tool in assessing the issues relevant to each site. The management plans will also provide mechanisms for their effective protection. Designated areas will form the basis of controlled development within the plan area and restrictions imposed on further development, which may adversely impact on the overall integrity of the protected area.

As stated previously, under the Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) an Appropriate Assessment is required for all plans or projects which may impact on sites designated as either Special Areas of Conservation or Special Protection Areas. The Local Authority will be obliged to seek such an assessment where the need arises.

The County Meath Wetlands & Coastal Habitats Survey identified littering as a particular problem in and around the coastal sites, especially in the Bettystown/Laytown/Mornington East and Mornington area. The area's proximity to Drogheda and north County Dublin mean that it is intensively used for recreation, particularly during summer months. The regular access and use of the beach and dune system in the form of motor vehicles, dog walkers and exercising of race horses - increases the risk of sand blow outs and subsequent erosion, degradation of dune system and impact on species.

An apparent decline in the occurrence of rare/threatened and scarce plant species in the plan area and Co. Meath area can be attributed to a degradation of semi-natural habitats within the County that is due in part to changes in agricultural practices, but is also due to development pressures on the land, pressures that are increased by the plan area's close proximity to Dublin.

Most relevant to the plan area is tourism and recreation pressures along the coast, which is highly sensitive, would not be managed in a combined way which could lead to the

¹ Actions for Biodiversity 2011-2016, Ireland's Second National Biodiversity Plan

significant loss of protected habitats. The Natura Impact Report prepared separately identifies the types of threats to the integrity of the European sites. These can then be related to the consequences of implementing the Local Area Plan to see if there is any risk of likely significant effects.

The following generic potential threats were identified:

Urban, Economic and Infrastructural Development

- Golf Courses;
- Roads, motorways;
- Coastal protection works;
- Sewage outflows;
- Housing developments;
- Communications Networks;
- Quarries;
- Canalisation;
- Landfill land reclamation;
- Disposal of household waste;
- River Channel Maintenance, and;
- Invasive Alien Species.

Recreation and Leisure

- Walking, horse riding and non-motorised vehicles;
- Offshore motorised vehicles;
- Bait Digging, and;
- New Paths and Tracks.

5.6 Soil and Geology

5.6.1 Introduction

The upper most layer of the earth's surface is generally termed "Soil". It comprises for the most part organic matter, minerals and fine to course grained weathered rocks. The variability in the constituent parts and the percentage content of each in the soil matrix results in differing characteristics. This has implications for suitable land use and the appropriateness for differing land use practices.

Geology encompasses the understanding and study of the solid and liquid matter that constitutes the earth and the processes by which they are formed, moved and changed. Its understanding is necessary to fully appreciate the geological factors that shape and influence the world and its particular structure.

5.6.2 Soils

Soil can be defined as the top layer of the earth's surface. It consists of fine to course grained rock and mineral particles, organic matter (the remains of plants and animals) and the living organisms that reside in the soil.

The Plan area has a varied soil profile, see Map C. The coastal areas range from Marine/Estuarine sediments adjacent the River Boyne Estuary and Wind Blown Sands along

the coastline. As the plan area moves inland to the built up areas the soil types vary from a predominance of Acid Deep Poorly Drained Material to smaller pockets of Alluviums, Mineral Alluviums and Basic Shallow well drained mineral around Donacarney.

5.6.3 Geology

The Geological Heritage of Meath, an audit of County Geological Sites in Meath was carried out in 2007 by the GSI in association with the Heritage Council and Meath County Council. It was carried out as an action of the County Meath Heritage Plan 2007-2011.

County Meath is a place with a subtle but distinctive landscape formed over hundreds of millions of years by various geological processes. The bedrock foundation and the more recent history of geomorphological processes involving river channels and glaciers are what have created an underlying geological diversity. Map D shows the Geology of the plan area.

The plan area has a Muddy, shaly or conglomeratic limestones, and limestones of variable grain size profile.

There are no quarries in the plan area however there are a number of quarries in close proximity.

5.6.4 Coastal Erosion

Coastal erosion is a natural process which results from the motions of the sea, the impacts of which are often seen on coastal and estuarine shores in the form of shifting sand and storm damage to public roads and footpaths. In some cases human activities interfere with the sea's natural motion causing the effects to change and to impact on different stretches of shore-line. In addition climate change will in the future lead to sea level change and a greater risk of both coastal flooding and erosion.

5.6.5 Existing Environmental Problems

The soil environment is a much overlooked aspect of the natural environment. However soils are an intrinsic part of the environment and perform a range of uses benefitting the wider environment. Soils have an economic value in terms of agricultural production, their type and quality dictating the type and intensity of production.

In addition soils also have an ecological value, their status being a critical factor in determining botanical diversity and ultimately the range of fauna which feed upon or live within those species of plant life.

Changes in soil result from both natural processes and human activities which contribute to their dynamic and evolving nature. Such changes are matters of concern if they result in the physical, biological or chemical degradation of soils. This can result in the impairment of ecologically-essential soil processes, the reduction in productive capacity, the depletion of soil quality and biodiversity and the direct loss of soil. Many of the changes arise as a result of pressures from human activities.

Urban environments have greatly changed in Ireland with the centres of population and towns being subjected to depopulation with growth focused on the periphery of these

areas. With urban expansion, agricultural land surrounding towns and settlements as well as green areas within them are subjected to increasing pressures.

The type and depth of soil has direct implications on water movement which can lead to increased pollution threats if not properly considered.

5.7 Water

5.7.1 Introduction

For the purposes of this section of the Environmental Report the water environment is taken to include natural features such as lakes, rivers, streams and groundwater. In addition flooding is also dealt with in this section. Wastewater treatment and drinking water may be referred to in this section, but are discussed in more detail under the Material Assets section.

Water is fundamental to all life; for humans, plants and animals alike. It is also critical in economic terms in generating and sustaining wealth in a number of key areas such as agriculture, fishing, power generation, industry transport and tourism. However it is also a fragile resource requiring continued protection. In general terms Ireland's waters are of good quality, however preserving the high standard of water is essential for human health and the natural environment.

Since 2000, Water Management in the EU has been directed by the Water Framework Directive (WFD) 2000/60/EC which was transposed into Irish law under the European Communities (Water Policy) Regulations 2003 (S.I. No. 722/2003). This legislation requires governments to take a holistic approach to managing all their water resources based on natural geographic boundaries, *i.e.* the river catchment or basin. The WFD establishes a common framework for the sustainable and integrated management of all waters covering groundwater, inland surface waters, transitional waters and coastal waters.

For the purpose of implementing the WFD, Ireland has been divided into eight River Basin Districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine/ coastal areas. The management of water resources is divided into these River Basin Districts. The plan area is located in the Eastern River Basin District (ERBD).

A River Basin Management Plan (RBMP) for the Eastern River Basin District was prepared and adopted in 2010. The RBMP provides objectives for River Basin Districts in order to implement the requirements of the WFD.

5.7.2 Surface Water

The tidal River Boyne forms the northern boundary for the Mornington and Mornington East settlements. The River Nanny dissects the Laytown settlement. The Mornington Stream and its tributaries flow through Bettystown and Mornington East in a northerly direction. Brookside Stream flows in an easterly direction through Bettystown. The River Boyne catchment covers approximately 2,695 km² and includes parts of counties Louth, Cavan, Meath, Westmeath, Offaly and Kildare. The River Nanny has a catchment area of 190km² at Duleek and at the confluence with the Irish Sea this area will be in excess of 200km².

The smaller watercourses of the Mornington Stream and tributaries and the Brookside Stream have catchment areas that are under 10km².

All watercourses discharge into the Irish Sea which is subject to tidal variation and the impacts of tidal surge. The impact of these tidal levels can impact upon the levels within each of the watercourses.

The River Basin Management Plan affecting the plan area sets out the objectives and actions required to achieve at least 'good' quality status for all waters, in the period 2009-2015. The ultimate deadline for Member States for achievement of 'good' status is 2027 at the latest.

Although the LAP area is located within the Baltray WMU the area is not part of the WMU as surface water in this area flows directly into the Sea. As such the coastal waters are considered of significant importance.

The principal rivers of relevance to the LAP are listed in Table 11.

River	Length (km)	2009 WFD Water Quality
River Boyne	115.3	Good-Moderate
River Nanny	48.6	Good-Poor

Table 11: Main Rivers in plan area and their WFD Status 2009

Map E and Table 11 above set out the waterbodies found within the plan area. The reported results of the EPA biological surveys carried out over the period of 2007-2009 as part of the first three years of the Water Framework Directive (WFD) monitoring programme are also shown above. Based on these surveys the EPA classified the river waters into four biological quality classes.

- A - Unpolluted (Good),
- B - Slightly polluted/eutrophic (Moderate),
- C - Moderately polluted (Poor) and
- D - Seriously polluted (Bad)

There are a number of streams which flow through the plan area into the River Boyne, the River Nanny or directly into the sea.

The eastern areas of Meath are considered to have moderate water quality status to the North and bad water quality status to the South of the River Nanny. The main pressures are generally wastewater discharges, un-sewered properties and agricultural pollution.

5.7.3 Coastal Waters

The entire of the Meath coastline falls into the Boyne Estuary Plume Zone as identified in the Eastern River Basin District. The existing condition as determined by the EPA taking account of water quality, ecology, morphology and protected area monitoring data is High.

The identified pressures on the Boyne Estuary Plume Zone are intensive use of the coast, combined sewer overflow, and the urban areas of Drogheda.

5.7.4 Groundwater

Groundwater is the water stored underground in formations of saturated rock, sand, gravel, and soil. Surface water and groundwater are intimately linked to each other within the hydrological cycle and is an important source of water for streams, rivers and lakes. Groundwater resources are an invaluable source of water supply for the public, industry and agriculture and also perform an important role in sustaining base flows in the rivers within the plan area and their tributaries. In Ireland groundwater provides between 20% and 25% of drinking water supplies. Thus the protection of groundwater quality from the impact of human activities is a high priority; resources are susceptible to pollution with long term consequences both for humans and the natural environment.

The WFD identifies the groundwater status as being good in the area. The Meath County Groundwater Protection Scheme identifies the majority of the area of its groundwater as having 'low vulnerability'. However there are pockets of 'high vulnerability' in Mornington west of Laytown and in Bettystown. Groundwater protection is therefore of the utmost importance.

The type of groundwater bodies includes a pocket of Karstic around the Duleek, Mornington, Bettystown, Laytown area.

5.7.5 Aquifers

Aquifers are underground layers of rock which contain water and which are capable of yielding it to surface waters such as streams and rivers. The plan area is divided between 'Locally Important Aquifer in the Donacarney and Mornington and 'Regionally Important Aquifer' along the coast.

5.7.6 Flooding and Flood Risk

The underlying causes of flooding, heavy rain and high sea levels are, essentially uncontrollable. However, the factors affecting the extent and severity of the flood can be addressed. The most influential of these factors is development, in particular development in flood plains *i.e.* areas adjacent to rivers that tend to become flooded following periods of heavy rain. The most common causes of flooding in County Meath are the flooding of rivers and the Boyne Estuary and its tributaries in the plan area and the inadequacy of existing stormwater pipe networks in response to extreme rainfall events. Other contributing factors include land drainage exercises, overgrazing, deforestation and cattle access that can all impact on river bank stability, thus causing flooding due to faster water runoff.

Historic records help to indicate which areas are prone to flooding, although it is always possible that areas not known to have flooded in the past or for which no records of flooding are available, might flood in the future due to changes in upstream or downstream conditions or the occurrence of more extreme rainfall events, which are becoming increasingly prevalent.

A Strategic Flood Risk Assessment (SFRA) was undertaken as part of this LAP preparation. These assessments were prepared in accordance with requirements of the DoECLG and OPW Planning Guidelines, The Planning System and Flood Risk Management.

Flood risk can be defined as the probability of flooding multiplied by the consequences of flooding. The SFRA for the LAP contains Flood Zone Mapping for the plan area which highlights those parts of the area that are at a higher risk of flooding.

In the 'Planning System and Flood Risk Management', the probability of a flood event taking place is recognised through the classification of Flood Zones which indicate a high, moderate or low risk of flooding from fluvial or tidal sources

Hydrological studies of a number of watercourses in the County have been undertaken by Meath County Council in recent years, in partnership with the OPW and Fingal County Council, to identify potential flood risks and measures to reduce the risks. These include:

- FEMFRAMS (Fingal East Meath Flood Risk Assessment Management Study)
- Mornington District Surface Water & Flood Protection Scheme

Within the EM LAP area the FEM FRAMS provides modelled outlines for the Brookside Stream, River Nanny and its tributaries. It also provides tidal outlines for the Meath coastline and part of the Boyne estuary. The FEMFRAM confirmed the main flood risk to Laytown arises from combined fluvial and tidal flood risk along the Nanny River estuary.

FEMFRAMS rejected the construction of flood defence embankments and demountable defences to protect properties at risk along the coast and from the Nanny River as a result of a benefit cost ratio below 1.

A more beneficial option was recommended for the construction of flood embankments and walls on the left bank of the River Nanny along the R150 southwest of Laytown. Approximately 210m of flood defence walls are required. Immediately downstream of the railway bridge, approximately 240m of flood embankment are required along the left bank of the Nanny River.

At the time of writing it is understood that this option has not been progressed further.

5.7.7 Existing Environmental Issues

The principal threat to water is pollution which can adversely impact on all parts of the water cycle from groundwater to rivers, lakes estuaries and coastal waters. In simple terms pollution means the presence of a harmful substance such as a poisonous metal or pesticide, a nutrient or indeed silt.

Flooding of land from surface water runoff is usually caused by intense rainfall that may only last a few hours. Areas at risk from fluvial flooding will almost certainly be at risk from surface water flooding. The indicative pluvial map from the OPW PFRA study has been used to identify development areas at particular risk of surface water and pluvial flooding. Based on the PFRA mapping, the risk of pluvial flooding is generally low although some isolated areas are predicted to have a higher probability of pluvial flooding. Most of the higher risk areas are within undeveloped lands; there are some reports of historical surface water flooding affecting the settlements and management of risk can be addressed by individual works. For new development, adhering to the policies on the management of surface water will ensure the risk will be adequately managed.

The coastal facing settlements of Bettystown, Laytown, Mornington East and Mornington are mainly impacted though high sea levels extending up the watercourses which drain the inland area. This issue has been addressed on the Mornington Stream through the flood defence scheme, but causes some risk on the River Nanny, the Stameen Stream and to a much lesser extent the Brookside Stream. The beach and links area/dune systems offer enough protection to the seaward facing periphery against current extreme sea levels. Laytown is at most risk from extreme sea levels and the FEMFRAMS recommends some management measures in this regard.

Groundwater status within the Plan area is shown in Map X. It shows the status of the majority of the plan area as being 'Good' in 2010. However, there are areas of the plan where the groundwater resource is classified as being of high vulnerability. This presents significant challenges in terms of appropriate land use and the long term protection of vulnerable resources.

Groundwater flooding is caused by the emergence of water originating from the subsurface, and is particularly common in karst landscapes. This source of flooding can persist over a number of weeks and poses a significant but localised issue that has attracted an increasing amount of public concern in recent years. In most cases groundwater flooding cannot be easily managed or lasting solutions engineered.

There is an increased risk of flooding due to development, climate change and rainfall patterns. Development can exacerbate the problems of flooding by accelerating and increasing surface water runoff, altering watercourses and removing floodplain storage. It is now recognised that flood risk management must be treated as a central issue in the development of the area. Areas of floodplain and wetlands should therefore be recognised and preserved as natural defences against flood risk.

In the plan area climate change will have the greatest impact in relation to the predicted increase in sea levels and the resulting increase in water levels on the watercourses draining into the River Boyne estuary, River Nanny estuary and the Irish Sea. Results from the OPW PFRA mapping for extreme coastal levels suggests that the most significant increase in risk is limited to the Mornington Stream. The sensitivity of the other watercourses to sea level increase appears to be much lower as a result of a more abrupt drop in level close to the coastal margin.

A Strategic Flood Risk Assessment (SFRA) has been carried out as part of the preparation of the Local Area Plan. Further consideration to the potential future impacts of climate change will be given for specific areas of the LAP settlements within the SFRA. Where development is proposed within an area of potential flood risk, a flood risk assessment of appropriate scale will be required and this assessment must take into account climate change and associated impacts.

The Planning System and Flood Risk Management guidelines recommends that a precautionary approach to climate change is adopted due to the level of uncertainty involved in the potential effects. Climate change may result in increased flood extents and therefore caution should be taken when zoning lands in transitional areas.

5.8 Air and Climate

5.8.1 Air Quality

Air quality monitoring in Ireland is undertaken largely to implement EC Directives. In 2008 the EC Directive 2008/50/EC on ambient air quality and cleaner air for Europe (the CAFE Directive) entered into force. This piece of legislation placed the previous air quality framework legislation into a single directive. It sets out air quality objectives and targets

The Environmental Protection Agency is involved in air quality monitoring and has installed a number of air quality monitoring stations throughout Ireland. The EPA Report *Air Quality in Ireland 2011* provides an overview of the air quality in the country for 2011 based on data obtained from the 28 monitoring stations. There is no detailed information available for the plan area with the one monitoring station, for Co. Meath, being located in Navan. The County of Meath is primarily rated located within Zone D (primarily smaller settlements and rural areas outside of cities and major centres).

5.8.2 Climate Change

It is now largely recognised that tackling the issue of climate change must take centre stage on policy agendas around the world. The UN's Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (UNEP, IPCC, 2007), concluded that if left unchecked, the world's average temperature could rise by as much as 6°C by the end of the century, causing serious harm to economies, societies and ecosystems worldwide.

Climate Change is a phenomenon that has widespread economic, health and safety, food production, security, and other dimensions. It is also widely recognised that Climate Change is occurring as a result of the build-up of atmospheric Greenhouse Gases (GHG's) such as carbon dioxide. Most GHG emissions are related to the energy generation, transport, agriculture, and industry sectors.

The National Climate Change Strategy 2007-2012 states that there is now scientific consensus that global warming is occurring as a result of man-made greenhouse gases. In order to avoid the devastating effects that climate change is predicted to have, action must be taken to stabilise and reduce these harmful emissions.² The EPA states that global warming is the primary environmental challenge of this century.³

The Climate Change Strategy and Energy Management Action Plan 2011-2012 prepared by the Meath Local Authorities sets out the strategy for County Meath in mitigating and adapting to climate change. It aims to clearly identify the solutions to the challenge of reducing energy related emissions. It also outlines the actions to be taken to meet the requirements as set out in the National Climate Change Strategy. The actions in this should be considered in the preparation of the LAP.

² National Climate Change Strategy 2007-2012, Page 7

³ www.epa.ie

5.8.3 Existing Environmental Issues

Air Quality

Overall, road traffic has now become the greatest source of air pollution generally. In urban areas, concern has clearly shifted to a range of pollutants associated with this source which may be considered relatively new in the context of air quality control. The most important of these pollutants are NO₂, particulate matter less than 10 microns in diameter (PM₁₀), carbon monoxide (CO) and a wide variety of Volatile Organic Compounds (VOC), including carcinogens such as benzene. Advances in engine technology and fuel development will, it is predicted, offset any rise in tail pipe emissions from increased car usage due to an increased population. The context to the plan area is rural in nature where travel is an essential part of daily life. Therefore it is important that a good quality road infrastructure is provided and indeed alternatives to the private car are encouraged where possible.

Climate Change

Land use changes can and will have far-reaching implications for climate change that could include changes to commuter patterns with the building of further housing developments and the resultant increase in GHGs, SO₂, NO_x, VOC and other pollutant emissions.

5.9 Material Assets

5.9.1 Introduction

Material assets can be defined as the critical infrastructure essential for the functioning of society such as: electricity generation and distribution; water supply; wastewater treatment; and transportation. Whilst this infrastructure is essential its usage can lead both directly and indirectly to adverse environmental impacts. This section will discuss the following:

1. Transportation (road and rail)
2. Waste Management
3. Water Supplies
4. Wastewater Treatment Infrastructure
5. Energy

5.9.2 Transportation

Transportation is an essential element to the functioning of the Irish economy and will continue to be promoted as a crucial component to the further sustainable development of the plan area. Nonetheless, the role of the Local Authority is somewhat limited with respect to the provision of transportation infrastructure. The National Roads Authority is directly responsible for the national road network, Iarnród Éireann is directly responsible for the rail network and Bus Éireann and other private operators are responsible for public bus services. The Local Authority will continue to liaise with the relevant authorities in enhancing service provision to the inhabitants of the Plan area.

The National Transport Authority (NTA) is a statutory body formed in 2009 with responsibility for securing the provision of public passenger land transport services; it also has responsibility for the development of an integrated transport system within the Greater Dublin Area (GDA). The NTA has produced a draft Strategic Transport Plan for the GDA up to

the period of 2030. The Strategy establishes appropriate policies and transport measures that will support the GDA (including Co. Meath) in meeting its potential as a competitive, sustainable city region. This strategy will form the top level of the hierarchy of transport plans for the Greater Dublin Area.

In terms of international transportation, the plan area is in close proximity to both Dublin and Belfast International Airports along the M1 motorway as well as Dublin, Drogheda and Belfast Ports.

The plan area is served by a number of Regional roads which act as both local distribution roads and also link roads to other smaller towns, villages and with the larger urban centres and with the national primary and secondary routes. The R150 links Julianstown- Laytown-Bettystown- Donacarney- Mornington to South Drogheda as does the R151 via the Coast and Mornington East.

The plan area is very well served by the rail network with the Dublin to Belfast line stopping at Laytown (and Drogheda). Iarnród Éireann operates frequent Inter-City and regular services on this line. Car parking upgrades providing for additional car parking provision have been carried out in recent years at Gormanston train station.

The County Development Plan promotes the improvement of cycling and walking routes. Policy guidance documents such as 'Smarter Travel – A New Transport Policy for Ireland (2009-2020)' and the 'National Cycle Policy Framework (2009-2020)' have clearly placed an emphasis on walking and cycling as alternatives to vehicular transport. The LAP should place emphasis on alternatives to car travel.

5.9.3 Waste Management

The Local Authorities of Meath, Louth, Cavan and Monaghan form the North East region with respect to Waste Management Planning. The current Waste Management Plan for the region is the replacement North East Regional Waste Management Plan 2005 – 2010. The objective of the Waste Management Plan is to develop a sustainable approach to managing resources, by minimising the waste that is generated in a safe and environmentally sound manner and disposing of wastes in accordance with current National and EU waste legislation and policies.

There are no licensed waste facilities within the plan area however there are a number adjacent the plan area in Gormanston and Duleek. In addition, a recovery and disposal facility for inert Construction & Demolition waste is under development at Gormanston in County Meath.

A Waste to Energy facility at Carranstown has recently begun operations. This facility has been developed in line with the North East Regional Waste Management Plan.

5.9.4 Water Supply

The provision of safe potable water is a basic human necessity. Within Ireland drinking water is supplied either by the Local Authority, a Group Water Scheme or by private borehole. Meath County Council is directly responsible for the improvement and maintenance of public water services in the County. The quality of both surface and groundwater reserves are an important element of the area's supply of water and it is

critical that resources contributing to the water supply network remain free from contamination.

The LAP is served from the East Meath, South Louth and Drogheda Water Supply Scheme. The main water source for the East Meath Water Supply Scheme is the abstraction from the River Boyne at Roughgrange, which is treated at Stalleen Water Treatment Plant. This plant serves an area of approximately 600sq.km with storage provided at Stalleen, Windmill Hill, Kiltrough, Donore, Balloy, Carnes and Rath and caters for East Meath, Drogheda Environs, Duleek, Ratoath and Ashbourne. While the water treatment plant at Stalleen is located in County Meath, it is operated by Louth County Council. There is an agreement between Louth County Council and Meath County Council to allocate 47% of the capacity of that plant to Meath. The capacity allocation to Meath equates to approximately 15,000 cu.m. per day. Meath currently uses c11,000 cu.m. per day of that allocation. It is noted that this allocation caters for areas other than the users within the LAP area.

The Stalleen Water Treatment Plant is aging and has limited spare capacity. An evaluation of the existing water supply and proposals for a future water supply scheme to supply the East Meath, South Louth and Drogheda region was undertaken by Consulting Engineers McCarthy/Tobin JV for Meath County Council. The Preliminary Report for the new East Meath, South Louth and Drogheda Water Supply Improvement Scheme, July 2009, indicated that to meet projected needs it will be essential to maximise the use of existing sources together with the development to new sources. Future demands will be met through the conjunctive use of surface and groundwater sources. While the existing River Boyne abstraction at Roughgrange will be maintained as a primary source, the potential for additional abstraction from the River Boyne is limited. The report recommends therefore, that potential yield from groundwater sources to serve East Meath should be developed.

In 2010 Meath County Council completed Phase 1 of the Kiltrough Augmentation Scheme which provides an additional 3,000 cubic metres per day of water to East Meath from boreholes at Kiltrough water tower. This, together with recent new water sources and treatment plants developed by the Council at Rath and Dunshaughlin as well as substantial gains made through water conservation, through active leakage control, pressure management and water conservation awareness campaigns, has reduced substantially the reliance on Stalleen Water Treatment Plant and will play a major role in contributing towards meeting the needs of the existing and future population for potable water.

Irish Water, the new national public utility, is to acquire statutory responsibility for water services, ownership of assets, operations and capital investment from 2014. Any water supply scheme required to meet the anticipated water requirements to serve this area will be subject to SEA and AA, as required.

5.9.5 Waste Water

The safe treatment and disposal of sewerage is fundamental to the sustainable development of our society. The treatment of waste water is either through wastewater treatment plants or individual septic tank units.

The plan area and surrounding East Meath area relies on facilities that are outside the jurisdiction of Meath County Council and therefore potentially represents a transboundary issue. Wastewater from the settlements of Bettystown, Laytown, Mornington East, Donacarney and Mornington is currently pumped to the Drogheda Wastewater Treatment

Plant for treatment and final disposal. Following the approval of upgrade proposals by the DEHLG the capacity of the plant increased to 101,000 *p.e.* As a result of this upgrade Meath's allocation was increased from 7,000 *p.e.* to 27,500 *p.e.* The current Meath loading is approximately 17,000 *p.e.*

However, with the addition of pending load (*i.e.* development granted permission but not yet developed and occupied) the existing committed loading from Meath is c22,000 *p.e.* Meath County Council has a close working relationship with Louth County Council and further options exist to increase Meath's capacity allocation significantly in a relative short timeframe, should the need arise.

5.9.6 Energy

Electricity is provided in Ireland through a national grid system which is made up of a network of high voltage (110,000 volts, 220,000 volts and 400,000 volts) transmission stations, power lines and cables. The system includes approximately 6,000 km of overhead lines and underground cables and over 100 transmission stations. Power is generated by power plants throughout the country, utilising a variety of fuel or energy sources – including gas, oil, coal, peat, hydro-electricity, wind turbines and other sources including biomass and landfill gas.

Technologically advanced societies such as Ireland have become increasingly dependent on external energy sources for transportation, the production of many manufactured goods, and the delivery of energy services. As the problems of climate change and peak oil production become more prevalent, societies are increasingly turning to renewable energy sources for power. To this end the Government have set a target for 40% of electricity consumed to be generated from renewables by the year 2020.

The main energy network serving East Meath is 38kV electricity transmission lines. There are no high voltage lines within the LAP area. Within Meath electricity is primarily generated at the Meath Waste to Energy facility in Duleek which is approx 7km from the plan area. Additionally there are no gas transmission pipelines passing through the LAP area.

5.9.7 Existing Environmental Issues

Transport

The 2011 Census results show that the residents of County Meath rely heavily on the use of private cars for transport. Travel patterns show that a high proportion of residents commute long distances by car to school, work, mostly to Dublin. The area is therefore dependent on an efficient and adequate connection to the primary road network. As such, the maintenance and upgrade of the existing road network and where necessary, the provision of new road networks or realignments of existing roads are essential to ensure that the road network and its carrying capacity are maintained to a high standard. Additionally the accessibility of local routes and connections are maintained.

It is important that the balance is sought between public and private transport modes, for instance the integration of park and ride facilities with public transport provisions. In addition lands planned for future public transport requirements should be protected from inappropriate development.

There is a need to improve cycling and pedestrian facilities to provide for the sustainable development of the area. Increasing movements within the area in this regard should be a priority.

Waste Management

Both public and private waste collectors have a responsibility with regards to meeting Waste Management targets. Increased facilities for recycling should be provided to reduce the levels diverted to landfill.

Water Supply

The Stalleen Water Treatment Plant is aging and has limited spare capacity. An evaluation of the existing water supply and proposals for a future water supply scheme to supply the East Meath, South Louth and Drogheda region was undertaken by Consulting Engineers McCarthy/Tobin JV for Meath County Council. The Preliminary Report for the new East Meath, South Louth and Drogheda Water Supply Improvement Scheme, July 2009, indicated that to meet projected needs it will be essential to maximise the use of existing sources together with the development to new sources. Future demands will be met through the conjunctive use of surface and groundwater sources. While the existing River Boyne abstraction at Roughgrange will be maintained as a primary source, the potential for additional abstraction from the River Boyne is limited. The report recommends therefore, that potential yield from groundwater sources to serve the plan area and the greater East Meath should be developed.

The new East Meath, Drogheda and South Louth Water Supply Scheme will cater for the water services needs of East Meath, Drogheda and South Louth up to at least the year 2030. This will include the development of substantial groundwater sources in the East Meath Area to meet the projected water supply needs of the plan area and the Meath environs of Drogheda.

Wastewater

Current capacity, including existing committed load, is sufficient to meet the needs of this LAP. However should development occur at a higher level than anticipated this could cause environmental damage from inadequacy in the capacity of both private and Local Authority systems and the assimilative capacity of receiving waters. Such pressure on infrastructure could affect river and estuarine water quality, ground water, and seawater.

Urban runoff is the surface runoff of rainwater caused by urbanization. The pollution potential of the surface water run off is becoming increasingly of concern particularly its cumulative impact over entire catchment areas. Any increase in impervious surfaces such as roads, carparks, and roofed areas will increase the amount of runoff accumulated during precipitation events, and in turn decrease the level of waters percolating naturally through the soil.

Energy

County Meath is overly reliant on external and non renewable energy sources. While renewable energy is to be welcomed any new wind farm development within Meath must

be carefully sited and designed so as to avoid negative impacts on the protected views and landscapes of the plan area.

5.10 Cultural Heritage

5.10.1 Introduction

Cultural heritage can be defined as the legacy of physical objects and intangible attributes of a group or society that are inherited from past generations, preserved in the present and maintained for the benefit of future generations.

Within the LAP settlements there are monuments, groups of buildings and sites of extreme importance in cultural heritage terms. In addition to the intrinsic value of the cultural heritage of Meath, the County also benefits economically through the tourism value of these sites and their ability to attract visitors.

5.10.2 Archaeological Heritage

The archaeological heritage of an area includes structures, constructions, groups of buildings, developed sites, moveable objects, monuments of other types as well as their context, whether situated on or under land or water.

The National Monuments Acts 1930 – 2004 provide for the protection of archaeological heritage. The Record of Monuments and Places (RMP) was established under Section 12 of the National Monuments (Amendment) Act 1994 and structures, features, objects or sites listed in this Record are known as Recorded. The East Meath LAP 2005 recognised a zone of archaeological potential.

5.10.3 Architectural Heritage

At the heart of the planning system is a statutory requirement that the protection of buildings of artistic, architectural, historical, cultural, archaeological, scientific, technical or social interest be a mandatory objective of the Development Plan of each Local Authority. These buildings and structures are compiled on a register known as the “*Record of Protected Structures*” (RPS). There are a number of protected structures in the plan area and the identification of these structures on the RPS can be seen in Map F.

Section 81 of the Planning & Development Act 2000-2011 places a statutory obligation on Planning Authorities to ensure that all development plans must now include objectives to preserve the character of a place, area, group of structures or townscape that of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures. The policies and objectives contained within the LAP seeks to reinforce the protection of these structures.

The County Development Plan identifies an Architectural Conservation Area in Laytown. The special character of the Victoria and Netterville Terrace ACA is as a result of the combination of its built fabric, coastal setting and historical development. Their orientation towards the sea and back to front relationship with the road is a reminder of the development of the area. The ACA contained within the LAP is included within Appendix 9 of the Meath CDP 2013-2019.

5.10.4 Existing Environmental Issues

Cultural Heritage, including all its various elements, represents a finite resource, one which must be protected in order to enrich future generations. Thus, development which is deemed to adversely impact on structures, features, historical areas *etc.* must not be permitted. A proactive approach needs to be maintained by the Local Authority, working in conjunction with the various state agencies and departments as well as stakeholders to ensure the ongoing protection of this element of the environment.

Currently the most immediate threat to the cultural heritage is development pressure which can lead to a loss or impairment of a feature of importance. Furthermore it is recognized that heritage has an economic value particularly in terms of tourism. However unsustainable tourism must be avoided and care taken to ensure a balance is achieved between the economic gain that cultural heritage can bring and the preservation of the structures / sites of interest.

5.11 Landscape

5.11.1 Introduction

The concept of landscape encompasses all that can be seen by looking across an area of land, *i.e.* it is the visible environment in its entirety. Landscape is the context in which all change takes place and helps to create a unique sense of place or identity within an area. The landscape supports a wide range of ecological habitats despite the rapid growth in its resident population. It is the interaction of all of these elements that influences landscape character for future generations.

Meath is largely an inland county however it does include a short stretch of coastline which is contained within the plan area. This coastline is characterized by wide sandy beaches and river estuaries. Local landscapes, including features such as rivers, streams, ponds, lakes, turloughs, woodlands, hedgerows and field boundaries, make a considerable contribution to the amenity and local distinctiveness of both urban and rural landscapes.

5.11.2 Landscape Character Types

Meath has a high quality landscape much of notable cultural and historical significance. This rich landscape has been subject to significant human influence over time. Furthermore the natural diversity of the landscapes of the county coupled with cultural features such as the archaeological monuments, stonewalls, hedgerows, woodlands, field patterns, settlements and buildings has given the county its distinctive character.

A Landscape Character Assessment was prepared as part of the Meath County Development Plan 2013-2019. The assessment identified 4 generic areas of distinctive character or Landscape Character Type within the plan area consists of primarily Coastal Landscape and River Corridors and Estuaries.

The assessment further identified 20 areas of geographically specific landscape character or Landscape Character Areas (LCA). The area subject to this Local Area Plan is identified as Coastal Plains and Nanny Valley Character Areas.

The various definition of landscape acknowledges the interaction between people and nature and the changing nature of landscape. The concepts of protecting the significant features of landscape while managing change within landscape are considered to be a key element for the Local Area Plan.

The CDP outlines the potential capacity of each LCA to accommodate various classes of development. Each area is ranked No, Low, Medium or High capacity for the 10 types of development as listed. Table 12 below shows that the Nanny Valley has low capacity to accommodate any further development in its landscape. The LCA primarily relates to the rural landscape outside of established settlements and given the built up nature of the plan area the capacity to accommodate general development within the settlements would be high within adversely impacting on the landscape.

Potential Capacity to accommodate development: <i>Low, Medium, High</i>					
Landscape Character Area	1. Large Scale Buildings	2. Visitor Facilities	3. Multi-House Residential	4. One-off houses	5. Conversion existing buildings
7. Coastal Plains	Low	Low	Medium	Medium	Medium
8. Nanny Valley	Low	Low	Low	Low	Low
Landscape Character Area	6. Overhead cables, masts, substations	7. Roads and railways	8. Underground services	9. Wind turbines	10. Biomass and Forestry
7. Coastal Plains	Low	Low	Low	Med-Low	Medium
8. Nanny Valley	Low	Low	Low	Low	Low

Table 12 : Landscape Character Areas Ability to Accommodate Development

5.11.3 Seascapes

In the context of the Landscape Character Assessment process a Seascape is defined as comprising one or more views from land to sea, views from sea to land, views along coastline, and/or the effect on landscape of the conjunction of sea and land.

Given the LAP's coastal significance, the SEA process will assess the Plan's implementation on landscape quality which will include an identification of the visually sensitive features of the landscape within the Plan area.

5.11.4 Views and Prospects

In addition to the Landscape Character Areas and Types a number of views and prospects are of value and worthy of continued protection from inappropriate development either in nature or scale. Table 13 identifies 2 protected views and prospects within the LAP area that listed in the Meath County Development Plan 2013 - 2019.

View	Location	Description	Significance
65	Laytown Strand	Distinctive View northwards along the shore from Laytown.	Regional

75	Boyne Estuary	Expansive views of the Boyne Estuary with associated long views and open skylines. Prospects towards Beaulieu are included. This view is typical of many such views along this road.	Regional
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Table 13: Protected Views and Prospects, Meath County Development Plan 2013 – 2019**5.11.5 Existing Environmental Issues**

The Landscape Character Assessment for Meath identifies the unprecedented population growth experienced in the County as a threat to its landscapes and historic settlement structure. Modern unsympathetic development is also a threat to the landscape quality.

Urban areas particularly within commuting distance of the capital have grown rapidly which has eroded the essential character of these towns. Generally the volume of large development within these towns is not in keeping with their character or scale and has created a series of autonomous developments with no reference to their rural setting. Also many settlements have grown at a rate that the historic centres have become detached from the majority of their populations and the relationship between urban areas and landscape setting has been largely lost.

Given the significance of the coastal landscape within the plan area development must be considered in terms of its potential impact on landscape and views.

5.12 Interactions

The environment is both complex and dynamic and the various elements of the environment interact in an equally complex and dynamic manner. The permutations can be numerous; however at a simplistic level the principal interactions can be either qualified or quantified in most instances.

These interactions can be either benign or unfavourable; can be either proportionate or synergistic; can be short lived or permanent. In addition an event, an individual action or an ongoing activity can have an effect on one or more aspects of the environment. This effect may differ in magnitude, type and duration across several different aspects of the environment.

For example the potential exists for discharges of treated effluent from wastewater plants to surface water systems to impact negatively on water quality. Similarly the use of septic tanks can impact negatively on the quality of ground water resources if working inefficiently or inappropriately sited. This report has attempted to deal with the issues at a 'root' level thereby diminishing the necessity to discuss further the possible and numerous interactions between the various environmental receptors.

This environmental report has approached each of the environmental receptors on an individual basis though it is fully cognisant of the relationship between the various elements. The report has therefore attempted to present the data in such a way as to indicate fully the potential for impacts on other aspects of the environment where they may occur or indeed are likely to occur.

To highlight the extent of the relationship between the various elements of the environment the matrix presented in Table 14 provides an indication of the interactions present between environmental receptors.

		Human Beings - Quality of Life	Biodiversity - Flora and Fauna	Soil and Geology	Water Quality - Surface and Ground	Flooding	Landscape and Visual Issues	Material Assets - Wastewater Treatment	Material Assets - Water Supplies	Material Assets - Transportation	Material Assets - Waste Management	Material Assets - Energy	Cultural Heritage	Air Quality	Noise
Is this aspect of the environment likely to interact with other aspects of the environment?	Human Beings - Population														
	Biodiversity - Flora and Fauna														
	Soil and Geology														
	Water Quality - Surface and Ground														
	Flooding														
	Landscape and Visual Issues														
	Material Assets - Wastewater Treatment														
	Material Assets - Water Supplies														
	Material Assets - Transportation														
	Material Assets - Waste Management														
	Material Assets - Energy														
	Cultural Heritage														
	Air Quality														
	Noise														

Table 14: Environmental Interactions

The significant aspect of the matrix (Table 14) is the relationship between human beings and all aspects of the environment. There are three simple conclusions to be drawn from the matrix; people benefit most from a high quality environment; people are collectively responsible for the adverse impacts that can occur; and people are most seriously affected by deterioration in environmental quality.

6.0 Strategic Environmental Objectives Targets and Indicators

6.1 Introduction

The primary objective of the SEA is to provide for a high level of environmental protection and to contribute to the integration of environmental considerations into the preparation and adoption of the Bettystown, Laytown, Mornington East, Donacarney and Mornington Local Area Plan 2014-2020

Article 5 of the SEA Directive requires the identification of environmental protection objectives. These Strategic Environmental Objectives (SEOs) assist in the prediction, description and monitoring of impacts on the environment as a result of the Local Area Plan. Indicators allow impacts to be assessed and highlighted in a simple and effective manner. Indicators can also be used to form the basis of a monitoring programme for the Plan, (outlined in Chapter 10 of this Environmental Report) the results of which will inform the next Plan Review and other studies.

Thus to achieve the aim of assessing and improving the environmental performance of the Local Area Plan, a number of Environmental Objectives, specific to each environmental topic have been formulated, see Table 15. These SEOs are a fundamental part of the SEA process. The Objectives are derived through consultation between the Planning Authority, the report authors (guided by SEA guidelines, incorporating where relevant international, national and regional policies which govern environmental protection/conservation) and are based on the overall strategy of the Planning Authority to safeguard the environmental integrity of the Local Area Plan area and to develop its functional area in a sustainable manner.

SEOs are distinct from the objectives and policies contained in the plan, though the process of preparing the Local Area Plan in conjunction with the SEA allows for the incorporation of environmental themes at an early stage of the process. The Environmental Objectives are used to assess the proposed development strategies of the Draft Local Area Plan, its policies and objectives, in order to evaluate and identify where conflicts may occur. The assessment is contained in Chapter 8.

Allied to the development of the Strategic Environmental Objectives are Environmental Indicators and targets. Indicators facilitate the monitoring aspect of the SEA, while targets provide a realistic and achievable target to which the Local Authority can work towards. The indicators are discussed in more detail in Chapter 10.

Environmental Parameter		Objective
Biodiversity	B1	Conserve and where possible enhance the diversity of habitats and protected species avoiding irreversible losses
	B2	Promote measures to protect biodiversity by creating and improving habitats, where possible
	B3	Provide opportunities for sustainable public access to wildlife and wild places at appropriate locations
	B4	Avoid damage by development to designated wildlife sites and protected species, and associated ecological corridors/ linkages

Population	P1	Improve people's quality of life based on high-quality residential, working and recreational environments and on sustainable travel patterns
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Human Health	H1	Minimise noise, vibration and emissions from traffic, industrial processes and extractive industry
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Soil	S1	Maintain the quality of soils
	S2	Maximise the sustainable re-use of brownfield lands, and maximise and prioritise the use of the existing built environment rather than developing greenfield lands
	S3	Minimise the consumption of non-renewable sand, gravel and rock deposits
	S4	Minimise the amount of waste to landfill

Water	W1	Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems
	W2	Promote sustainable water use based on a long-term protection of available water resources
	W3	Reduce progressively discharges of polluting substances to waters
	W4	Mitigate the effects of floods and droughts including vulnerability to climate change. (extreme weather, sea level rise, coastal erosion)

Air	A1	Reduce all forms of air pollution
	A2	Minimise emissions of greenhouse gases to contribute to a reduction and avoidance of human-induced global climate change
	A3	Reduce waste of energy, and maximise use of renewable energy sources
	A4	Assess, plan and manage adaptation to climate change impacts
	A5	Reduce the need to travel

Environmental Parameter		Objective
Material Assets	MA1	Maximise use of the existing built environment
	MA2	Avoid flood risk and/or coastal erosion in selecting sites and zoning of lands for development
	MA3	Maintain water abstraction, run-off and recharge within carrying capacity (including future capacity) at environmentally sustainable levels.
	MA4	Maintain the quality of and access to assets such as aquifers, aggregates, ports, motorways, and all physical and social infrastructures.
Cultural Heritage	CH1	Promote the protection and conservation of the cultural, including architectural and archaeological, heritage
Landscape	L1	Conserve and enhance valued natural and historic landscapes and their character and features within them

Table 15: Strategic Environmental Objectives

7.0 Alternatives

7.1 Introduction

The issue of alternatives is a critical function of the SEA process and is necessary to evaluate the likely environmental consequences of a range of alternative development strategies for the county within the constraints imposed by environmental conditions. The alternatives were considered at an early stage of the process and through an iterative process with the Local Area Plan, SEA and AA teams the most appropriate scenario was selected.

7.2 Legislative context

Article 5 of the SEA Directive requires the consideration of reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme and the significant environmental effects of the alternatives proposed. It states under Article 5(1) that;

Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I.

In accordance with SEA guidelines the alternatives put forward should be reasonable, realistic and capable of implementation. They should also be in line with the appropriate strategic level at which the Plan will be implemented within the national and county planning hierarchy. The Bettystown-Laytown-Mornington East-Donacarney- Mornington Local Area Plan 2014-2020 is framed within a policy context set by a hierarchy of National, Regional and County level strategic plans as well as the Irish and European legislative framework. Therefore the options for alternatives are limited, and a scenario such as the 'do-nothing' situation has not been included as it is neither reasonable nor realistic.

The alternatives proposed have been assessed against the relevant Strategic Environmental Objectives (SEOs) established for the key aspects of the environment likely to be affected by the Plan's implementation. The evaluation process resulted in the identification of potential impacts and informed the selection of the preferred development scenario for the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020. This determination sought to understand whether each alternative was likely to improve, conflict with, or have a neutral interaction with the environment of the plan area.

7.3 Methodology for the Selection of Alternatives

The plan is based on the principles of sustainable development which means that development will be promoted in accordance with the appropriate international, national, regional and county guidelines.

Particular reference is drawn to the Core Strategy of the Meath County Development Plan which must be complied with. The Core Strategy allocates 100 residential dwellings to the

plan area (80 unit housing allocation to Laytown-Bettystown-Mornington East and 20 unit housing allocations to Donacarney-Mornington) to be developed over its lifespan for the years 2013 – 2019 based on their designation within the County Settlement Hierarchy. This 100 residential dwelling allocation includes the 50% headroom.

The Core Strategy also states that the extent of committed units (*i.e.* units for which planning permission has been granted but which have not yet been built) must also be taken into account. There are currently 146 ha of available land zoned in the 2005 East Meath LAP at Laytown-Bettystown-Mornington East and Donacarney-Mornington which allows for residential development. Given that the Core Strategy of the Meath CDP 2013– 2019 allocates an additional 100 housing units over the period of this Plan in addition to the extant planning permissions ((1,414 no. units), it is evident that there is a significant excess of land zoned to accommodate residential development within the plan area.

The average residential density considered appropriate in this context is 25 units per hectare in Bettystown-Laytown-Mornington East and 20 units per hectare in Donacarney-Mornington. Applying the average density per hectare results in a requirement of 3.2 hectares in Bettystown-Laytown-Mornington East and 1.0 hectare in Donacarney-Mornington being available to accommodate the allocated number of units. After these units have been provided for there is a resultant excess zoning of 113.7 hectares in Bettystown-Laytown-Mornington East and 28.0 hectares in Donacarney-Mornington remaining. In order to align with the Core Strategy, it will be a requirement to reduce the quantity of land zoned to accommodate residential development.

On this basis, 7 undeveloped sites located within Laytown-Bettystown-Mornington East and 11 within Donacarney-Mornington have been identified and assessed to achieve the most suitable sites for the preferred future development scenario to accommodate growth within the town as required by the Core Strategy.

The evaluation of the development areas therefore excluded:

- Sites identified within the SFRA which are located with flood zones A & B (corresponding with the 1:100 year and 1:1,000 year flood event) and are considered inappropriate for vulnerable development. The SFRA for the LAP is included in Appendix C of this plan which was prepared by JBA Consulting on behalf of Meath County Council.
- Those sites less than 0.5 hectares in extent as it is not considered necessary to include sites which could bring forward less than 10 no. units in the same manner as it has not been considered necessary to include small scale brownfield sites in the town centre/edge of town centre. It is not considered that a Core Strategy needs to be prescriptive to this minute level of detail.
- The evaluation excluded the consideration of sites containing existing uses which are unlikely to change over the course of the next plan.
- All sites with the benefit of an extant permission.

The following factors have been used to determine the suitability of specific lands for residential development which constitute the proper planning and sustainable development of the town:

- Proximity to the Bettystown town centre and Donacarney village centre;
- Proximity to the schools;

- Availability of Public Transport - to maximise public transport investment, it is important that land use planning underpins its efficiency by sustainable transport patterns. This includes promoting higher densities within 400m metres walking distance of a bus stop and proximity to the rail station (800m);
 - Regeneration/Renewal of residential areas or other brownfield sites;
 - Environmental Constraints – proximity to and potential impact on the qualifying interests of the adjoining Natura 2000 sites;
 - The need to provide new roads infrastructure to facilitate development.
- Consideration as to whether a site could be considered an infill opportunity as opposed to extending the urban footprint further from the town centre.
- Leapfrogging beyond other available sites will not be considered favourably.

Sites were rated based on the above factors and ranked in order of preference for zoning to residential use as part of the Local Area Plan preparation process. This assessment has been reviewed by Brady Shipman Martin from a Strategic Environmental Assessment perspective to ensure that the identified environmental factors are in agreement with the findings. Each of the identified sites proposed for zoning were assessed on the basis of environmental criteria of the SEA Environmental Objectives as set out in Chapter 8 of this ER in order to identify any potential negative environmental effects in relation to these sites. The results are presented in Table 16.

[illegible]

Table 16: Assessment of Alternative Zonings

This assessment was undertaken to identify any potential issues in relation to these sites that may not have been identified as part of the initial alternatives assessment ranking procedure. This essentially is a thorough review of the sites from an environmental perspective. This assessment was used to inform the overall residential strategy for zoning of lands to serve the town.

The potential uncertainties identified in the assessment relate to localised impacts which may occur as a result of the development of these sites. However these potential uncertainties will be dealt with at planning application stage and are mitigated against by protective policies contained in the Plan with regards to flooding, biodiversity and landscape.

8.0 Strategic Environmental Assessment of the Plan

8.1 Introduction

In its Introduction chapter the Bettystown-Laytown-Mornington-Mornington East-Donacarney Local Area Plan 2014-2020 states:

The Strategic Vision for Bettystown, Laytown, Mornington, Mornington East and Donacarney is to create a place to live, work and visit which is appealing, distinctive and sustainable, with minimal impact on the environment and drawing on the unique coastal setting.

The SEA process ensures that the environment is central to all decisions on the future development of the plan area.

The purpose of this section of the Environmental Report is to highlight the potential conflicts, if they are present, between the stated policies and objectives contained in the Plan with the Strategic Environmental Objectives. Furthermore the assessment examines the potential impact arising from the Plan's implementation of its policies and objectives on sensitive environmental receptors.

The process of SEA and Local Area Plan formulation is an iterative one and as such environmental considerations have informed all stages of plan preparation carried out to date in order for the potential for significant adverse effects arising from implementation of the plan to be minimised. Nonetheless, it is possible that some individual plan objectives or policies will create such effects. Where the environmental assessment identifies significant adverse effects, consideration is given in the first instance to preventing such impacts; where this is not possible for stated reasons, to lessening or offsetting those effects through mitigation measures outlined in Chapter 9 of this report.

In some instances there is little or no relationship between the various Plan Policies/Objectives and the respective environmental receptor. Where this occurs no further discussion is deemed necessary. This has been determined through an initial screening of the Local Area Plan policies and objectives which ascertains if policies are likely to have a positive, negative or neutral impact on the environment. This screening process allows the assessment to focus more efficiently on the pertinent issues. The assessment matrices are provided indicating where the screening process has in the first instance identified an impact which may potentially arise due to the implementation of policy/objective contained within the Plan. Similarly where a conflict exists between a Strategic Environmental Objective and a Policy/Objective this is noted and discussed.

This process aims to ascertain the quality, if any, of the potential impact. Each of the Plan's policies and objectives have been screened for their impact and where a neutral impact is noted no further discussion is provided within this report. This format allows for the ER to focus on the positive and negative impacts and proceed to a discussion on their significance and duration. Thus it is a more robust, more focused approach to understanding the potential impacts associated with the Plan's implementation.

8.2 Environmental Assessment

This phase of this assessment identified the potential impact on the environment as a result of the policies and objectives of the Local Area Plan. Table 17 below highlights where the impact may be either potentially positive (green); neutral (white); potentially negative (yellow); or uncertain (blue). Where a neutral impact is identified no further discussion is deemed necessary. However it is acknowledged localised issues may arise depending on site specific issues and the type of development proposed. The assessment contained herein deals with strategic issues alone, for potential localised impacts the Mitigation section contained in Chapter 9 should be consulted.

It has been determined that there are a number of policies/objectives where the impact is potentially negative. The significant issues are discussed in the following sections. A comprehensive and detailed set of mitigation measures are provided in Chapter 9 which effectively reduces or eliminates identified negative impacts. Similarly, monitoring the implementation of the plan, as discussed in Chapter 10, will ensure that if any negative impact becomes a reality it will be identified at an early stage and appropriate actions taken by the relevant authority/agency to remedy the situation.

In general terms the Plan, in its current form will have a positive effect on the environment as a whole.

8.3 Human Beings

The purpose of the Local Area Plan in broad terms is to promote, manage and control development within the plan area over the lifetime of the plan in order to achieve a balance between social, economic and environmental considerations thereby benefitting the residents of the area both now and in the future. The initial screening aspect of the assessment presented in Table 17 indicates the Plan will impact positively on the area's residents. However the assessment of the Plan's implementation on other receptors fully considers the consequences of the Plan's implementation on Human Beings. For instance where an aspect of the environment relates to or overlaps with the broad issue of human health such as air quality or water quality, this aspect of 'human health' is addressed under that topic.

The potential impacts for Population and Human Health are predominantly positive as it is proposed to consolidate settlements, improve social and community facilities and integrate land use and transport.

8.4 Soil and Geology

The assessment reveals that the majority of policies and objectives are neutral on Soils & Geology. A number of the objectives and policies contained within the Strategic Vision, Core Strategy and Themes chapter of the Plan will result in a positive effect at a strategic level on the soil and geology aspect of the environment.

The overall reduction in lands zoned within the plan area reduces the requirement of development on greenfield sites thus protecting potentially valuable agricultural resource. The implementation of these strategic objectives will contribute positive impact on the soil and geology element of the environment.

The screening assessment identified a positive impact on this aspect of the environment due to the implementation of the Plan's policies and objectives in relation to the natural environment.

8.5 Biodiversity

The plan area is situated in a highly sensitive environment for flora and fauna. As such the assessment has raised a significant number of potential negatives and uncertainties as a result of the policies and objectives contained within the plan.

The primary concerns relate to the interaction between tourism proposals, transport objectives, possible flood risks and green infrastructure proposals and reference to policies and objectives relating to the Coast and the protection of designated sites. Many of these are screened as uncertain at this stage and would be subject to detailed environmental assessment during the planning process. The possible interactions are dealt with in more detail in the accompanying Natura Impact Report.

8.6 Water Quality

The screening assessment identified a neutral impact on water quality (water, groundwater, surface water and flooding) due to the implementation of the Plan's policies. Development will be subject to necessary infrastructure in place to accommodate the needs of that development. This will therefore result in a positive impact on the quality of waters within the plan area.

The Plan provides considerable protection of vulnerable and valuable water resources and thus the effect of the Plan's policies and objectives contained within this section of the Plan will result in a positive impact on water resources.

The Council has provided specific policy and objectives relating to water quality, both ground and surface.

In order to ensure both public health and environmental protection, it is essential that any new dwelling is served by drainage arrangements that meet the Council's requirements and standards. Therefore the following policies are encouraged as they are likely to have profound positive impacts on the water environment of the plan area.

The impact on flooding is positive or neutral as it is proposed that a comprehensive risk-based planning approach to flood management to prevent or minimise future flood risk be implemented. The avoidance of development in areas where flood risk has been identified will be the primary response. Proposals for mitigation and management of flood risk will only be considered where avoidance is not possible and where development can be clearly justified with the justification test outlined in the "Planning System and Flood Risk Management – Guidelines for Planning Authorities".

Having regard to the approach to flood risk set out in the Guidelines and the extent of the areas shown to be at risk in the SFRA mapping for LAP area, a number of areas which were zoned for development in the 2005 East Meath LAP are no longer zoned to accommodate highly vulnerable uses in this plan because the lands have been identified as being at risk of flooding. This change of zoning does not alter the validity of any existing planning permissions on these lands but will be a material consideration in the assessment of any future planning applications.

Justification Tests were carried out on 2 sites as part of the SFRA process. As a result, zonings have been retained at one location identified as being at risk of flooding.

Within Mornington East it has been considered appropriate to retain the zoning objective of some lands, notwithstanding the fact that they have also been identified as being at risk of flooding. These zonings have been retained subject to the requirement for more detailed assessment at project stage, on the basis that they are located where development is generally desirable and necessary to facilitate the creation of a local centre (TVC OBJ 6).

It has also been considered appropriate to retain the objective of the North South Spine Road (TM OBJ 1), notwithstanding the fact that this area has been identified as being at risk of flooding. This objective has been retained subject to the requirement for more detailed assessment at project stage, on the basis that it is integral to the overall land use planning and movement strategy for the LAP where delivery of this route is necessary to facilitate consolidation of centrally located sites and create linkages between the educational campus, town centre and residential areas.

In all other instances all undeveloped lands within Flood Zones A & B have been zoned for open space.

8.7 Material Assets – Transport

Broadly speaking the policies and objectives relevant to the Transport (Material Assets) aspect of the environment are positive and will assist in increasing the sustainable movement of people and goods throughout the County. The promotion of sustainable travel patterns through reduced requirement on cars and the increased provision of cycling and pedestrian routes will have positive impacts.

The consolidation of development within the towns and villages and the adoption of a sequential approach to development of those settlements will ensure the viability of transport infrastructure and provision of alternatives to the private car.

Implementation of the above policies and the supporting objectives regarding transport will in general have a positive or neutral impact and will have secondary positive impacts on climate change and air quality. There are a number of identified indirect uncertainties with regard to flooding and impact on biodiversity and landscape.

8.8 Material Assets – Waste Services

This section of the assessment ascertains how the policies and objectives of the Local Area Plan are likely to impact on the supply of water and disposal of wastewater and waste management throughout the County.

Wastewater

The baseline analysis revealed the plan area's reliance on external wastewater infrastructure. The inclusion of policies and objectives to ensure wastewater infrastructure is in place prior to development occurring is a positive for wastewater.

This assessment has identified a likely neutral to positive impact in this regard through the implementation of policies and objectives contained within the Water Services and Waste Management Section of the Plan.

Waste Management

With regard to waste management the policies of the Plan which support the reduction of the amount of waste that ends up in landfill / incineration have a positive to neutral impact on the plan area. Additionally they will have secondary positive impacts on climate change and human beings.

8.9 Noise

In overall terms the policies and objectives of the Plan have been found likely to have a positive to neutral impact on this aspect of the environment. While implementation of policies and objectives contained in the plan are likely to have a positive impact on noise the potential exists for site specific impacts to occur as a result of development. This of course will be dependent on the nature and specifics of that development and where it will be located. Any potential negative impacts will be mitigated for and will be dealt with on a site specific basis through the development management process.

8.10 Air Quality

The potential impacts on Air Quality are positive or neutral as the Plan proposes to consolidate the towns.

The Plan acknowledges there is an increase in private car use, however it also aims to promote more sustainable modes of transport which will impact positively on air quality. The plan also promotes sustainable travel modes and seeks to reduce the requirements of long distance commuting to Dublin.

The plan is committed to the promotion of sustainable means of travel, and the encouragement of modal change from the private car. The emphasis will be on achieving a situation where the residents of the plan area are within reasonable walking/cycling distance of local services and public transport. The strategy proposes the improvement of cycling and pedestrian infrastructure.

8.11 Energy

Energy infrastructure is critical for the sustainable development of the plan area. The assessment of the policies and objectives contained within the Plan has resulted in a generally neutral impact on the environment of the plan area.

8.12 Climate Change

The fundamental objective of fostering sustainability and reducing the levels of pollution and emissions caused through development is central to the formulation of the policies and objectives of the LAP.

Thus the need to reduce the amount of energy generated as a result of transportation has been to the fore in the proposed transportation and settlement strategies pursued in this Local Area Plan.

Flooding is a natural phenomenon of the hydrological cycle which is predicted to increase as a result of ongoing climatic changes. An increase in rainfall intensity as a result of climate change could have severe consequences for flooding and in particular the severity of flood events.

Meath is committed to pursuing sustainable energy policies in accordance with the White Paper, 'Towards a Sustainable Energy Future for Ireland 2007-2020'. Improving energy efficiency is a key step in a sustainable energy policy. Energy efficiency is internationally recognised as the most cost-effective means of reducing dependence on fossil fuels.

8.13 Cultural Heritage

In general the policies and objectives contained within the LAP are positive to neutral for impacts on Cultural Heritage however the interaction between tourism objectives and cultural heritage had indicated uncertain or potential negative impacts. Development (*i.e.* residential, commercial *etc.*) therefore should be in keeping with the character of the village in question. This is considered vital to protecting the heritage of the plan area. Maintaining the quality of the urban environment is key to protect this heritage and maximise its potential for tourism.

The assessment identified the potential for localised impacts associated with the provision or improvement of transport infrastructure such as road widening, road construction *etc.* and this should be considered on a case by case basis at the planning stage.

8.14 Landscape

The screening assessment identified a full spectrum of potential impacts on the landscape arising from the implementation of the Plan's policies and objectives on this aspect of the environment.

As with Biodiversity and Cultural Heritage potential negatives or uncertainties have been identified from the interaction between tourism and green infrastructure policies and objectives.

Additionally Energy and communications and transport infrastructure can and do have an impact on the landscape.

Development proposals that arise as a result of these policies and objectives will be assessed on a case by case basis and any potential negative impacts on this aspect of the environment will be assessed during the planning process.

Environmental Report Chapter 8: Strategic Environmental Assessment of the Plan

Table 17: Strategic Environmental Assessment of Policies and Objectives

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Flooding	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management
Chapter 2: Strategic Vision, Core Strategy & Themes																	
	SC POL 1																
	SC POL 2																
	SC POL 3																
	SC POL 4																
	SE POL 1																
	SE POL 2																
	SE POL 3																
	SE POL 4																
	SE POL 5																
	SH POL 1																
	SH POL 2																
	SH POL 3																
Prioritising Land for Development	RE POL 1																
	RE POL 2																
	RE POL 3																
	RE POL 4																
Chapter 4: Development Policies & Objectives																	
Economy & Employment	EED POL 1																
	EED POL 2																
	EED POL 3																
	EED POL 4																
	EED POL 5																
	EED POL 6																
	EED POL 7																
	EED OBJ 1																
Tourism Development	TD POL 1																
	TD POL 2																
	TD POL 3																
	TD POL 4																
	TD POL 5																
	TD POL 6																
	TD POL 7																
	TD POL 8																
	TD POL 9																
	TD POL 10																
	TD POL 11																
	TD POL 12																
	TD POL 13																
	TD POL 14																
	TD OBJ 1																

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

SEA of Bettystown Laytown Mornington East Donacarney
Mornington Local Area Plan 2014-2020

Environmental Report Chapter 8: Strategic Environmental Assessment of the Plan

Table 17: Strategic Environmental Assessment of Policies and Objectives contd.

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Flooding	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management
Town & Village Centres	TVC POL 1																
	TVC POL 2																
	TVC POL 3																
	TVC POL 4																
	TVC POL 5																
	TVC POL 6																
	TVC POL 7																
	TVC POL 8																
	TVC POL 9																
	TVC OBJ 1																
	TVC OBJ 2																
	TVC OBJ 3																
	TVC OBJ 4																
	TVC OBJ 5																
	TVC OBJ 6																
Residential Development	HD POL 1																
	HD POL 2																
	HD POL 3																
	HD POL 4																
	HD POL 5																
	HD POL 6																
	HD POL 7																
	HD POL 8																
	HD POL 9																
	HD POL 10																
	HD POL 11																
	HD POL 12																
	HD POL 13																
	HD POL 14																
	HD OBJ 1																
	HD OBJ 2																
	HD OBJ 3																

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

Environmental Report Chapter 8: Strategic Environmental Assessment of the Plan

Table 17: Strategic Environmental Assessment of Policies and Objectives contd.

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Flooding	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management
Community Infrastructure	CI POL 1																
	CI POL 2																
	CI POL 3																
	CI POL 4																
Childcare Facilities	CI POL 5																
	CI POL 6																
	CI POL 7																
	CI POL 8																
Healthcare Facilities	CI POL 9																
	CI POL 10																
	CI POL 11																
	CI POL 12																
Education	CI POL 13																
	CI OBJ 1																
	CI OBJ 2																
	CI POL 14																
Library Facilities	CI POL 15																
	CI POL 16																
	CI POL 17																
	CI POL 18																
Age Friendly Strategy	CI POL 19																
	CI OBJ 3																
	CI POL 20																
	CI OBJ 4																
Arts & Culture	CI POL 21																
	CI POL 22																
	CI POL 23																
	CI POL 24																
Recreation & Open Space Development	ROS POL 1																
	ROS POL 2																
	ROS POL 3																
	ROS POL 4																
	ROS POL 5																
	ROS POL 6																
	ROS POL 7																
	ROS POL 8																
	ROS POL 9																
	ROS POL 10																
	ROS POL 11																
	ROS OBJ 1																
	ROS OBJ 2																
	ROS OBJ 3																
	ROS OBJ 4																
	ROS OBJ 5																

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

Environmental Report Chapter 8: Strategic Environmental Assessment of the Plan

Table 17: Strategic Environmental Assessment of Policies and Objectives contd.

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Flooding	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management
Water Supply	WSU POL 1																
	WSU POL 2																
	WSU POL 3																
	WSU POL 4																
	WSU POL 5																
	WSU POL 6																
	WSU POL 7																
	WSU POL 8																
	WSU OBJ 1																
Wastewater	WSU OBJ 2																
	WSU OBJ 3																
	WSU POL 9																
	WSU POL 10																
Surface Water	WSU POL 11																
	WSU POL 12																
	WSU OBJ 4																
	WSU POL 13																
Flood Risk Management	WSU POL 14																
	WSU POL 15																
	WSU POL 16																
	WSU POL 17																
	WSU POL 18																
	WSU POL 19																
	WSU POL 20																
	WSU POL 21																
	WSU POL 22																
	WSU POL 23																
	WSU POL 24																
	WSU OBJ 5																
	WSU OBJ 6																
	WSU OBJ 7																
	WSU OBJ 8																
	WSU OBJ 9																
Waste Management	WSU OBJ 10																
	WSU POL 25																
	WSU POL 26																
	WSU POL 27																
	WSU POL 28																
	WSU POL 29																
Telecommunications	WSU POL 30																
	WSU OBJ 11																
	WSU OBJ 12																
	WSU OBJ 13																
Energy	WSU POL 31																
	WSU POL 32																
	WSU POL 33																
Energy	WSU POL 34																
	WSU OBJ 14																

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

Table 17: Strategic Environmental Assessment of Policies and Objectives contd.

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Flooding	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management
Transportation & Movement	TM POL 1																
	TM POL 2																
	TM POL 3																
	TM POL 4																
	TM POL 5																
	TM POL 6																
	TM OBJ 1																
	TM OBJ 2																
	TM OBJ 3																
	TM OBJ 4																
	TM OBJ 5																
	TM OBJ 6																
	TM OBJ 7																
	TM OBJ 8																
	TM OBJ 9																
	TM OBJ 10																
	TM OBJ 11																
	TM OBJ 12																
	TM OBJ 13																
	TM OBJ 14																
	TM OBJ 15																
	TM OBJ 16																
	TM OBJ 17																
	TM OBJ 18																
	TM OBJ 19																
Future Development & the National Road Network	TM OBJ 20																
	TM OBJ 21																
	TM OBJ 22																
	TM OBJ 23																
	TM POL 7																
	TM POL 8																
	TM POL 9																
Walking & Cycling	TM POL 10																
	TM OBJ 25																
	TM OBJ 26																
	TM OBJ 27																
	TM POL 11																
	TM POL 12																
	TM POL 13																
Public Transport	TM POL 14																
	TM POL 15																
	TM POL 16																
	TM POL 17																
	TM POL 18																
	TM POL 19																
	TM OBJ 28																
Mobility/ Workplace Travel Plans	TM OBJ 29																
	TM POL 20																

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

Environmental Report Chapter 8: Strategic Environmental Assessment of the Plan

Table 17: Strategic Environmental Assessment of Policies and Objectives contd.

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Flooding	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management
Cultural Heritage, Natural Assets & Green Infrastructure	HER POL 1																
	HER POL 2																
	HER POL 3																
	HER OBJ 1																
	HER OBJ 2																
	HER OBJ 3																
	HER OBJ 4																
	HER OBJ 5																
	HER POL 4																
	HER POL 5																
	HER POL 6																
	HER POL 7																
	HER POL 8																
	HER POL 9																
	HER POL 10																
	HER OBJ 6																
	HER OBJ 7																
	HER OBJ 8																
	HER POL 11																
	HER OBJ 9																
	HER OBJ 10																
Archaeological Heritage	HER POL 12																
	HER POL 13																
	HER OBJ 11																
Architectural Heritage	HER POL 14																
	HER POL 15																
Views & Prospects	HER POL 16																
	HER POL 17																
Landscape Character	HER POL 18																
	HER POL 19																

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

Table 17: Strategic Environmental Assessment of Policies and Objectives contd.

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Floods	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management
Green Infrastructure	GI POL 1																
	GI POL 2																
	GI POL 3																
	GI POL 4																
	GI POL 5																
	GI POL 6																
	GI POL 7																
	GI POL 8																
	GI POL 9																
	GI POL 10																
	GI POL 11																
	GI POL 12																
	GI POL 13																
	GI OBJ 1																
	GI OBJ 2																
	GI OBJ 3																
	GI OBJ 4																
	GI OBJ 5																
	GI OBJ 6																

Potential Positive Impact	Potential Neutral Impact	Potential Negative Impact	Uncertain Impact
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9.0 Mitigation Measures

9.1 Introduction

The quality of the environment within plan area is an important issue for consideration by Meath County Council. The area contains a rich coastal landscape of significance within Meath and the region, as well as a wealth of natural and man-made heritage assets. These form the basis for a high level of amenity and tourism potential in the area. This has been recognised throughout the SEA and Local Area Plan process and the Plan is framed within ideals of sustainability throughout its vibrant communities, tourism economy and unique cultural and natural heritage.

Article 5 of the SEA Directive requires that mitigation measures be proposed for all significant adverse effects on the environment as a result of the implementation of the Local Area Plan. The SEA is an iterative process prepared in tandem with the formulation of the policies and objectives of the Local Area Plan. While not always possible to achieve, it is the aim of the process to ensure that sensitive environmental receptors are given adequate and appropriate consideration throughout.

9.2 How the SEA has Influenced the Local Area Plan

As environmental considerations have informed all stages of the preparation of the Bettystown-Laytown-Mornington East-Donacarne-Mornington Local Area Plan, the policies and objectives of the Plan have been framed to ensure that potential adverse impacts are avoided, eliminated or lessened to an acceptable level. As a result of this informed iterative process, it is the finding of the assessment of the Local Area Plan as presented in Chapter 8 of this SEA Report, that the full implementation of the Plan, will have a neutral to positive impact on the environment as a whole.

Integration between SEA, AA and the preparation of the draft Plan was achieved through reviews of the emerging pre-draft Plan and through workshop meetings at the key stages with relevant SEA, AA and Plan team members. This process allowed for an iterative and proactive approach to the preparation of the plan with preliminary and on-going assessment and review of the emerging and the final adopted plan.

9.3 Mitigation Measures

Given the plan area's environmental designations, landscape and cultural heritage sensitivities there were a number of uncertain and potential negative impacts identified as a result of interactions between the plan policies and objectives and the Strategic Environmental Objectives. In most instances potential uncertainties or negative impacts could be mitigated against by the protective policies already contained within the Plan.

A detailed assessment of the Plan policies/ objectives was undertaken (as per Chapter 8) and the proposed mitigation is presented in Table 18.

Environmental Report Chapter : Mitigation Measures

Table 18: Mitigation Measures

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Flooding	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management	Comments/ Mitigation/ Amendments
Chapter 2: Strategic Vision, Core Strategy & Themes																		
	SH POL 1																	SH POL 3
Chapter 4: Development Policies & Objectives																		
Economy & Employment	EED POL 1																	HER OBJ 2, HER POL 5,7,19, WSU POL 17,23
	EED POL 4																	HER OBJ 2, HER POL 19
	EED POL 5																	SH 3, HER OBJ 2, HER POL 19
Tourism Development	TD POL 1																	TD POL 13, 14
	TD POL 2																	TD POL 13, 14
	TD POL 3																	TD POL 13, 14
	TD POL 4																	TD POL 13, 14
	TD POL 6																	TD POL 5, 13, 14
	TD POL 8																	TD POL 5, 13, 14
	TD POL 10																	TD POL 5, 13, 14
	TD POL 11																	TD POL 5, 13, 14
	TD POL 12																	TD POL 5, 13, 14
TD OBJ 1																	TD POL 5, 13, 14	
Town & Village Centres	TVC POL 2																	WSU POL 17, 21, 23
	TVC POL 5																	TD POL 5, 13, 14
	TVC OBJ 1																	HER OBJ 2, HER POL 5,7,19
Education	CI POL 14																	WSU POL 23
Recreation & Open Space	ROS POL 11																	HER OBJ 2, HER POL 5,7,19
	ROS OBJ 1																	GI POL 7, 8, HER OBJ 2, WSU POL 23, WSU OBJ 8, 9
	ROS OBJ 5																	HER OBJ 2, HER POL 5,7,19
Water Supply	WSU POL 3																	HER OBJ 2, HER POL 5,7,19
	WSU POL 5																	WSU POL 3
	WSU POL 6																	WSU POL 3
Wastewater	WSU OBJ 4																	HER OBJ 2, HER POL 5,7,19
Flood Risk	WSU POL 15																	WSU POL 17,20, 21, 23
Telecomms	WSU POL 32																	HER OBJ 19
Energy	WSU POL 34																	HER OBJ 2, HER POL 19
Potential Positive Impact		Potential Neutral Impact		Potential Negative Impact		Uncertain Impact												

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

Table 18: Mitigation Measures contd.

LAP Chapter	LAP Policy/ Objective	Human Beings	Soil and Geology	Biodiversity	Surface Water	Groundwater	Flooding	Air Quality	Climate Change	Noise	Landscape	Cultural Heritage	Energy	Wastewater	Water	Transport	Waste Management	Comments/ Mitigation/ Amendments	
Transportation & Movement																			
Future Development & the National Road Network	TM POL 5																	HER OBJ 2, HER POL 19	
	TM OBJ 1																	WSU POL 17,23	
	TM OBJ 4																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 5																	HER OBJ 2, HER POL 19	
	TM OBJ 6																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 7																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 8																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 9																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 10																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 11																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 13																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 14																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 15																	HER OBJ 2, HER POL 5,7,19, WSU POL 17,23	
	TM OBJ 16																	HER OBJ 2, HER POL 5,7,19, WSU POL 17,23	
	TM OBJ 17																	HER OBJ 2, HER POL 5,7,19, WSU POL 17,23	
	TM OBJ 18																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 19																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 20																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 21																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 22																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 23																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	TM OBJ 24																	HER OBJ 2, HER POL 19, WSU POL 17,23	
	Walking & Cycling	TM POL 10																	HER OBJ 2, HER POL 19
	Public Transport	TM POL 18																	HER OBJ 2, HER POL 19
TM POL 19																		HER OBJ 2, HER POL 19	
	TM OBJ 29																	HER OBJ 2, HER POL 19	
Cultural Heritage, Natural Assets & Green Infrastructure																			
Cultural Heritage, Natural Assets	HER POL 3																	HER POL 19	
	HER OBJ 3																	HER OBJ 2, HER POL 19	
	HER OBJ 5																	HER OBJ 2	
Coastal	HER POL 5																	HER OBJ 2, HER POL 19	
	HER POL 6																	HER OBJ 2, HER POL 19	
	HER OBJ 7																	HER OBJ 2, HER POL 19	
Green Infrastructure	GI POL 6																	HER OBJ 2:	
	GI POL 9																	HER OBJ 2, HER POL 5,7,19	
	GI POL 10																	HER OBJ 2, HER POL 19	
	GI POL 11																	HER OBJ 2, HER POL 5,7,19	
	GI POL 12																	HER OBJ 2, HER POL 19	
	GI OBJ 3																	HER OBJ 2, HER POL 19, GI POL 10	
	GI OBJ 4																	HER OBJ 2, HER POL 19	
	GI OBJ 5																	HER OBJ 2, HER POL 19	
	GI OBJ 6																	HER OBJ 2, HER POL 19	
	GI OBJ 7																	HER OBJ 2, HER POL 19	
	GI OBJ 8																	HER POL 19	

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

Potential Positive Impact

Potential Neutral Impact

Potential Negative Impact

Uncertain Impact

In instances, during the preparation of the LAP process, where mitigation was not deemed possible through existing policies or objectives mitigation measures were proposed in the form of the insertion of new policies/ objectives and/or amendments to the text of policies/objectives.

The mitigation included assumes requirements for environmental assessment in accordance with the normal development management process and EIA Directive as a given. The proposed amendments and additions to the plan, proposed as a result of the SEA, have been incorporated into the final LAP and as such there are no residual impacts.

10.0 Local Area Plan Monitoring

10.1 Introduction

Under the Planning and Development Act, 2000 - 2013, the Local Authority is required to prepare a progress report on the implementation of the Plan. Given the environment is a significant consideration then the progress report will include the key findings of the environmental monitoring programme as outlined in this chapter of the Environmental Report.

Monitoring of the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan and its implications on the environment is paramount to ensure that the environment is not adversely affected through the implementation of the Plan. Under Article 10 of the SEA Directive monitoring must be carried out of the significant environmental effects directly related to the implementation of the Plan *“in order to, inter alia, identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action.”* The Department of the Environment, Community and Local Government Guidelines on SEA recommends that monitoring does not require new research activity; existing sources of information can be used and the task of data collection can be shared.

While considerable environmental data is directly available to the Council such as water quality, recycling rates etc., other sources of information will be accessed to provide a comprehensive view of the impact of the Plan. In this regard the Local Authority will work with other agencies with environmental mandates to gather data for the purposes of monitoring the implementation of the Plan. Therefore, while monitoring specific elements of the environment is not strictly the preserve of the Council, the Council will continue to liaise and work with the Environmental Protection Agency, The National Parks and Wildlife Service, Inland Fisheries, as well as others in the pursuit of environmental conservation and protection through existing environmental monitoring procedures.

10.2 Monitoring Indicators

It is proposed to base monitoring on a series of indicators which measure changes in the environment, especially changes which are critical in terms of environmental quality, for example water or air pollution levels. The indicators aim to simplify complex interrelationships and provide information about environmental issues which is easy to understand. A list of environmental indicators is provided in the table overleaf. The indicators are based on the Strategic Environmental Objectives presented in Chapter 6 and have been derived from knowledge of the existing environmental issues within the Plan area and also from legislation, guidelines and higher level Plans.

Environmental indicator assessment during monitoring can show positive/neutral impacts or negative impacts on the environment. Where an indicator value highlights a positive/neutral impact on the environment, it is likely that the policies and objectives of the Plan are well defined with regard to the environment. Conversely where the objectives of the Plan have a negative impact on the environment, it may be necessary to review the objectives of the Plan or to take some other form of intervention. For example, if an objective or policy is having a significant adverse impact, a variation may be considered during the lifetime of the Plan.

Table 19: Proposed Monitoring Indicators

Environmental Category	Targets	Selected indicators	Data Sources, Responsibility and Frequency (subject to available resources)
Biodiversity - Flora and Fauna	No loss of important and/or designated habitats	Number of sites.	Meath County Council/National Parks and Wildlife Service/Inland Fisheries (depending on available information from relevant statutory authorities)
	No deterioration in the quality of protected areas	Number of sites containing rare or threatened species.	Initial monitoring to commence within two years of adoption as part of the County Manager's Report on progress. (subject to available resources)
	No loss of protected species	Number of rare or threatened species.	
	No fish kills during the lifetime of the plan	Details of major fish kills	
	All actions contained within the Biodiversity Plan to be achieved during the lifetime of the County Development Plan.	Number of actions achieved.	
	No net loss of green linkages established under the Green Infrastructure Strategy.	Net area of new green infrastructure established through the development management process.	
	No spread of invasive species within the County	Numbers of new cases identified.	Establish baseline, location and extent of invasive species in the county, to commence within two years of adoption as part of the County Manager's Report on progress. (subject to available resources)
			Meath County Council Planning Department
Population (Human Beings)	No adverse impacts on Natura 2000 sites	Numbers of planning applications accompanied by Stage 2 Appropriate Assessment	
	Decrease in journey times to work, education and recreation.	Distance and mode of transport to work	Meath County Council - Housing, Planning and Roads sections.
		Number and proportion of residential units permitted within 400m of centre of Settlement	Meath County Council Planning Department
		Gross Floor Area (GFA) and proportion of employment use permitted within 400m of public transport stop.	Meath County Council Planning Department

Environmental Category	Targets	Selected indicators	Data Sources, Responsibility and Frequency (subject to available resources)
	Applications for new developments in excess of fifteen residential units or over 0.02ha. to be accompanied by Design Statement. Rural housing to accord with Rural Housing Design Guidelines	Number of design statements. Number of planning permissions granted in the countryside.	Initial monitoring to commence within two years of adoption as part of the County Manager's Report on progress. (subject to available resources)
	Delivery of residential development in line with Meath County Settlement Strategy	Percentage of residential development within each level of the settlement hierarchy Percentage of the residential planning permission target achieved in each settlement Density of development within each residential planning permission	Meath County Council Planning Department Meath County Council Planning Department Meath County Council Planning Department
	Consolidation of Town / Settlement Centre	Number of planning permissions granted within town / village centre zoned lands	Meath County Council Planning Department
	Soil No incidences of soil contamination	Number/severity of recorded pollution incidences	Meath County Council & EPA
	Limited and controlled development of greenfield sites	Area of land lost through greenfield development as per Development Plan process	Initial monitoring to commence within two years of adoption as part of the County Manager's Report on progress. (subject to available resources)
Water	Implement fully the recommendations of the three relevant River Basin Districts River Basin Management Plans. Achieve 'good' quality status of surface waters in line with WFD Comply and implement fully the most recent EPA guidelines on Septic Tank use and siting as well as other on-site treatment facilities. Maintain and upgrade where necessary all Local Authority operated WWT plants to comply with the relevant legislation.	Number of recommendations achieved. Percentage increase in the overall quality of surface waters. Number of permissions granted complying with the guidelines. Compliance with discharge parameters.	Meath County Council - Planning Department, Water Services Department. Also the Environmental Protection Agency. Initial monitoring to commence within two years of adoption as part of the County Manager's Report on progress.(subject to available resources)

Environmental Category	Targets	Selected indicators	Data Sources, Responsibility and Frequency (subject to available resources)
Air Quality	Improvement in bathing water quality	Achieve and maintain Green Flag status on all beaches.	
	Reduction in development subject to Flood Risk	Number of residential planning applications / permission granted on sites identified as being in Flood Risk Zone A or B	Meath County Council Planning Department
		Gross Floor Area (GFA) of employment development located on sites identified as being in Flood Risk Zone A or B	Meath County Council Planning Department
	Improvement in the concentrations of measured parameters such as Particulate Matter, Sulphur Dioxide and nitrogen oxides.	Measurable reductions in concentrations.	EPA Initial monitoring to commence within two years of adoption as part of the County Manager's Report on progress.(subject to available resources)
Climate change	Increase in permissions granted for residential development within acceptable distance of public transport hubs.	Percentage of housing developments within specified distance to transport hubs.	Review of EPA standards and data to commence within two years of adoption as part of the County Manager's Report on progress.(subject to available resources)
Material Assets	Increase access to public transport from households.	Provision of walking and cycle infrastructure as proposed under LAP.	Meath County Council
	Increase re-use of brownfield sites for development in preference to greenfield sites.	Ratio of brownfield site development to greenfield sites.	Meath County Council
	Improved treatment at established wastewater treatment facilities.	Compliance with discharge limits.	Meath County Council/EPA
	Reduction in the tonnage of overall waste produced and an increase in the percentage of waste recycled.	Tonnage of waste produced and recycled.	Meath County Council/EPA

Environmental Category	Targets	Selected indicators	Data Sources, Responsibility and Frequency (subject to available resources)
Cultural Heritage	No loss of features of architectural or archaeological Importance	Number of recorded features lost.	Meath County Council, The Archaeological Survey monitoring programme, Ireland; Buildings at Risk Register - Heritage Council Ireland
	No deterioration in the quality of Architectural Conservation Areas	Condition of ACAs	Meath County Council
	No impact on the integrity or setting of monuments contained on the Record of Monuments by development granted planning permission.	Number of protected structures impacted by new development.	Meath County Council
	No protected structures to be lost through neglect or misuse.	Number of deletions to the RPS.	Meath County Council
Built Heritage	Reduction in impacts on Built Heritage	Number of planning permission affecting Protected Structures, Structures on the Record of Monuments and Places, Architectural Conservation Areas or NIAH Designed Landscapes	Meath County Council – Planning
Landscape	No diminution in the quality of important landscapes.	Number of developments permitted within landscapes of exceptional value and high sensitivity as per the LCA.	Meath County Council
	Implement in full the recommendations of the Landscape Character Assessment for Co. Meath.	Number of recommendations implemented.	Meath County Council

Note on Frequency of Monitoring

It is recommended that data based on planning application data is monitored on an annual basis.

It is recommended that data related to environmental emissions, such as water, air, noise and soil quality are reviewed at two-yearly intervals.

11.0 Conclusion

The Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020's policies and supporting objectives are key to the future sustainable development of the County. The Plan aims to balance the needs of the future population with the preservation and conservation of environment as prescribed in the County Development Plan. The Plan has a strong focus towards sustainability.

The Strategic Environmental Assessment process has been carried out in conjunction with the Appropriate Assessment of the Plan and the preparation of the Plan itself. This allows for an early indication of the potential environmental effects likely to occur as a result of the implementation of the Plan. As a result changes or alterations to the Plan are made throughout the course of its preparation. Through this process of assessment and re-assessment, it was identified that particular objectives or policies could potentially have a negative environmental impact on particular environmental receptors or indeed on a number of them simultaneously. The benefit therefore of preparing the Plan, the Natura Impact Report, and the Environment Report ensures that these issues are highlighted at an early stage in the process. This allows the potential negative impacts of the Plan to be addressed early on and effectively eliminated from the Plan.

The policies/objectives contained within the Plan were assessed against the Strategic Environmental Objectives and indicate that the full implementation of the Plan will not result in a significant negative or adverse impact on the environmental resources within the Plan area. It has been shown in this report that the Plan's policies and objectives are generally consistent with this summary and as a result the Plan will have a neutral to positive impact on the environment as a whole.

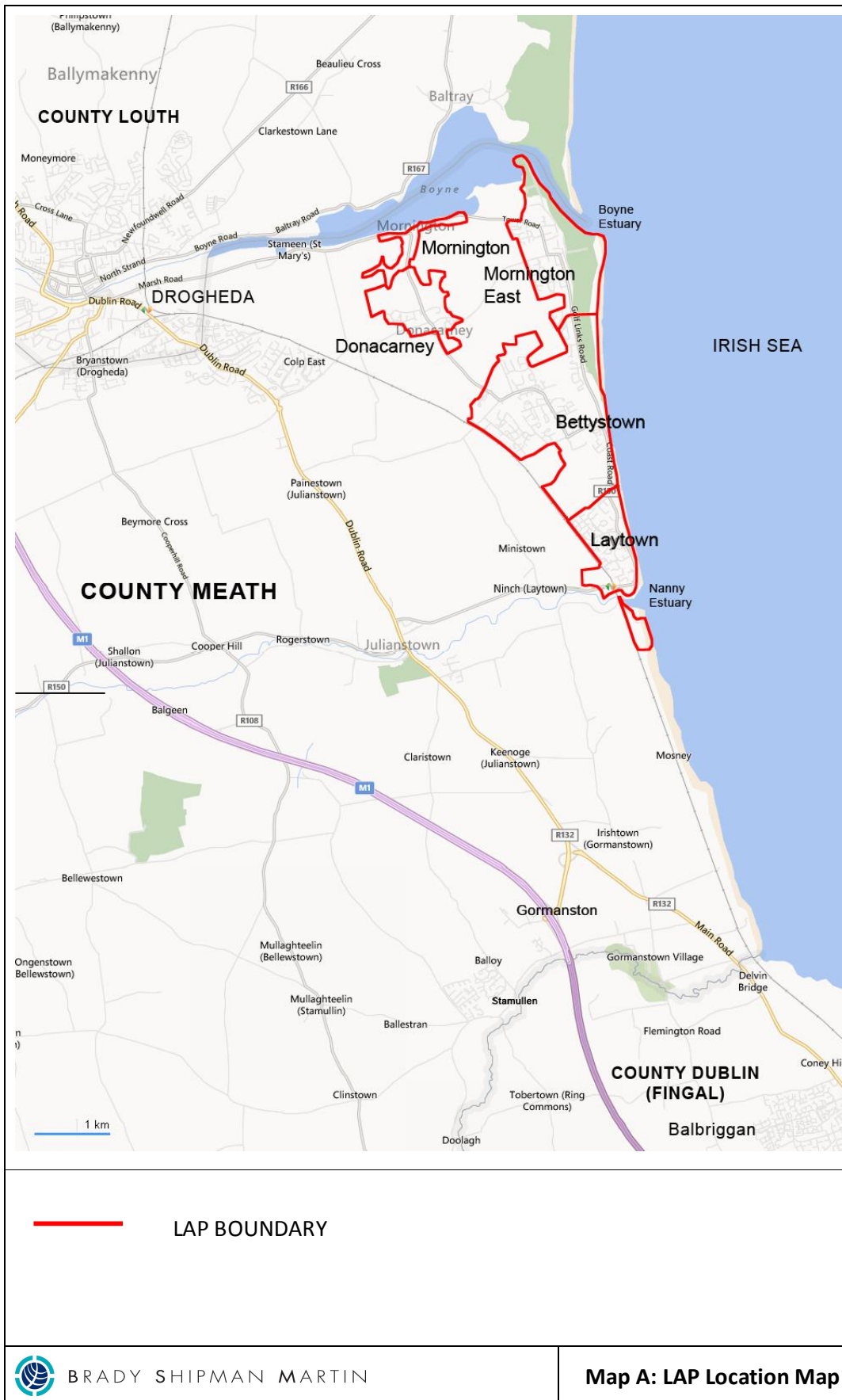
Where the SEA has found potential for negative impacts on the environment as a result of the Plan's implementation, mitigation as well as enhancement measures have been proposed. The implementation of these measures, coupled with the monitoring procedures will ensure the Local Area Plan is acceptable from an environmental perspective.

In addition the Natura Impact Report of the Local Area Plan was prepared to give information on and assess the potential of the Local Area Plan to impact on sites of European-scale ecological importance. This Natura Impact Report records the decisions that were taken during the preparation of the Bettystown-Laytown-Mornington East-Donacarney- Mornington Local Area Plan 2014-2020. It determines that, assuming the successful implementation of the Policies and Objectives, there will be no likely significant effects on the European sites in the zone of influence of the Plan in isolation or in combination with other Plans and Projects acting in the same area.

Finally at the outset of the assessment process, a number of environmental issues were identified. While these are and remain the key environmental challenges facing the Council over the lifetime of the plan, they also have complex interrelationships with other environmental receptors. Therefore, the imperative is to promote a holistic, all inclusive response towards the protection of the natural assets within the Plan area. For example groundwater for human consumption can be improved if restrictions on inappropriate land uses and surface based activities are applied. Subsequently, efforts made to improve water quality also have beneficial

impacts on soil quality, habitat conservation, landscape and visual quality *etc.* The potential synergies at play, if appropriately addressed, will lead to an improvement in the quality of life for the residents of the plan area.

In summary, the assessment of the Plan has concluded that its policies and objectives are acceptable and represent a balanced and fair approach to the sustainable development of Bettystown, Laytown, Mornington East, Donacarney and Mornington. Monitoring of the Plan throughout its lifetime will ensure that any potential adverse environmental impacts, unforeseen at this stage will be identified early, so as to prevent any deterioration of the environment. This Plan, as currently presented, balances growth with environmental protection and can deliver a sustainable future for the inhabitants of the area.





LAP BOUNDARY

LEGEND



Special Protection Area



Special Area of Conservation



proposed Natural Heritage Area



BRADY SHIPMAN MARTIN

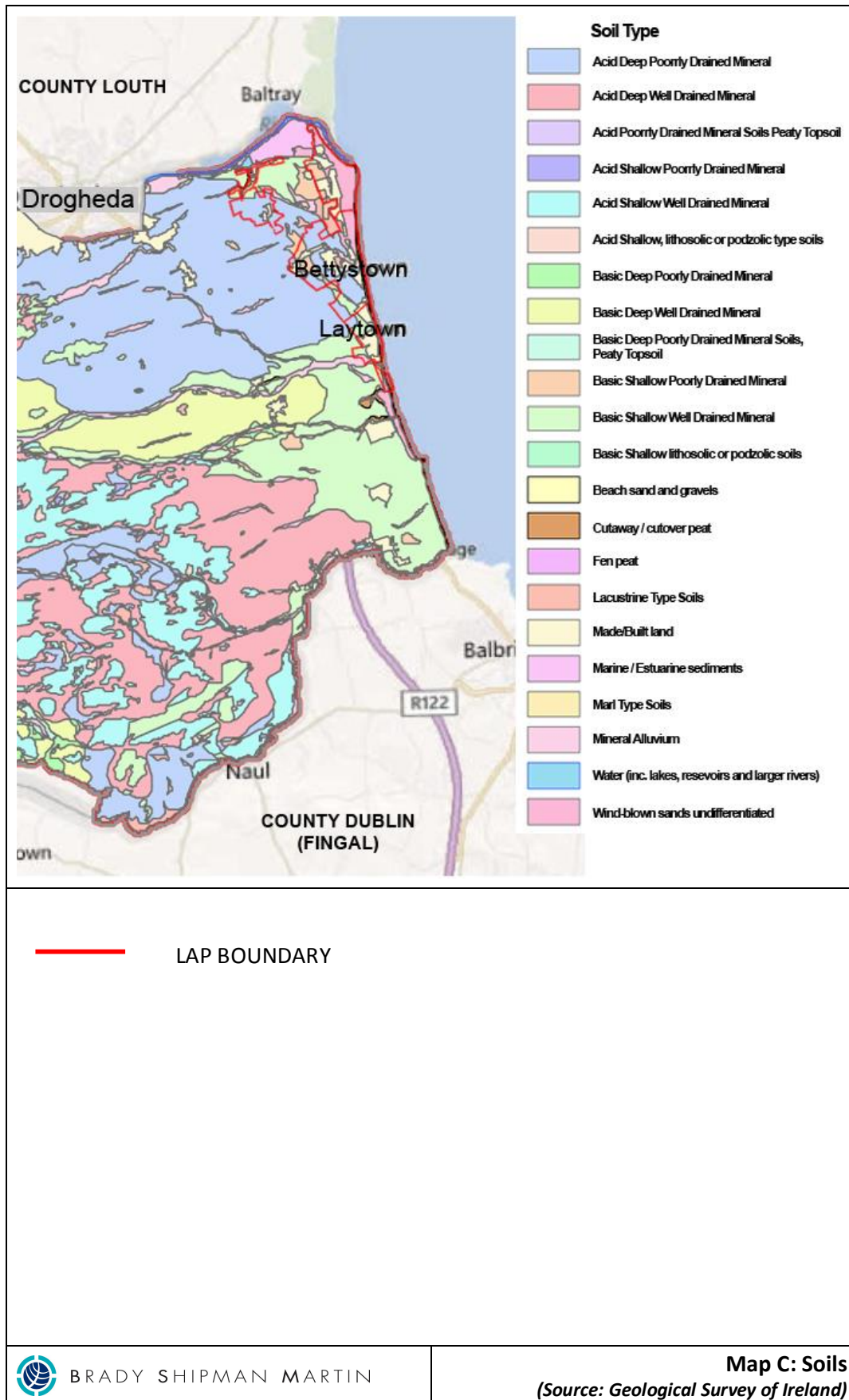
Map B: Ecological Designations
(Source: National Parks and Wildlife Service)

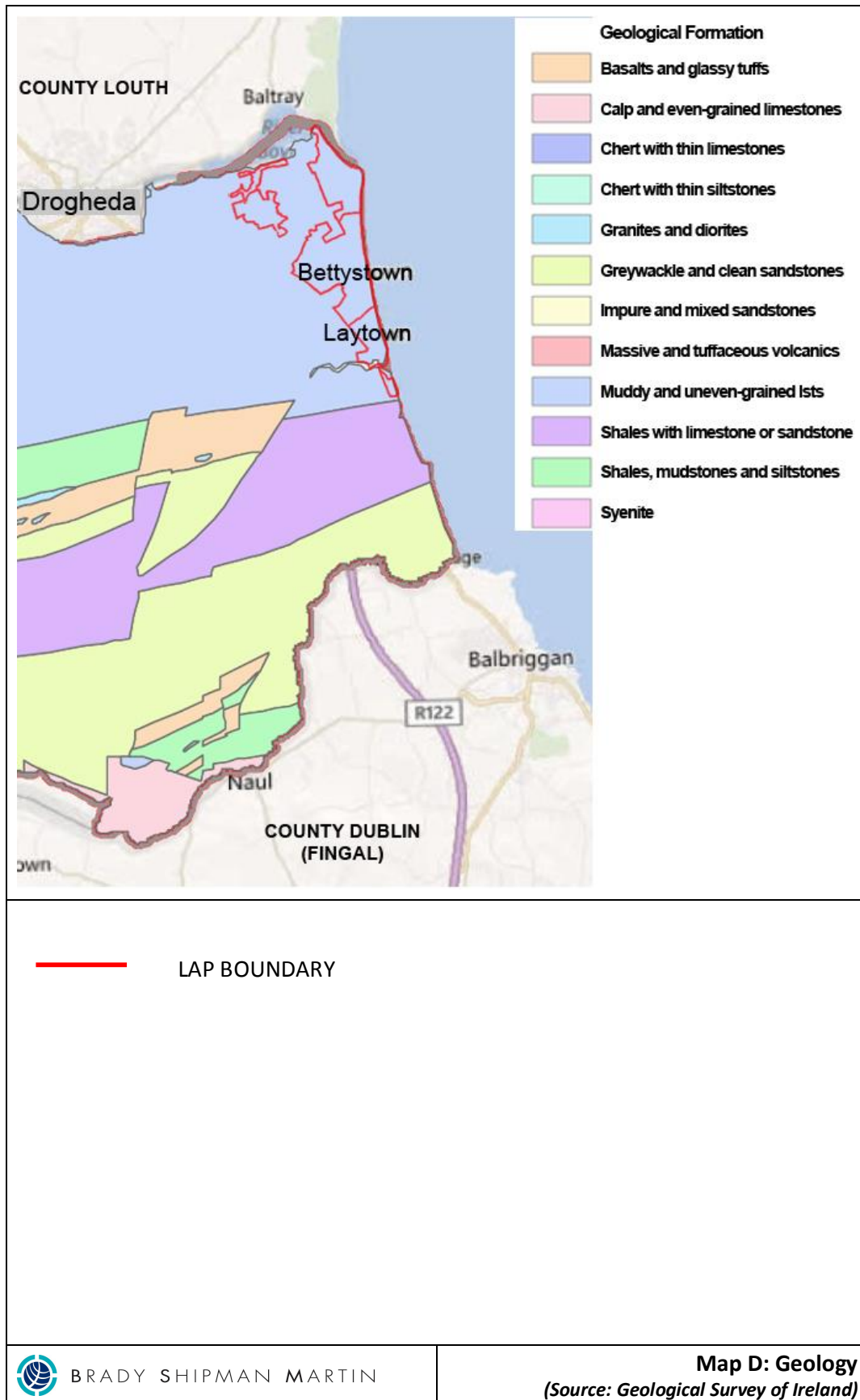
Environmental Report of Bettystown, Laytown, Mornington East
Donacarney & Mornington Local Area Plan 2014-2020



comhairle chontae na mí
meath county council









LAP BOUNDARY

LEGEND



Views and Prospects



Protected Structures



National Monuments



Architectural Conservation Area



BRADY SHIPMAN MARTIN

Map E: Cultural Heritage



comhairle chontae na mí
meath county council

East Meath Local Area Plan 2014-2020

**Bettystown / Laytown / Mornington East / Donacarney /
Mornington**



Assessment Statement Letter





BRADY SHIPMAN MARTIN

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Cork
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Dundrum Business Park
Dundrum Road
Dublin 14

Ms. Fiona Redmond
Senior Executive Planner
Planning Department
Meath County Council,
Abbey Road
Navan,
Co. Meath.

Date: 23rd July 2014

**Re: Strategic Environmental Assessment and Appropriate Assessment of
Draft Bettystown-Laytown-Mornington East-Donacarney-Mornington Local
Area Plan 2014-2020**

Dear Ms. Redmond

The preparation of the Bettystown-Laytown-Mornington East-Donacarney-Mornington Local Area Plan 2014-2020 has been subject to appropriate and full assessment as required under the Habitats and Birds Directive and the Strategic Environmental Assessment Directive.

The assessment has considered the written statement, maps, objectives, and appendices, taking account of all changes to date, including any arising from submissions from Statutory Authorities and consultations. The assessment of the Local Area Plan has had regard to all relevant environmental legislation.

It is considered that the development objectives in the Plan are consistent, in as far as practicable, with the conservation and protection of the environment.

Yours sincerely,

Thomas Burns

Brady Shipman Martin

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PLANNING

LANDSCAPE

ENVIRONMENT

URBAN DESIGN

VISUALISATION