Douglas Land Use and Transportation Strategy (DLUTS)

Strategic Environmental Assessment (SEA)

Environmental Report

Prepared by Cork County Council Planning Policy Unit
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1 Non Technical Summary

1.1 Chapter 1 Non Technical Summary

1.1.1 This is the non technical summary of the Environmental Report of the Douglas Draft Land Use and Transportation Strategy (DLUTS) Strategic Environmental Assessment (SEA). The purpose of this summary report is to provide a clear synopsis of the overall findings of the SEA process in relation to the Draft Strategy and outline the key likely environmental consequences of policies and decisions. Correspondingly the findings of each chapter are dealt with below.

1.2 Chapter 2: Introduction

1.2.1 The SEA is being carried out in order to comply with the provisions of the SEA Regulations and in order to improve the planning and environmental management of the area. This report should be read in conjunction with the Draft Douglas Land Use and Transportation Strategy 2013. A Strategic Environmental Assessment is an important mechanism in promoting sustainable development and in raising awareness of significant environmental issues and in ensuring that such issues are addressed within the capacity of the planning system. It seeks to inform the decision making process before a decision is made to adopt the strategy.

1.2.2 The overall aim of SEA is to:

- provide a high level of protection of the environment;
- to integrate environmental considerations into the preparation and adoption of plans,
- to promote sustainable development and
- to increase public participation in environmental decision making.

1.2.3 SEA is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt the plan or programme. The SEA process is also intended to facilitate the identification and appraisal of alternative plan strategies, raise awareness of the environmental impacts of the plan and encourage the inclusion of measurable targets and indicators.

1.3 Chapter 3: The Draft Plan-Review

1.3.1 The Douglas Land Use and Transportation Strategy (DLUTS) is a response to resolving the competing demands for more housing and retail development and balancing this with the provision for better transportation, environment and community facilities. The DLUTS strategy is being prepared under the strategic planning document of the Carrigaline Electoral Area Local Area Plan (2011), which identified two Special Policy Areas around the Douglas Town Centre (X-03a) and Douglas Golf Course (X-03b). It is a 20 year strategy that once adopted by the Carrigaline Area Committee, will form the basis of an amendment to the Carrigaline Electoral Area Local Area Plan 2012.

1.4 Chapter 4: SEA Methodology

1.4.1 This chapter outlines the process that was undertaken so as to establish whether a Strategic Environmental Assessment was required and if so what issues should be addressed. At the outset it was considered that an SEA was required given the statutory nature and importance of the DLUTS and consultation with the Environmental Protection Agency established the key environmental issues that needed to be examined.

1.5 Chapter 5 - Relationship of the plan with other relevant plans and programmes

1.5.1 This chapter describes the position of the Draft Stategy in the overall context of the wide range of strategies and policies at varying levels; international, national and regional. These strategies and policies are all aimed at the continuous sustainable development and protection / improvement of the environment and are explored in detail in Chapter 5. It is considered that this Draft Plan is in compliance with all relevant policies and strategies.

1.6 Chapter 6 – Environmental Baseline

1.6.1 This section of the Environmental Report summarises the environmental baseline in the Electoral Area. The baseline assessment methodology contains the following steps:

- Description of the current state of the environment
- The primary environmental issues of relevance to the Plan
- The characteristics of the environment likely to be significantly affected by the Plan.
- The evolution of the environment in the absence of the Plan
- The interaction between environmental topics

1.6.2 The baseline has been compiled using all available datasets and in conjunction with indicators suggested during scoping. The main sources of data used in the compilation of this baseline were (amongst others):

- Scoping Responses from the Environmental Authorities
- Existing databases such as the EPA, Cork County Council and the (CSO)
- Information supplied by Cork County Council during the SEA scoping stage.

1.6.3 The characteristics of the existing environment are described under the following headings:

- Population and Human Health
- Biodiversity/Flora and Fauna
- Soil and Geology
- Water Resources
- Air and Climate
- Cultural Heritage including Architectural and Archaeological Heritage
- Landscape
- Material Assets

1.6.4 There are also a number of maps included in this section to highlight the baseline environment of the area, the majority of which indicate the existing situation for the environmental issues identified above. A cumulative sensitivity map at the electoral area level has also been provided as effects cannot be considered to be boundary sensitive.

1.7 Chapter 7 – SEA Objectives and Targets

1.7.1 This section aims to identify the relevant Environmental Protection Objectives (EPOs). SEA objectives are used to help show whether the objectives of the plan are beneficial for the environment, to compare the environmental effects of alternatives, or to suggest improvements. The Environmental Protection Objectives set out in this section are set out under a range of topics and are used as the standards against which the future development scenarios, strategic aims, strategic principles and development objectives of the plan can be evaluated, to help to identify areas in which significant adverse impacts are likely to occur, if unmitigated.

1.8 Chapter 8: Consideration of Alternatives

1.8.1 The following section identifies and describes the alternative scenarios considered during the drafting process of the draft strategy. Article 5 of the Strategic Environmental Assessment Directive requires the Environmental Report to consider “reasonable

alternatives taking into account the objectives and the geographical scope of the plan or programme" and the significant environmental effects of the alternatives selected. Alternatives must be realistic and capable of implementation. The alternative scenarios that were considered for the Draft Strategy are discussed and the preferred scenario from an environmental perspective is provided. Mitigation measures which attempt to prevent, reduce and as fully as possible offset any significant adverse effects of the environment of implementing the preferred alternative are identified in this chapter where applicable.

1.9 Chapter 9: Environmental Assessment of the Draft Strategy

1.9.1 This chapter outlines in a tabular form the likely positive and negative impacts of Draft Strategy policies on the EPO objectives detailed in Chapter 7. It is considered that the majority of the policies will either improve the state of the EPO or else are unlikely to interact with them adversely. However, a certain amount of policies are more likely to have either an uncertain or negative impact and in these cases it is recommended that mitigation objectives be included so as to minimise damage to the relevant EPO.

1.10 Chapter 10: Mitigation Measures

1.10.1 This section will outline the possible mitigation measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment, identified in Chapter 9 arising from the implementation of the Plan and as such seeks to tie together the SEA process. As a result of this analysis and in light of the SEA process, certain mitigation measures have been identified although in general it is considered that where potential conflict or uncertainty has been demonstrated, adequate compensatory objectives are proposed that will seek to negate any potential significant impacts from proposed policies.

1.11 Chapter 11: SEA Monitoring

1.11.1 The SEA Directive requires that the significant environmental effects of the implementation of plans are monitored in order to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action. Monitoring can also be used to analyse whether the Strategy is achieving its environmental protection objectives and targets, whether such objectives need to be re-examined and whether the proposed mitigation measures are being implemented.

2 Chapter 2: Introduction

2.1 Introduction

2.1.1 This is the Environmental Report of the Douglas Land Use and Transportation Strategy (DLUTS) Strategic Environmental Assessment (SEA). The purpose of the report is to provide a clear understanding of the likely environmental consequences of decisions regarding development under this strategy. The SEA is being carried out in order to comply with the provisions of the SEA Regulations and in order to improve the planning and environmental management of the area. This report should be read in conjunction with the Draft Douglas document.

2.2 Strategic Environmental Assessment

2.2.1 Strategic Environmental Assessment is an important mechanism in promoting sustainable development and in raising awareness of significant environmental issues and in ensuring that such issues are addressed within the capacity of the planning system. It seeks to inform the decision making process before a decision is made to adopt the strategy.

2.2.2 The overall aim of SEA is to:

- provide a high level of protection of the environment;
- to integrate environmental considerations into the preparation and adoption of plans and programmes,
- to promote sustainable development and
- to increase public participation in environmental decision making.

2.2.3 SEA is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt the plan or programme. The SEA process is also intended to facilitate the identification and appraisal of alternative plan strategies, raise awareness of the environmental impacts of the plan and encourage the inclusion of measurable targets and indicators.

2.3 Legislation

2.3.1 The European Community issued the Strategic Environmental Assessment (SEA) Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment. This introduced the requirement that SEA 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 if certain plans and programmes which are likely to have significant effects on the environment”.

2.3.2 The SEA Directive was transposed into Irish Law under the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435 of 2004), and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436 of 2004) and became operational on 21 July 2004. Under Section 14B (a) Strategic Environmental Assessment is mandatory for plans and programmes for areas with a population of 10,000 or more.

2.4 Implications for Carrigaline Area Committee and Elected Members

2.4.1 As a result of the above legislation, certain plans and programmes which are prepared by Cork County Council are required to undergo SEA. The findings of SEA are expressed in an

Environmental Report which is submitted to the Elected Members alongside the relevant plan or programme. The Elected Members must take account of the Environmental Report before the adoption of the plan or programme. When the plan or programme is adopted a statement must be made public, summarising, inter alia: how environmental considerations have been integrated into the plan or programme, and; the reasons for choosing the plan or programme as adopted over other alternatives detailed in the environmental report.

3 Chapter 3: Douglas Land Use and Transportation Strategy

3.1 Introduction

3.1.1 Cork County Council intends to prepare a Land Use and Transportation Strategy for Douglas in County Cork to provide a framework for the optimal and sustainable long-term development of this area. Having regard to the potential significance of the environmental effects that the strategy would be likely to have, it was considered that an SEA should be prepared.

3.1.2 As a significant urban area adjoining the Cork City boundary, well connected to all modes of transport this site is an important strategic asset to the County andto the southern region. In order to continue the economic diversification of the region and to act as an important economic driver in the region, a commitment to the preparation of a Strategy was outlined in the Carrigaline Electoral Area Local Area Plan 2011.

3.1.3 Because of the potential significant environmental effects that this project may have on the surrounding area, the Council considers that an Environmental Report is required. The purpose of this environmental report is to outline the relevant environmental issues and consult with the relevant environmental authorities in order to ensure that the potential impacts are identified and addressed appropriately in the report itself. This report uses the parameters of Schedule 2B of the Planning and Development (SEA) Regulations 2004 to begin this process.

3.2 Background

3.2.1 The Douglas Land Use and Transportation Strategy (DLUTS) is a response to resolving the competing demands for more housing and retail development and balancing this with the provision for better transportation, environment and community facilities. The DLUTS strategy is being prepared under the strategic planning document of the Carrigaline Electoral Area Local Area Plan (2011), which identified two Special Policy Areas around the Douglas Town Centre (X-03a) and Douglas Golf Course (X-03b).

3.2.2 The overall aim of the Douglas Land Use Transportation Strategy is to ensure that there is an integrated approach to land use planning, urban design and transportation engineering for the future development of the study area. Specifically, the goals of this study are:-

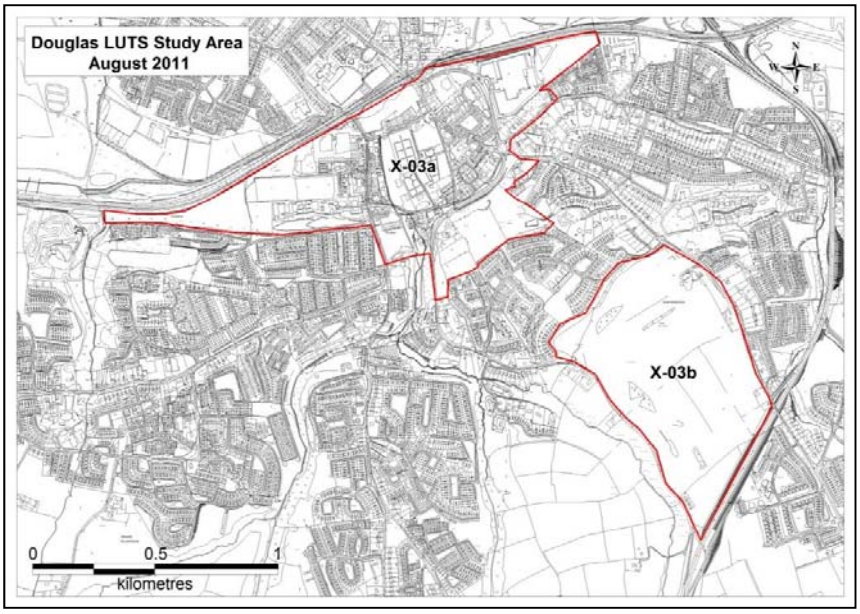
- to provide a framework for future planning decisions
- devise a strategy to optimise the traffic and transport network
- provide a guide to the investment in transport infrastructure
- identify the capacity of the town centre for additional retail and other development
- inform the future of two areas zoned 'Special Policy Areas' (Douglas Town Centre X-03a and the lands described as Douglas Golf Course X-03b) in the Carrigaline Electoral Area Local Area Plan (2011).
- Make Douglas a more competitive and vibrant urban centre in the metropolitan area of Cork

3.3 Study Area and Site Description

3.3.1 The study area is split into two areas, namely, X-03(a) and X-03(b) as shown on the map below. The boundary of X-03(a) consists of an area of 77 hectares and primarily incorporates Douglas village. The site stretches for 1.5km from West to East (with Douglas GAA Club in the west to Douglas Court Shopping centre in the east) and for .8 km from South to North (from the boundary of Maryborough Woods in the south to the N40 national route in the north).

3.3.2 Douglas village is situated in Cork County and is 3.5km south east of Cork city. Originally Douglas was a small and distinct village that developed in close proximity to two rivers, namely, the Tramore and Ballybrack. Historically, this association and plentiful supply of water made it an ideal location for the development of the linen industry. Today Douglas village is a high density mixed use settlement which serves an expanding suburban area. Douglas village can be describe as the centre piece to the Southern Environs of Cork City. Douglas village acts as the focal point for a very large suburban population which stretches from Turners Cross to the North (Cork City) to Donnybrook, Frankfield and Grange to the South and from Rochestown in the East to Lehenagh More in the West. The principle functions of Douglas Village are residential, retail, employment and recreational, relying on good communications, proximity to the city, an attractive environment and the availability of good building land. The boundary of X-03(b) consists of an area of 54 hectares and primarily contains Douglas Golf Course.

Figure 1: Douglas LUTS Study Area



3.3.3 Immediately after the Local Area Plan was adopted in July 2011 and when approved by the Area Committee and Senior Management, a term of reference was prepared for the procurement of transport consultants to assist the County Council in producing the DLUTS. As a result of the terms of reference for consultants the following study methodology has been identified:

- **Baseline Surveys** - In order to carry out the study, it is necessary to undertake baseline surveys of the land use and transportation in the study area. Land use surveys have been undertaken in the residential areas, retail and employment floor areas, community facilities, extent of recreation activities, infrastructure provision. The traffic and transport surveys will involve parking, traffic counts, public transport, walking and cycling. In addition, an environmental report of the environmental aspects of the study area will be completed for the Strategic Environmental Assessment and a screening report prepared for the Appropriate Assessment requirements of the project. A Strategic Flood Risk Assessment (SFRA) will also need to be undertaken of the area before any development proposals are made.

- **Alternative Scenarios** - Following the analysis of the results of baseline surveys and public consultation, a set of alternative land use and transportation scenarios will be developed. The evaluation of these alternative scenarios will be carried out taking into consideration the environmental, economic and social implications to the community. Each land use option will be accompanied by a full understanding of the traffic and transport implications.
- **Traffic and Transportation Model** -The project will involve the preparation of a traffic and transportation model based on an existing CASP wide model, that will be capable of testing the various alternative development scenarios and assist in the selection of the preferred development options. The consultants appointed will need to meet with key stakeholders, especially the Cork City Council (for validation) and NRA (for impact on N40).
- **Interim/Final Reports** – These will be prepared following analysis of the baseline information and generation of alternative scenarios. The final report will incorporate the findings of the public consultation and the selection of the preferred alternative.
- **Implementation Programme** – The final report will contain recommendations for a phased programme of implementation of the preferred alternative land use and transportation scenario. Details for the implementation of junction improvements, car parking, town centre circulation, HGV and Delivery management, public transport proposals, school management plan, pedestrian and cyclist access.

4 Chapter 4: SEA Methodology

4.1 Introduction

4.1.1 Strategic Environment Assessment (SEA) is a 'key mechanism in promoting sustainable development and in raising awareness of significant environmental issues and in ensuring that such issues are addressed within the capacity of the planning system'. SEA is intended to facilitate the identification and appraisal of alternative plan strategies, raise awareness of the environmental impacts of the DLUTS Strategy and encourage the inclusion of measurable targets and indicators.

4.1.2 This Environmental Report has been prepared in tandem with the preparation of the Draft DLUTS report. The Department of the Environment, Heritage and Local Government issued "Guidelines to Regional Authorities and Planning Authorities on the implementation of the SEA Directive", and the process of SEA can be divided into a number of steps:

- Screening – process for deciding whether a particular plan, other than those for which SEA is mandatory, would be likely to have significant environmental effects, and thus would warrant SEA.
- Scoping – procedure whereby the range of environmental issues and the level of detail to be included in the Environmental Report are decided upon, in consultation with the prescribed environmental authorities.
- Environmental Report - Publishing an environmental report on the plan including its environmental effects, and consulting on it.
- Adoption - Providing information on the adopted plan including incorporation of the consultation output and outlining the monitoring framework.
- Monitoring - Monitoring significant environmental effects and taking appropriate remedial action for any unforeseen significant environmental effects.

4.2 Screening

4.2.1 Screening, evaluating whether SEA needs to be carried out, was not relevant as it was considered appropriate that a Strategic Environmental Assessment be undertaken of the Draft Strategy in consultation with the EPA.

4.3 Scoping

4.3.1 Scoping is the procedure whereby the range of environmental issues and the level of detail to be included in the Environmental Report are decided upon, in conjunction with the prescribed environmental authorities.

4.3.2 A Scoping Report was then prepared by the Planning Policy Unit which identified the key environmental issues that would be addressed appropriately in the Environmental Report.

4.3.3 The Scoping Report was sent to the Environment Protection Agency (EPA) in December 2012 and a response was received which provided guidance to the preparation of this Environmental Report for the Draft Strategy.

4.4 Environmental Baseline and Data Collection

4.4.1 The process of SEA is led by the description of the existing environmental baseline and from this information the likely effects of implementing the Plan can be identified and evaluated.

4.4.2 The SEA Directive (Annex 1) requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme'. Information is therefore provided on existing environmental problems which are relevant to the plan, thus, helping to ensure that the plan does not result in any existing environmental problems to worsen.

4.4.3 The SEA Directive requires that information on the baseline environment be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected and the likely evolution of the current environment in the absence of the strategic action i.e. the development plan. Any information that does not focus upon this is surplus to requirements; therefore, the SEA of the draft strategy focuses on the significant issues, disregarding the less significant ones.

4.4.4 In order to describe the baseline – the current state of environment – data was collated from currently available, relevant environmental sources.

4.5 Alternatives

4.5.1 The Environmental Report is required by the SEA Directive to consider "reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme" and the significant environmental effects of the alternatives selected.

4.5.2 Alternatives were formulated having regard to the policies of the draft strategy, its geographical scope and its location within the hierarchy of plans.

4.6 The Environmental Report

4.6.1 In this Environment Report, which has been prepared alongside the Draft Strategy, the likely environmental effects of the draft strategy and the alternatives are predicted and their significance evaluated while having regard to the environmental baseline. The Environmental Report provides the decision-makers with a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of this project. Mitigation measures to offset potential adverse impacts of implementing the plan and the identification of monitoring procedures to monitor the impacts of the plan are also undertaken in the Environmental Report.

4.6.2 The Environmental Report raises awareness of significant environmental issues for the Elected Members, as well as members of the public, and ensures that these issues are addressed within the capacity of the planning system. The Report also provides a clear indication of the likely environmental consequences of development policies contained within the Draft Strategy and suggests mitigation measures to minimise reduce or prevent such impacts. The Environmental Report also evaluates alternatives and puts forward measures to ensure monitoring of the plan's policies and objectives.

4.7 Consultation on Environmental Report

4.7.1 This Environmental Report constitutes one stage of the SEA process and the SEA process will continue after the public consultation on the draft strategy and the Environmental Report. This Environmental Report will be circulated to the Elected Members and be on public display as it accompanies the Draft Strategy. Written submissions are invited on both this Report and also on the Draft Strategy.

4.7.2 It is considered that between the published Environmental Report and the final publication of the Environmental Statement there will be three key changes:

- The Environmental Report will be updated in light of the public consultation process and comments received from the environmental authorities.
- The SEA process will need to assess any significant changes to the draft strategy arising from the consultation process.
- The recommendations and mitigation measures identified through the SEA process should generate changes to the draft strategy.

4.7.3 The SEA Directive requires that the Environmental Report, the opinions expressed by the environmental authorities and the public, must be taken into account during the preparation of the strategy and before its adoption.

4.8 Environmental Statement

4.8.1 As required by the SEA Directive and the SEA Regulations a document referred to as an SEA Statement (DoEHLG, 2004) will be produced and made available to the public. The SEA Statement includes information on: how environmental considerations have been integrated into the strategy - highlighting the main changes to the strategy which resulted from the SEA process; how the Environmental Report and consultations have been taken into account - summarising the key issues raised in consultations and in the Environmental Report indicating what action, if any, was taken in response and; the reasons for choosing the strategy in the light of the other alternatives, identifying the other alternatives considered, commenting on their potential effects and explaining why the Draft Strategy was selected. As required, information is included on how environmental considerations have been integrated throughout the process as is a description on how the preferred alternative was chosen.

4.9 Technical Difficulties encountered during the preparation of the Environmental Report

4.9.1 During the preparation of the Scoping documents and Environmental Report, no new research – excepting refinement of flood data - was undertaken and information was gathered from existing sources of data. It should be noted that there are a number of areas where data was not readily available which include:

- Lack of habitats surveys for non-designated sites and insufficient baseline data on habitats and species to allow for on-going monitoring
- Information is largely paper based with exceptions of designated areas in digitised format (GIS)
- Lack of guiding legislation in some areas e.g. soils and their conservation.
- Limited Air Quality monitoring data for the local area plan. The frequency of this monitoring is also identified as an issue.
- The lack of centralised data source for environmental baseline data posed a difficulty to the SEA process.

4.10 Legislative Conformance

4.10.1 This Environmental Report complies with the provisions of the SEA Regulations and is written in accordance with Schedule 2B of the Planning and Development (Strategic Environmental Assessment) regulations 2004 (SI No. 436 of 2004).

4.10.2 The following table reproduces the checklist of information to be contained in the Environmental Report and includes the relevant sections of this report which ensure these requirements are met.

Table 1 - Checklist of information to be included in the Environmental Report	
Information Required to be included in the Environmental Report	**Corresponding Section of this Report**
(A) Outline of the contents and main objectives of the guidelines, and of its relationship with other relevant plans and programmes	Chapter 3, 5
(B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the guidelines.	Chapter 6
(C) Description of the environmental characteristics of areas likely to be significantly affected.	Chapters 5, 6, 7, 8
(D) Identification of any existing environmental problems, which are relevant to the guidelines, particularly those relating to European protected sites.	Chapters 6,9
(E) List environmental protection objectives, established at international, EU or national level, which are relevant to the guidelines and describe how those objectives and any environmental considerations have been taken into account when preparing the guidelines.	Chapters 9,10
(F) Describe the likely significant effects on the environment	Chapters 9,10
(G) Describe any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse environmental effects of implementing the plan.	Chapter 10
(H) Give an outline of the reasons for selecting the alternatives considered, and a description of how the assessment was undertaken (including any difficulties)	Chapter 8
(I) A description of proposed monitoring measures.	Chapter 11
(J) A non-technical summary of the above information	Chapter 1

5 Chapter 5: Relationship of Draft Douglas LUTS Strategy with other relevant Plans and Programmes.

5.1 Introduction

5.1.1 The preparation of this Draft Strategy is an important part of the planning process and focuses on the local level implementation of the overall strategy for the Carrigaline Electoral Area as set out in the Local Area Plan 2011 and in the County, as set out in the County Development Plan 2009, with which, in law, it is obliged to be consistent. It must also adhere to the core strategies set down in higher level plans such as the National Spatial Strategy and the Regional Planning Guidelines for the South West Region. Section 1 of the Strategy describes the conformity of the Strategy with the provisions of the National Spatial Strategy (2002-2020), the Regional Planning Guidelines (2010-2022) and with the Cork County Development Plan 2009-2015.

Planning Hierarchy

5.1.2 The development of the Draft Strategy is influenced by a wide range of strategies and policies at varying levels; international, national and regional. These strategies and policies are all aimed at the continuous sustainable development and protection / improvement of the environment. Planning legislation is set out in the Planning and Development Act 2000-2006 and the principal regulations relating to the Act are outlined in the Planning and Development Regulations 2001-2007.

International

- EU Water Framework Directive & associated Directives;
- EU SEA Directive;
- EU Floods Directive;
- EU Groundwater Directive;
- EU Habitats Directive;
- EU Birds Directive;
- EU Freshwater Fish Directive;
- EU Drinking Water Directive;
- EU Bathing Water Directive;
- EU Environmental Impact Assessment Directive;
- EU Seveso Directive;
- EU Sewage Sludge Directive;
- EU Urban Waste Water Treatment Directive;
- EU Nitrates Directive;
- EU Integrated Pollution Prevention Control Directive;
- EU Plant Protection (Products) Directive;
- EU Soils Directive;
- EU Air Framework Directive;
- EU Climate Change Programme (ECCP II);
- EU REACH Initiative;
- Kyoto Protocol;
- Stockholm Convention;
- Valetta Convention;
- Ramsar Convention;
- OSPAR Convention;
- MARPOL Convention;
- Gothenburg Strategy

National

- National Climate Change Strategy 2007-2012;
- Delivering a Sustainable Energy Future for Ireland - The Energy Policy Framework
- 2007-2020;
- National Spatial Strategy 2002-2020;
- National Development Plan 2007-2013;
- Transport 21;
- Sustainable Urban Housing: Design Standards for New Apartments. Guidelines for Planning Authorities 2007;
- Quality Housing for Sustainable Communities. Best Practice Guidelines for Delivering
- Homes Sustaining Communities 2007;
- Planning Guidelines on the Planning System and Flood Risk Management;
- Sustainable Residential Development in Urban Areas - Consultation Draft Guidelines for Planning Authorities 2008;
- Sustainable Development – A Strategy for Ireland, 1997;
- National Biodiversity Plan, 2002 and subsequent review;
- Guidelines on Habitat Directive Assessment by the DoEHLG.
- Architectural Heritage Protection: Guidelines for Planning Authorities (2004).

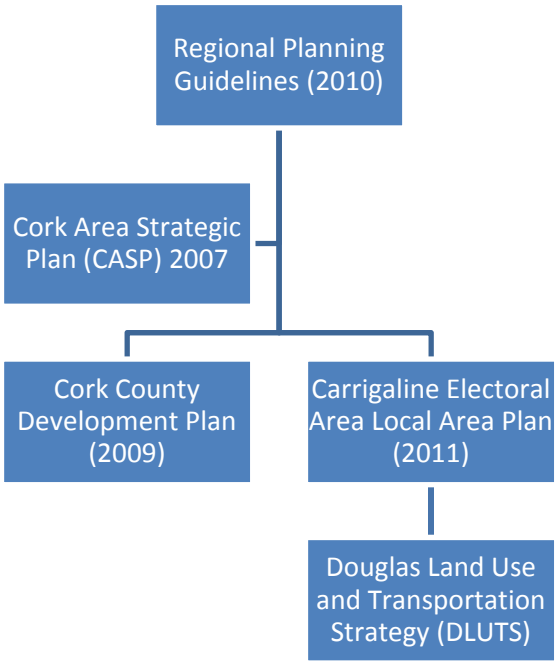
Regional & County

- South West Regional Planning Guidelines 2010
- Regional Waste Management Plans
- Retail Strategies
- South Western River Basin District Draft River Basin Management Plan
- Flood Risk Management Plans
- Groundwater Protection Schemes
- Cork County Development Plan 2009-2015
- Cork County Biodiversity Action Plan 2008
- Cork County Heritage Plan 2005-2010
- Guidelines for the Management and Development of Architectural Conservation Areas
- Cork Area Strategic Plan 2001-2020
- Carrigaline Electoral Local Area Plan 2011

5.2 Key influences on the Draft Douglas LUTS

5.2.1 The Planning and Development Act 2000, as amended, requires that any plan or programme shall, in so far as it is practicable, be consistent with national plans, policies or strategies as the Minister determines relates to proper planning and sustainable development. In formulating the Draft Strategy for Douglas LUTS regard has been made to the wider National, Regional and local context and a number of relevant policy documents have been taken into account including. The DLUTS sits into the hierarchy of strategic plans as follows:-

Figure 2: Hierarchy of Plans



5.2.2 The South Western Regional Planning Guidelines (2010) comprising Cork City and the Counties of Cork and Kerry has an area of approximately 12,100 sq. km. The 2011 census records the regional population as 671,996 persons. Cork City is the second largest city in the State and the Greater Cork Area (CASP area), with a population in 2011 of 407,718, is one of the most dynamic areas of modern Ireland in terms of education, research and development, internationally traded services and high-technology manufacturing. The region is the European Headquarters for many multinational corporations in the electronics, software, food pharmaceutical, bio-pharma and associated sectors.

5.2.3 Cork Area Strategic Plan (CASP): The original Cork Area Strategic Plan (CASP) was published in 2001 and was updated in July 2007. CASP places large emphasis on the fact that future growth in the region needs to be solidly based on the principle of sustainable development and in particular, needs to take place in a way which supports the use of sustainable transport modes (public transport, cycling and walking). The Updated CASP Strategy echoes the proposals of the original CASP by proposing that development should be directed along the Cork suburban rail corridor, which would support the investment that the Government is making in suburban rail. The Updated CASP Strategy therefore provides a phased approach which gives priority to growth along the rail corridors.

5.2.4 In order to reflect this rebalancing of development in Metropolitan Cork the CASP Update envisages that the settlements in the Carrigaline Electoral Area including Douglas will generally consolidate within their existing development boundaries while receiving some moderate growth. The CASP update identifies additional growth for Douglas and the South Environs.

5.2.5 Policies in the County Development Plan 2009 state that;

> "*the potential of this area (south environs), warrants close cooperation with the City Council so as to ensure that high quality environment is achieved through appropriate balance of land uses. Development in Douglas will promote urban regeneration of the district centre to include a wider range of uses and enhanced shopping, social, leisure*

and recreation facilities serving the community. There is potential for significant employment development on brownfield land close to Douglas centre".

5.2.6 The Cork County Development Plan (2009) also provided guidance on the levels of population and household growth for the South Environs based on the CASP Update figures. The estimate provided in the plan for the year 2020 is for an additional growth of 100 persons in 2,467 households. This will be due to falling household size over the period 2006-2020. There should be sufficient land identified for about 500 housing units.

5.2.7 In addition to population and household growth, the County Development Plan provided guidance on the quantum of economic development in the metropolitan area. Specifically, the metropolitan area could benefit from an additional 20,596 jobs by 2020, of which 22% should be in the retail and commercial sector and 48% in the enterprise sector. These estimates have been further refined by the Carrigaline Electoral Area Local Area Plan, to provide for an additional 1,500 jobs in the South Environs area.

5.2.8 The Carrigaline Electoral Area Local Area Plan (2011) identified an opportunity for the Douglas area "to evolve into a fully functional mixed use higher order centre in terms of its development density and its retail offer with an improved public transport, accessibility and parking demand management system". It proposed in the Local Area Plan that a Land Use and Transportation Study (LUTS) should be prepared for the Douglas areas as a priority.

5.2.9 The DLUTS Study will be prepared for Douglas and the Local Area Plan has zoned two Special Policy Areas around the Douglas Town Centre (X-03a) and around the land described as the Douglas Golf Course (X-03b).The Specific Objective X-03 (a) and (b) states that:-

5.2.10 "It is an objective to undertake a Land Use and Transportation Study for the Douglas Area. This study will begin no later than September 2011 and will be completed during 2012.Lands within these clearly defined boundaries {X-03(a) & X-03(b)} will be subject to a Land Use and Transportation Study (LUTS) which will consider the following:

- Proposals for the protection and enhancement of existing residential areas and amenity.
- Proposals for enhancement of social and cultural facilities including the provision of significant areas for open space and recreation uses.
- Proposals for the improvement and development of new and existing public realm areas.
- A detailed future land use framework for the study areas which will ensure that Douglas evolves into a fully functional mixed use higher order urban centre in terms of both its development density and its retail offer and quality of life. Providing opportunity for the provision of housing, retail, employment, social and community facilities including recreation.
- A detailed transportation plan for the Douglas area (Douglas 'Village' and its catchment) which will develop proposals for a road network which will meet the demand of new and existing road uses.
- Detailed parking proposals which will focus upon the quantity and location of new public parking facilities.
- Detailed proposals for movement and transportation within and adjoining the study areas including an enhanced public transport system and pedestrian & cyclist priority.

5.2.11 While the Douglas LUTS is being prepared any large scale development proposed within the X-03 boundaries that may prejudice the outcome of the Study, should be avoided. Carrigaline LAP 2011."

Other Strategic Documents

5.2.12 **The South West River Basin District Project**: The project began in 2004 and involves the development of a river basin management system, including a programme of measures and a river basin management strategy, designed to achieve at least good status for all waters and to maintain high status where it exists. The River Basin Management Plan was adopted in 2010 and it has made recommendations in relation to managing development within the river basin district. Douglas and its surrounding area fall under the Lower Lee - Owenboy Water Management Unit in the context of the overall River Basin District Project. The Tramore River and its tributaries (Ballybrack) are the receiving waters for Douglas. Its general water quality is designated as moderate ecological status and it is an objective to restore this water body to good status by 2015.

5.2.13 **The National Climate Change Strategy 2007-2012:** The National Climate Change Strategy 2007-2012 sets out a programme of action for achieving these limits. The Strategy recognises that decisions by Local Authorities on the location, design and construction of domestic and commercial development and of related economic and social activity, can have a significant effect on greenhouse gas emissions.

5.2.14 **Sustainable Residential Development in Urban Areas (Guidelines for Planning Authorities)**: This guidance document revises and updates the Residential Density Guidelines for Planning Authorities published in 1999 and focuses on creating sustainable communities by incorporating the highest design standards and providing a co-ordinated approach to the delivery of essential infrastructure and services.

5.2.15 **Guidelines for Planning Authorities: The Planning System and Flood Risk Management (2009)** The guidelines require the planning system at national, regional and local levels to avoid development in areas at risk of flooding unless there are wider sustainability grounds that justify appropriate development and where flood risk can be reduced or managed to an acceptable level without increasing flood risk elsewhere. The guidelines require that Development Plans address flood risk by having the necessary flood risk assessments, including mapping of flood zones, in place at the critical decision making phases and the consideration of any subsequent amendments. The guidelines require the adoption of a sequential approach to flood risk management based on avoidance, reduction and mitigation of flood risk.

5.2.16 **Architectural Heritage Protection: Guidelines for Planning Authorities (2004).** These Guidelines were prepared by the Department of Environment, Heritage and Local Government (now Department of Arts, Heritage and the Gaeltacht), to provide guidance to Planning Authorities on Part IV of the Planning and Development Act 2000. This document provides detailed guidance in relation to the legislative provision for protected structures and architectural conservation areas as well as detailed guidance notes for technical matters dealing with the built heritage and is of particular relevant for Douglas given the significant number of protected structures and Architectural Conservation Areas in the town.

5.2.17 **Guidelines for the Management and Development of Architectural Conservation Areas.** This document was published in 2010 by Cork County Council. The purpose of the guidelines is to promote the unique character of Architectural Conservation Areas and to establish an understanding of what constitutes that special character and to provide guidance to building owners, prospective developers and others in relation to development within these areas.

6 Chapter 6: Environmental Baseline

6.1 Introduction

6.1.1 This chapter summarises the environmental baseline in the study area.

6.1.2 The DLUTS is about developing a strategy that will deliver the vision to secure a successful vibrant urban centre with a more efficient transport network for Douglas, that provides an improved public realm, reduces congestion, encourages greater levels of walking and cycling and improves the quality of life of the community, thereby enabling sustainable future growth.

6.2 Baseline Assessment

6.2.1 The characteristics of the existing environment are described under the following headings:

- Biodiversity/Flora and Fauna
- Population and Human Health
- Soil and Geology
- Water Resources
- Air and Climate
- Cultural Heritage including Architectural and Archaeological Heritage
- Landscape
- Material Assets - Waste Management

6.2.2 As required by the SEA Directive, commentary is also included on the likely evolution of the various indicators in the absence of the implementation of the Douglas land use transportation strategy. The proposed DLUTS is a response to resolving the competing demands for more housing and retail development and balancing this with the provision for better transportation, environmental and community facilities.

6.3 Biodiversity, Flora and Fauna

6.3.1 Biodiversity in its most general sense refers to all aspects of variety in the living world and includes the number of (flora and fauna) species, the amount of genetic variation and the amount of habitats present in an area. The 1992 United Nations Conference on Environment and Development was held in Rio de Janeiro. One landmark international agreement that resulted was the Convention on Biological Diversity (CBD). This recognised, for the first time that biological diversity is 'a common concern for humankind' with each country needing to take responsibility in order to halt the global loss of biodiversity. The Irish Government signed the CBD in 1992, and ratified it in 1996. Key documents and information sources include the National Heritage and Biodiversity Plans as well as those of the Local Authorities. These set out policies, aims and actions relating to the protection of biodiversity.

6.3.2 In 2009 Cork County Council produced the Cork County Biodiversity Action Plan which was to foster awareness of a range of heritage issues and development of pro-active policies. The overall aim of The County Cork biodiversity action Plan is to conserve and to enhance biodiversity and to ensure that every person in the county has the opportunity to appreciate and understand its importance on our lives. The Biodiversity Action Plan is County Cork's response to the national biodiversity planning process. Informed by the guidance set out in *'Guidelines for the Production of Local Biodiversity Action Plans'* drafted by the Heritage Council and published by the Department of Environment, Heritage and Local Government, this document takes into account the overall goal, objectives and principles of the National Biodiversity Action Plan, and translates them into a local County Cork context.

6.3.3 European and National Legislation now protects the most valuable of our remaining wild places, through designation of sites as proposed Natural Heritage Areas, Natural Heritage

Areas, candidate Special Areas of Conservation and Special Protection Areas. The designation of these sites at a national level is the responsibility of the Department of the Environment, Heritage and local Government but it is the responsibility of all of us to protect these sites. The process of designation of such sites is ongoing, with new sites being added, redesignated and boundaries of existing sites being adjusted.

6.3.4 The environmental designations within the area include one SPA Cork Harbour SPA 4030, and one pNHA Douglas River Estuary pNHA 1046. Cork County Council is committed as part of their objectives in the 2009 County Plan to "*provide protection to all natural heritage sites designated or proposed for designation in accordance with National and European legislation. This includes SACs, SPAs, NHAs Statutory Reserves and Ramsar sites.*"

Table 2: Natura 2000 Sites Within 15km of the Study Boundary

Site Name	Proximity to Douglas LUTS (DLUTS)	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats (General)
Cork Harbour SPA 4030	Bounds the DLUTS Area. Separated by N25 South Link Road	n/a	Cormorant; Shelduck; Oystercatcher; Golden plover; Lapwing; Dunlin; Black-tailed godwit; Curlew; Redshank; Common tern; 20,000 wintering waterbirds.	**Species:** Little grebe; Great crested grebe; Grey heron; Wigeon; Teal; Pintail; Shoveler; Red-breasted merganser; Grey plover; Black-headed gull; Common gull; Lesser black-backed gull; Wetland and Waterbirds.	Pressure for development within the coastal zone; pressure arising from recreational activities; boating activities.

Site Name	Proximity to Douglas LUTS	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats (General)
Great Island Channel SAC 1058	6Km	Mudflats and sandflats not covered by		**Habitats:** Wet grassland. **Species:** Wintering	**Habitats:** Water pollution; reclamation; spread of invasive species; pressure for development in coastal

Site Name	Proximity to Douglas LUTS	Habitats for which these are designated	Species for which these are designated	Other species and habitats of note occurring within the site	Potential Threats (General)
		seawater at low tide; Atlantic salt meadows.		waterfowl.	zone - marinas, coastal protection works, infrastructural projects, residential and commercial development; Disturbance to marine mammals and wintering birds arising from boating and other activities.

Table 3: Other Sites of Ecological Value within 15km of the study boundary

Site Name	Site type	Proximity to Douglas LUTS	Nature Conservation Interests	Potential threats
Douglas River Estuary	pNHA	Bounds site	Part of the Cork Harbour SPA, and situated in the upper harbour, this site consists of extensive mudflats, it is an important roost for wading birds including Black-tailed Godwit and it is a feeding area for Wigeon. Site also forms part of the Cork Harbour SPA.	Industrial and urban development, pollution, recreational usage, drainage and reclamation. The spread of cord-grass also may pose a threat to the quality of the mudflats.
Glanmire Wood	pNHA	15km	Broad-leaved woodland dominated by oak, beech and sycamore. Rich ground flora with wood fescue, wood millet, primrose, violets, wood anemone and lords and ladies.	Activities giving rise to distburbance of woodland or removal of woodland habitat.
Great Island Channel	pNHA	6km	Part of the Great Island Channel SAC, this site supports sheltered tidal mudflats and sandflats. This is an important site for	As per Great Island Channel Special Area of Conservation.

Site Name	Site type	Proximity to Douglas LUTS	Nature Conservation Interests	Potential threats
			wintering waterfowl. Site also forms part of the Cork Harbour SPA.	
Lough Beg	pNHA	7.5km	Part of Cork Harbour SPA, this inlet at Ringaskiddy with sandy, rocky and boulder beaches, this site supports tidal mudflats that support internationally important numbers of a range of wintering birds including wigeon, teal and shelduck. This site functions as an important secure roosting site for flocks of all shorebirds when feeding areas are covered by tide. Site also forms part of the Cork Harbour SPA.	Industrial and urban development, pollution, recreational usage, drainage and reclamation. The spread of cord-grass also may pose a threat to the quality of the mudflats.
Rockfarm Quarry	pNHA	5km	Limestone quarry on the southern shore of Little Island, this site supports dry grassland, scrub woodland and a rich calciole flora with some rare species.	No threats identified.
Rostellen Lough, Aghada Shore and Poulnabibe Inlet	pNHA	13km	Part of the Cork Harbour SPA, this site includes the impounded Rostellan Lough which supports a distinctive bird community including diving ducks, little Grebe, Pochard and Tufted Duck and Mallard. Site also includes Alder woodland and tidal mudflats at Aghada that are important for Black-tailed Godwit, Curlew, Redshank and Whimbrel. Site also forms part of the Cork Harbour SPA.	Industrial and urban development, pollution, recreational usage, drainage and reclamation. The spread of cord-grass also may pose a threat to the quality of the mudflats.
Dunkettle Shore	pNHA	4.5km	Part of Cork Harbour SPA,	Industrial and urban

Site Name	Site type	Proximity to Douglas LUTS	Nature Conservation Interests	Potential threats
			this site supports mudflat habitat which is often covered with algal mats and cord-grass. It is an important site for bird life supporting a range of species including Teal, Oystercatcher, Ringed Plover, Curlew, Black-tailed Godwit, Bar-tailed Godwit, Redshank, Oystercatcher, Knot and Dunlin. Surrounding reclaimed land serves as a high tide roost. Site also forms part of the Cork Harbour SPA.	development, pollution, recreational usage, drainage and reclamation. The spread of cord-grass also may pose a threat to the quality of the mudflats.
Whitegate Bay	pNHA	11km	Part of Cork Harbour SPA, this site comprises open marine water with extensive mudflats which are exposed at low tide. It is an important site for a range of waterfowl including Grebes, Diving Ducks and Waders including Shelduck, Widgeon, Dunlin, Knot, Curlew, Redshank, Bar-tailed Godwit, Turnstone, Oystercatcher and Ringed Plover. Site also forms part of the Cork Harbour SPA.	Industrial and urban development, pollution, recreational usage, drainage and reclamation. The spread of cord-grass also may pose a threat to the quality of the mudflats.
Monkstown Creek	pNHA	5.8km	Part of Cork Harbour SPA, this site comprises a tidal inlet composed of mudflats with limestone along the southern shore and a brackish lake separated from the sea by a sluice gate. Mudflats are fringed by saltmarsh vegetation while above the limestone on the southern shore, two areas of semi-natural woodland occur. This is an	Industrial and urban development, pollution, recreational usage, drainage and reclamation. The spread of cord-grass also may pose a threat to the quality of the mudflats.

Site Name	Site type	Proximity to Douglas LUTS	Nature Conservation Interests	Potential threats
			important site for Shelduck, Teal, Redshank and Dunlin. There is an important roost site for Cormorants along the jetty within the pNHA. Site also forms part of the Cork Harbour SPA.	
Owenboy River	pNHA	6km	The Owenboy River is the most southerly of these Cork Harbour bays on the western side and runs from Carrigaline to Crosshaven. It consists of two expanded sections with extensive mudflats at low tide, separated by a much narrower channel. Only the upper part is included in the NHA because it is here that the great majority of birds congregate in winter.	Activities giving rise to disturbance to feeding or roosting birds. Land reclamation and spread of invasive species.
Lee Valley	pNHA	5.5km	This site occupies five separate sections of the valley of the River Lee, immediately to the west of Cork City. A diverse range of semi-natural habitats occurs here including wet broadleaved woodland, dry broadleaved woodlands, unimproved dry grassland and freshwater marsh fringes the river itself.	Sections of the valley have been improved for agriculture in the past, so that the site now consists of five sub-sites. This should not be allowed to infringe further into the site. The spread of Sycamore poses a threat to the naturalness of parts of the woodlands, as does river engineering works to the river bank communities
Blarney Lake	pNHA	8.5km	This site is situated 1km south west of Blarney, close to Blarney Castle. Blarney Lake is an artificial lake surrounded by a narrow band of woodland predominantly Oak, Beech	The main landuses within the site are boating, fishing and shooting.

			and Silver Fir. The outflow of the lake is also included within the site. A recent survey of the lake noted a good deal of waterfowl on the lake including Tufted Duck, Teal and Mallard.	
Ardamadane Wood	pNHA	11km	Ardamadane Wood is located north of Blarney village. It is situated along the banks of the River Martin. This site comprises mainly dry deciduous woodland of Oak and Birch with some scrub woodland and improved agricultural grassland.	Threats to the survival of these sites are - coniferous afforestation of the woodland communities and the encroachment of agricultural activity e.g. grazing pressures, clear felling and agricultural improvement.
Shournagh Valley	pNHA	15km	This site includes two lower sections of the Shournagh/river c. 8km west of Cork City; this river flows south-east to join the River Lee which flows through the City. The Coolymurraghre estate woodland comprises a broadleaved woodland Oak trees but the northern end of the wood consists of Beech with Pine (*Pinus* species) and Larch (*Larix* species). At the southern end of this wood is an area of old Oak and Sycamore coppice, An extensive badger sett is found here.	Any activity giving rise to disturbance or removal of woodland habitat.
Cork Lough (city)	pNHA	4km	This small lake is situated in the north-west of Cork City, 1km. North of the River Lee. The lake regularly holds over 100 Mute Swans, a feral flock of over 30 Canada Geese and small numbers (usually under 50) of Mallard, Teal, Tufted Duck and Coot. An increasing flock of	High numbers of birds, attracted by bread-feeding, are causing severe eutrophication along with exotic fish having been released over the years.

			wintering Lesser Black-backed Gulls also occurs.	
Minane Bridge Marsh	pNHA	13km	This site is situated on a low lying river valley which floods frequently, giving rise to where marshy conditions. The site supports a range of plant species including rushes, sedges, herbs, horsetails and grasses. There is some colonisation of willow and alder. Heron and Mallard are known to breed here and snipe and water rail are also likely to be present.	Habitat removal or deterioration. Drainage. Any activity giving rise to disturbance to birds.

Fountainstown Swamp	pNHA	12.5km	Freshwater marsh, fen, wet woodland with Alder, Willow, Ash and Hazel with a good herb understory. Wide variety of bird spp.	Undisturbed, but could be threatened by drainage and spread of invasive species.
Cuskinny Marsh	pNHA	9.5km	This site is located 2.5km east of the centre of Cobh on the shores of Cork Harbour. It is a small site with the dominant habitat being a brackish lake, joined to the sea through a sluice gate, and fed by streams flowing from the west and north. The lake is fringed with Common Reed with wet deciduous woodland, composed of Alder and Willow, occurring to the north and west. The main interest of the site is ornithological, with the lake supporting locally important numbers of dabbling ducks and mute swans.	Impacts on water quality. Any activity likely to cause disturbance to birds.

6.3.5 The largest nature conservation area is the **Cork Harbour SPA (4030)**. Cork Harbour is a large, sheltered bay system, with several river estuaries – principally those of the Rivers Lee, Douglas and Owenacurra. The SPA site comprises most of the main intertidal areas of Cork Harbour, including all of the North Channel, the Douglas Estuary, inner Lough Mahon, Lough

Beg, Whitegate Bay and the Rostellan inlet. Cork Harbour is an internationally important wetland site, regularly supporting in excess of 20,000 wintering waterfowl, for which it is amongst the top five sites in the country. Several of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Golden Plover, Bar-tailed Godwit, Ruff and Common Tern.

6.3.6 This is a very important habitat and one of the largest in the county. With its location adjoining Douglas and the southern city environs the site would be sensitive to land use changes, population increase, recreational demands, intensification of uses and surface water run off. This site does not form part of any of this settlement but rather bounds Douglas. Discharges to Cork Harbour and coastal developments will impact on the quality and integrity of this designation.

6.3.7 Relating to the importance of the Cork Harbour designation at this location there is the additional water related conservation area of the **Douglas River Estuary pNHA 1046.**The Douglas Estuary is situated where the Tramore River enters Cork Harbour. Fine silt forms mudflats of 50-60 ha at low tide bisected by the winding river channel. Around the shore is a narrow fringe of brackish marsh with Spartina (cord grass) in the north-eastern corner and Phragmites (reed) at the western end. Damp grassland occurs on part of the southern side, extending to some low islands which are inundated in extreme high tides. Outside the estuary much larger mudflats are found on the south side of Lough Mahon. The area is of interest for its birdlife as it provides food and a roosting site for several thousand waders and several hundred wildfowl.

Other Designations

6.3.8 In addition to these sites there are further areas of local nature conservation importance (source Appendix 4 County Cork Biodiversity Action Plan)

6.3.9

Table 4: Carrigaline Habitats Survey

Site Name	Site type	Proximity to Douglas LUTS	Nature Conservation Interest	Potential Threats
Douglas West Ecological Corridor	Area of Local Biodiversity Value (County Habitat Survey)	Within Study Area	This site is an ecological corridor consisting of semi Natural Grassland (GS2) that grade into willow scrub (WS1) to the east and to the west, where it narrows between the main road and scrub. There is good diversity of plants and broadleaf components.	Habitat loss or fragmentation.
Douglas Ecological Corridor and Tree Preservation Order	Area of Local Biodiversity Value (County Habitat Survey)	Within Study Area	The southern section of X-03 (a) is within an ecological corridor and there is Tree Preservation Order (Castletreasure 1140/84) in place for the	Habitat loss or fragmentation.

			woodland which identifies the protection of this site, especially from further development.	

Ramsar Sites - Cork Harbour
Wildfowl Sanctuaries - Douglas Estuary

Ecological Networks

6.3.10 Cork County Council has mapped areas of high biodiversity value and corridors. The ecological network approach promotes management of linkages between areas of high biodiversity value, between areas of high and low biodiversity value, between areas used by species for different functions and between local populations of different species. Corridors and linking areas can support migration, dispersal and daily movements. This process begun with the Habitat Mapping programmes completed in Blarney, Carrigaline and Midleton.

6.3.11 The objectives of the Carrigaline Electoral District Habitat Survey and Mapping project are

- To carry out a survey of habitats within the Carrigaline Electoral district (ED);
- To map semi-natural habitats identified to level 111 of Fossitt (2000) classification scheme;
- To survey, map and provide supplementary information relating to all habitat listed on Annex 1 of the European union Habitats Directive 992/43/EEC) that occur within the survey area:
- To survey, map and provide supplementary information relating to sites of local biodiversity value and ecological corridors within the survey area;
- To provide a GIS database of habitat mapping and other data.

Carrigaline Habitat Mapping

6.3.12 The Carrigaline Electoral Area is under significant development pressures to fulfill a range of functions including acting as a metropolitan green zone, providing and maintaining key village functions, supporting recreational and tourism functions, maintaining and controlling rural housing, along with supporting housing development in certain areas. Development pressures at the urban fringe of Cork city, village expansion pressures, tourism and recreation activities particularly at the coast, all potentially impact on biodiversity and ecological function of the area.

6.3.13 The purpose of the Habitat Mapping is to

- Inform and include mapping of biodiversity areas and potential ecological networks in Local Area Plans, reviews of the County Development Plan, and as an input to a County Landscape Character Assessment.
- Provision of baseline information on habitats and biodiversity which will be important in the future production of Local Biodiversity Action Plans;
- Informing future conservation policies in relation to habitats in the study area.
- Utilisation of the data gathered on habitat features to engage local communities in considering the value of their local habitats and also the potential for networks of key ecological features at local and county level.
- Raising awareness of the importance of biodiversity and habitats among landowners and residents in those areas surveyed;

6.3.14 The Carrigaline Electoral area is divided into four broad types of landscape, of relevant to this study is the category of urban and suburban areas of western cork City. Recent years have seen an increase in both residential and industrial development in the Carrigaline area. This has had a knock-on effect on both habitats and wildlife in the area. Perhaps the main effect is loss of habitat, particularly around the major residential areas. Other consequences are increasing pressure on waterways, a reduction in the size of corridors, infill, and increasing amenity usage of certain habitats such as woodlands and coastal areas. Changes in farming practices may also affect existing rural mosaics.

6.3.15 Many areas of local biodiversity value correspond to sites already designated by the Department of the Environment, Heritage and local Government as special areas of conservation (SACs), special protection areas for birds (SPAs) or proposed natural heritage areas (pNHAs). Highlighted in the study are the key sites of biodiversity. Ecological corridors linking high biodiversity areas were also identified. The conservation value and threats to areas of local biodiversity value were assessed in greater detail.

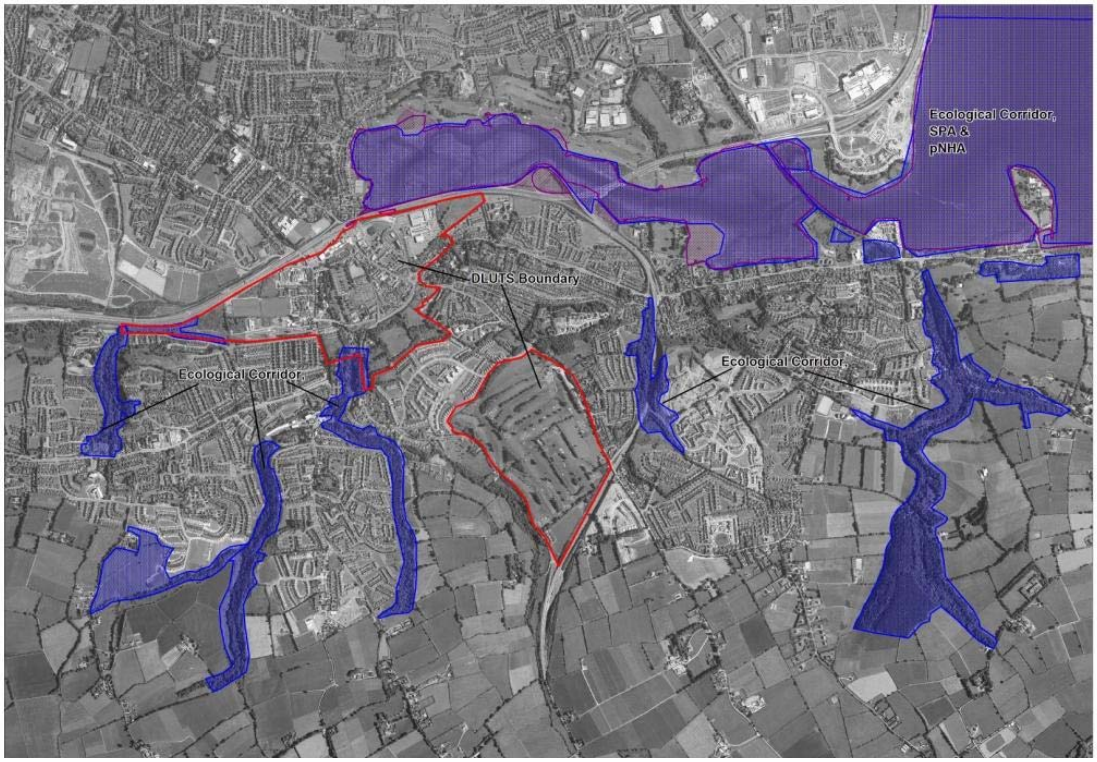
6.3.16 The Study area has the following ecological networks

- Local Biodiversity Area: Habitat areas that are important on a local scale, they act as links in the landscape. Local biodiversity areas have a role to play in the conservation of wildlife and their habitats. Examples of a local biodiversity area can include small streams, small patch of trees or a meadow.
- Primary Corridor: A large linear feature like a major river or a large wooded strip. Primary corridors can be sub-divided into reaches of broadly similar character e.g. an urban reach of river built up and modified, a poor rural reach with improved land to either side, a green valley reach with abundant woodland and wetland habitat associated with the corridor feature.
- Secondary Corridor: Usually a single feature such as a river tributary, hedgerow, wooded strip or a short stretch of habitat along a railway/road.
- Buffer: A buffer can be defined as a zone that separates a habitat from an area that is a potential threat to the habitat.

6.3.17 The DLUTS study area does not have any habitats within its area, however it borders some ecological networks. To the north of the site is the combined SPA Cork Harbour 4030 and pNHA Douglas Estuary 1046. To the south of the study area along the Carrigaline road ecological corridors are identified which have a local biodiversity value.

6.3.18 Management recommendations were made to maintain or enhance the conservation value of areas of local biodiversity value. As most of the lands identified in the habitat survey database are in private ownership, achieving ecologically beneficial management will in many cases require a cooperative engagement with landowners.

Figure 3: Douglas Ecological Corridors



Benefits

6.3.19 As this environmental baseline forms part of the DLUTS where recommendations for land use transport and planning will arise with potential impacts the existence of an area and percentage cover will provide an indicator to measure change in biodiversity value arising from development (residential, commercial, industrial, transport) or other pressures including amenity uses.

Issues

6.3.20 Impacts on protected areas, European (e.g. Special areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites) and Nationally Designated Sites (e.g. Natural Heritage Areas (NHAs);

- Impacts on flora and fauna including protected species;
- Impacts on sensitive habitats outside protected areas;
- Protecting and enhancing biodiversity at a regional level;
- Potential for habitat loss and fragmentation.

Protected Species

6.3.21 The Cork Harbour SPA has several species which are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Golden Plover, Bar-tailed Godwit, Ruff and Common Tern.

Green Infrastructure

6.3.22 Green Infrastructure (GI) will be identified in the DLUTS. GI is a network of multifunctional open spaces, including formal parks, gardens, woodlands, green corridors, waterways, street trees and open countryside. It comprises all environmental resources and thus a green infrastructure approach also contributes towards sustainable resource management.

Non Implementation of DLUTS

6.3.23 DLUTS aims to ensure that there is an integrated approach to land use planning and transportation engineering for the future development of the town. In the absence of this study, development within the study area would have no long term guidance and each planning application would be treated individually. Consequently, no long term cumulative causal or holistic impacts on ecological habitats within the study area would be assessed and, through time, fragmentation of habitats and loss of habitats would occur. The consequences would result in developments along riverbanks resulting in a reduction in ecological connectivity within and between these and other habitats. Pollution of various water bodies may occur from developments along the edges of water bodies or where single dwelling units discharge to groundwater.

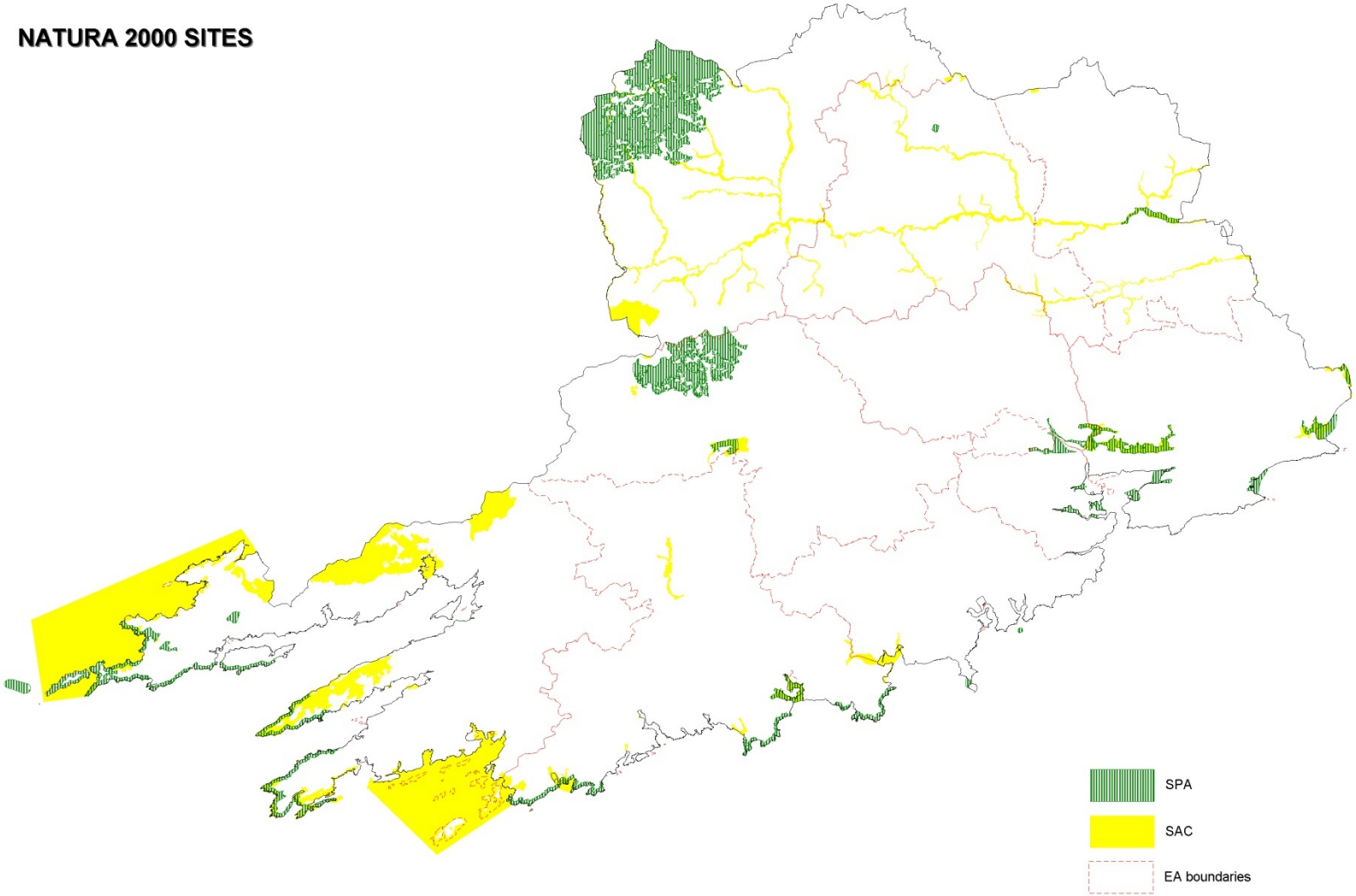


Figure 4: Natura 2000 sites

6.4 Population and Human Health

6.4.1 A definitive population for Douglas Village and its environs is difficult to identify due to the fact that it is not a single census area and it is complicated further by the fact that it straddles two separate administrative boundaries namely Cork City Council and Cork County Council.

6.4.2 The 2011 Census allocates a population to Douglas of 19,787. For the purpose of this study it is considered that this figure is grossly underestimated as it does not include large parts of Grange, all of Frankfield and a number of Cork City Wards whose population will use Douglas Village on a daily basis. As a result of this it was decided to identify the Electoral Divisions of the County and the Wards of the City which are deemed to be most influenced by Douglas village.

6.4.3 The study identified that there were two Electoral Divisions in the County and seven wards in the City which had a direct influence on Douglas on a daily basis. In the county, the two EDs are Douglas and Lehenagh, these were easily identifiable as been within the catchment of Douglas village primarily due to the fact that they both adjoin Douglas Village and are adjacent to the Metropolitan greenbelt to the south and are adjoined by the N40 National road to the North.

6.4.4 Identifying the Cork City Wards catchment (for Douglas) was a little more difficult. The area that was chose within the Cork City Administrative consists of seven City Wards which are enclosed by the N27 to the West, Capwell Road to the North, the Ballinlough Road and the Well Road to the East and the N40 to the South. These wards were chosen for a number of reasons, namely, their close proximity to Douglas, there close proximity to the four major roads that lead to and from Douglas i.e. the Douglas Road, the South Douglas Road, the N27 (via the N40) and the Well Road. Another major contributor to identifying these Wards was the location of schools (both Primary and Post Primary) within these Wards who all have students that reside in Douglas and the wider Douglas area.

6.4.5 These Census administrative areas which affect Douglas are identified as follows:

Table 5 Douglas Population catchment

Douglas Population Catchment Area by Electoral Divisions and City Wards	
Administrative Area	Electoral Divisions (ED) Name
Cork County	1. Douglas ED
	2. Lehenagh ED (which includes most of Grange and Frankfield)
Cork City Council	1. Ballinlough A
	2. Ballinlough B
	3. Ballinlough C
	4. Browningston
	5. Tramore A

	6. Tramore B
	7. Tramore C

6.4.6 Table 6 below outlines the growth for the Douglas catchment area between the inter-census periods 2006-2011. The Douglas Electoral Division(ED) experienced very positive growth, increasing by 12.2% from 18,182 persons in 2006 to 20,397 persons in 2011. The Lehenagh ED experienced steady growth increasing by 3.8% from 9,534 persons in 2006 to 9,898 persons in 2011.

6.4.7 In contrast, each of the DLUTS related Cork City Wards experienced a population decline of –4.2% dropping from 10,291 in 2006 to 9,859 in 2011. This is due to falling household size in the older more established residential area of the city. As whole, however, the designated catchment area affecting Douglas experienced positive growth, increasing by 5.6% from 38,007 persons in 2006 to 40,154 in 2011.

Table 6: Population Growth 2006 – 2011 in Douglas

Population Growth 2006-2011 in Douglas					
		2006	2011	Growth	%Difference
Douglas ED		18,182	20,397	2,215	12.2
Lehenagh ED		9,534	9,898	364	3.8
Cork City Wards	Ballinlough A	796	756	-40	-5.0
	Ballinlough B	1,857	1,740	-117	-6.3
	Ballinlough C	1,585	1,495	-90	-5.7
	Tramore A	846	843	-3	-0.4
	Tramore B	1,040	1,029	-11	-1.1
	Tramore C	3,132	2,985	-147	-4.7
	Browingston	1,035	1,011	-24	-2.3
Total Cork City Wards		10,291	9,859	432	-4.2
Total DLUTS Population Catchment		38,007	40,154	2,147	5.6

6.4.8 The growth in population has been experienced highest in the 65+ age group between the years 2006-2011 and that this has been more prevalent in the Lehenagh ED. There has also been a higher that average growth in the 15-64 age group.

6.5 Quality of Life

6.5.1 According to the Travel to Work census results in 2006, much of the Douglas Area is car dependant, thus an increase modal shift to public transport and co-ordination of land use and transportation policies would improve people's quality of life based on sustainable travel patterns. This would help create a reduction in journey to work (time/distance) and a high quality residential and working environment.

Environmental Issues

6.5.2 In the longer term these trends are unsustainable and if they are allowed to continue, congestion and emissions will increase and competitiveness will decline. This will have significant impact on quality of life, air quality and climate change, biodiversity and the landscape.

6.5.3 If population growth is not carefully managed in the future, unsustainable patterns of commuting together with increased levels of air pollution will continue. There will also be a need to plan for more sustainable travel patterns in an effort to reduce air pollution and greenhouse gas emissions. In this context it is considered that a sustainable development strategy for Douglas is required where growth should be focused in areas where it envisages employment growth and where high levels of sustainable commuting to work can be achieved. In addition development should be directed to areas where sufficient infrastructural capacity exists or where it can be provided for in a sustainable manner.

6.5.4 Growth should be directed and guided to the areas of the study area that environmentally can accommodate growth without negative impacts on the environment or where environmental impacts are kept to a minimum. It is considered that there are many benefits of directing growth to the town centre including the promotion of sustainable commuting and the improvement of the quality of life for the existing and future populations of the town. There is a responsibility to manage this growth and careful consideration of the potential impacts on other aspects of the environment is required.

6.5.5 In this section the current and targeted population of the Douglas study area will be examined. The likely significant impacts of population change proposed in the plan on human health will be assessed and the foundation of this assessment will be based on wastewater treatment and drinking water quality. Other potential impacts on human health such as air quality and waste management facilities will be dealt under separate environmental receptors.

6.5.6 As the study area relates to resolving the competing demands for more housing and retail development and balancing this with the provision for better transportation, environment and community facilities the primary focus of this section shall be set within this context. As a place of employment it is important that a high quality and safe environment is created, however, the characteristics of this environment by definition shall be somewhat different with that of a wider mixed use residential area.

6.5.7 The lists below show the areas covered in this section and also the environmental receptors which have a strong connection with Population and Human Health. For example, it is important to note that wastewater and drinking water issues have a strong link with water quality issues and this will be explored further in the Water Resources section.

6.5.8 Issues relating to Population and Human Health:

- Economic Well Being
- Transportation
- Quality of Environment
- Noise
- Safety
- Amenity

Travel to Work

6.5.9 Figure 5 (Sustainable Commuting) shows the percentage of people per DED who travel to work by sustainable means e.g. walking, cycling, public transport or working at home. This information was taken from the travel to work patterns, which emerged from the 2006

census. For the purposes of this Environment Report it is considered that above 25% is regarded as achieving a good level of sustainable commuting while lower than 25% would indicate more car dependency. The key to significantly increasing sustainable commuting and decreasing car dependency is focusing targeted population growth to major employment centres that are well served by public transportation and where high levels of sustainable commuting can be achieved.

6.5.10 The majority of the population travelling to work in the Carrigaline Electoral Area are car dependant. As expected, the majority of Cork City scores highly but there is a notable drop in the percentage of people travelling to work by sustainable means in the east of the city. Thus travel to work patterns which have emerged from the 2006 census have shown that car dependent travel plays an overwhelming role in the Carrigaline Electoral Area.

Table 7: Commuting Modes

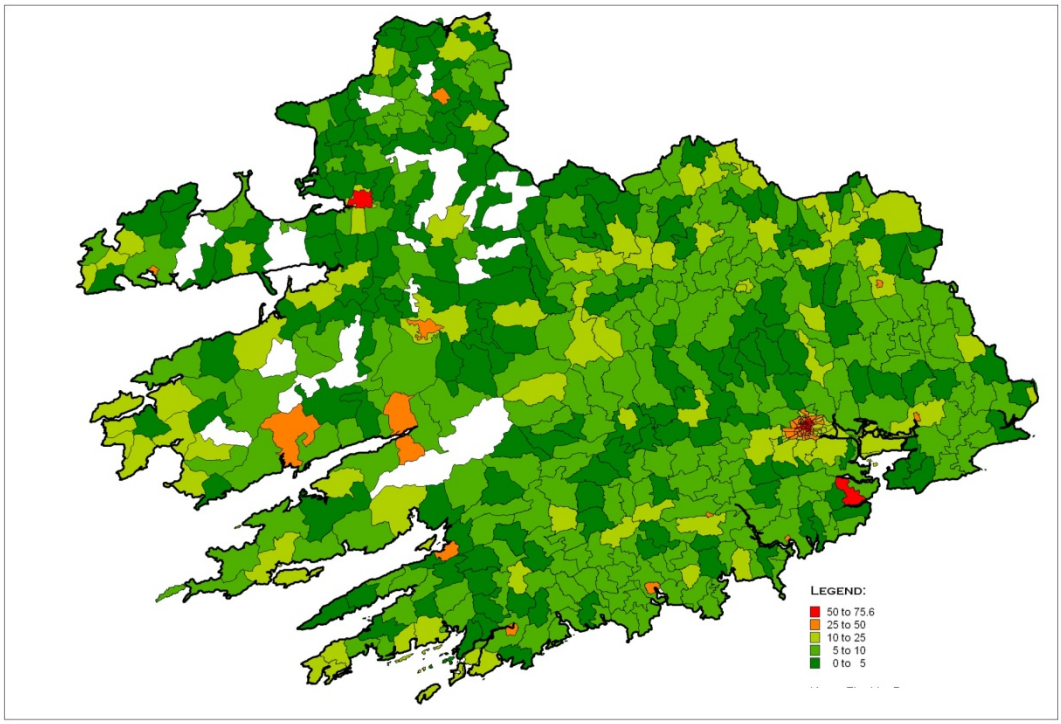
Means of Travel	On Foot	Bicycle	Bus, minibus	Driving a car	Passenger in a Cork	Other	Total
No. of Commuters	183	95	465	4501	382	197	5823

6.5.11 In the longer term these trends are unsustainable and if they are allowed to continue, congestion and emissions will increase and competitiveness will decline. The table below demonstrates that the majority of journeys are between 5-9km which centres both origin and destination mostly in the study area.

Table 8: Commuting Distance

Distance	<5km	5-9km	10+km	Total
No. of Commuters	1625	3062	1136	5823

Figure 5: Travel to Work (Sustainable Commuting)



6.5.12 Environmental Receptors with Strong Links to Population and Human Health:

- Drinking Water Quality
- Wastewater Treatment
- Water Resources
- Water Supply
- Biodiversity
- Air Quality
- Waste Management

Waste water treatment and discharge mechanisms

6.5.13 Waste water from the urban settlement of Douglas and surrounding lands in the Southern environs of the City is collected by sewer mains into a trunk main that traverses the study area. The Tramore River Valley Trunk Sewer, which is 1350mm in diameter runs from west to east south of the GAA playing fields and primary schools at St Columba's. There is a 30 metre wayleave on which any structural development is prohibited. Associated with this trunk waste water pipeline is a 1500mm water trunk main (following the same alignment). There are numerous wastewater pipes serving the residential and other uses throughout Douglas that all flow into the trunk main. Ultimately, wastewater from the Douglas area and surrounding southern environs is treated at the Cork City WWTP at Carrigrennan. There is spare capacity in the Tramore River Valley Trunk Sewer for further development.

Water quality (surface and underground)

6.5.14 The principal suspected causes of less than satisfactory water in the state are discharges, principally of nutrients, from agricultural activities and from municipal wastewater treatment works. Industrial discharges, wastewater from unsewered properties and discharges from several other activities have also been identified as contributing. Action should concentrate in the first instance on these issues which pose the greatest threat to the

water environment, but it is also important to address other possible sources of water pollution and impact, including issues such as water abstraction and physical modification and issues specific to the RBD.

6.5.15 The RBD Plans identify a programme of measures to protect and restore water status by addressing the main pressures (that is sources of pollution or status impact) in the district. Many of the measures are already provided for in national legislation and are being implemented. These include, for example, the Urban Waste Water Treatment Regulations 2001 to 2010 and the Good Agricultural Practice for the Protection of Waters Regulations of 2009. Other measures have been recently introduced (for example new Bathing Water Regulations, 2008) or are under preparation (for example proposed authorisation regulations for abstractions and physical modifications). The key measures include:

- Control of urban wastewater discharges;
- Control of unsewered waste water discharges;
- Control of agricultural sources of pollution;
- Water pricing policy;
- Sub-basin management plans and programmes of measures for the purpose of achieving environmental water quality objectives for Natura 2000 sites designated for the protection of Freshwater Pearl Mussel populations;
- Pollution reduction programmes for the purpose of achieving water quality standards for designated shellfish waters; and

Storm Water Disposal

6.5.16 In relation to storm water, Douglas is only served by a public storm water pipe (450mm) in the Cinema parking area in Central Douglas that runs to a pumping station near the Ballet School at Douglas Court. Any new development in Douglas will require disposal of storm water through attenuation being provided by a landowner/developer in accordance with Sustainable Drainage Systems (SuDS) model. For a developed site, it is required that any flows in excess of those from the original Greenfield site must be attenuated. This also depends on the capacity of the receiving waters to be able to carry excess flow especially in locations subject to flooding. The Water Services Assessment of Needs Report 2009 for the Douglas area contains the “Tramore River Valley Sewerage Scheme Storm water Separation Study”, which requires a study to separate storm water from the existing waste water pipes.

Wastewater Treatment Plant (WWTP):

6.5.17 Wastewater from Cork City and Environs is treated at the Cork City WWTP at Carrigrennan. There is spare capacity in the Tramore River Valley Trunk Sewer for further development

Waste water treatment and discharge mechanisms

6.5.18 The Tramore River Valley Trunk Sewer is installed through Parcel X03(a). There is a foul sewer in the L2470 (Maryborough Hill) which can service Parcel X03(b). This sewer discharges to the Tramore River Valley Trunk Sewer. There is spare capacity in the Tramore River Valley Trunk Sewer for further development. The Assessment of Needs 2009 contains the item “Tramore River Valley Sewerage Scheme Stormwater Separation Study”, This is for a study to separate stormwater from the existing collection system feeding the existing Tramore River Valley Trunk Foul Sewer.

6.5.19 The principal suspected causes of less than satisfactory water in the state are discharges, principally of nutrients, from agricultural activities and from municipal wastewater treatment works. Industrial discharges, wastewater from unsewered properties and discharges from several other activities have also been identified as contributing. Action should concentrate in the first instance on these issues which pose the greatest threat to the

water environment, but it is also important to address other possible sources of water pollution and impact, including issues such as water abstraction and physical modification and issues specific to the River Basin District.

6.5.20 The River Basin District Plans identify a programme of measures to protect and restore water status by addressing the main pressures (that is sources of pollution or status impact) in the district. Many of the measures are already provided for in national legislation and are being implemented. These include, for example, the Urban Waste Water Treatment Regulations 2001 to 2010 and the Good Agricultural Practice for the Protection of Waters Regulations of 2009. Other measures have been recently introduced (for example new Bathing Water Regulations, 2008) or are under preparation (for example proposed authorisation regulations for abstractions and physical modifications). The key measures include:

- Control of urban wastewater discharges;
- Control of unsewered waste water discharges;
- Control of agricultural sources of pollution;
- Water pricing policy;
- Sub-basin management plans and programmes of measures for the purpose of achieving environmental water quality objectives for Natura 2000 sites designated for the protection of Freshwater Pearl Mussel populations and
- Pollution reduction programmes for the purpose of achieving water quality standards for designated shellfish waters.

Non Implementation of DLUTS

6.5.21 The occurrence of growth in sensitive areas can result in significant adverse impacts on the environment. In the absence of the Strategy for Douglas there would be no framework for the provision of infrastructure to serve existing and future development and this would be likely to delay or hinder the provision of infrastructure which would have the potential to result in impacts on environmental vectors to which humans are exposed.

6.5.22 The Strategy aims to aid in the response to health issues in the town by delivering better access to recreation facilities which can promote a healthier lifestyle. In the absence of the Plan, a more holistic response to health inequalities within the town would not be delivered.

Water Resources

6.5.23 The study area is bounded to the north by the Tramore River, which forms the boundary with the City Council. Much of the river in the town centre flows through channels constructed as part of the town centre development. The Ballybrack Stream flows through the study area from the south (Donnybrook) to its confluence with the Tramore River in the middle of the town centre.

Water Framework Directive

6.5.24 In response to the increasing threat of pollution and the increasing demand from the public for cleaner rivers, lakes and beaches, the EU has developed the Water Framework Directive (WFD). This Directive is unique in that, for the first time, it establishes a framework for the protection of all waters including rivers, lakes, estuaries, coastal waters and groundwater, and their dependent wildlife/habitats under one piece of environmental legislation. It requires governments to take a new holistic approach to managing their waters and it applies to rivers, lakes, groundwater, estuaries and coastal waters. Member States must aim to achieve good status in all waters and must ensure that status does not deteriorate in any waters.

6.5.25 Specifically the WFD aims to:

- protect/enhance all waters (surface, ground and coastal waters)
- achieve "good status" for all waters by December 2015
- manage water bodies based on river basins (or catchments)
- involve the public
- streamline legislation

6.5.26 In this section information and objectives arising from the Water Framework Directive (WFD) pertaining to the Carrigaline Electoral Area and Douglas will be examined. As this project is essentially concerned with land use and infrastructure development in an existing urban settlement, it is considered that this project will most likely affect water quality through discharges from municipal wastewater treatment plants. Thus the likely significant impacts of population change proposed in the plan on water quality will be assessed and the foundation of this assessment will be based on wastewater treatment.

6.5.27 The study area is bounded to the north by the Tramore River much of which is covered as it flows by the Douglas Village shopping centre. This river has flooded in the past.

Flooding and flood risk

6.5.28 The risk of flooding pertaining to the study area will need to be assessed. To comply with the EU Floods Directive introduced on 26th November 2007, and in line with Section 28 of the Planning & Development Acts an assessment of flood risks has been formally taken into account in the preparation of the 2011 Carrigaline Local Area Plan.

6.5.29 The assessment and management of flood risks in relation to planned future development is an important element of the local area plan. The majority of towns, villages and smaller settlements have a river or stream either running through the built-up area or close by and are inevitably exposed to some degree of flood risk when those rivers or streams overflow their normal course. Similarly, in coastal areas flooding can periodically occur following unusual weather or tidal events.

6.5.30 The Information about flood risks that has been used in the preparation of the DLUTS has been collated from a number of sources including:

- ‘Floodmaps.ie’ – The national flood hazard mapping website operated by the Office of Public Works, where information about past flood events is recorded and made available to the public. ‘Flood point’ information is available on this site and has been noted.
- ‘Draft Flood Hazard Mapping’ for fluvial and tidal areas commissioned by Cork County Council from Consultants JBA and Associates. These indicative flood extent maps provide flood extent information for river catchments where a more detailed CFRAMS study is not currently available.

Flood Risk

6.5.31 Since the introduction of the planning system in Ireland in 1963, the assessment of flood risks has been one of the material considerations that planning authorities can take into consideration when determining applications for planning permission. Since the 1963 Act, ‘flood-risk’ has been a ‘non-compensatable’ reason for refusal under the Acts.

6.5.32 Prior to November 2009, there was no national guidance or standards to help planning authorities address flood risk issues when determining planning applications. As a result there was considerable variation in the approach taken and widespread & reliable mapping of areas at with a susceptibility to flooding was not available.

6.5.33 Much of the current development in Douglas was authorised during the period when no national guidance, standards or reliable mapping were available with respect to flood risks.

According to the OPW Floodmaps.ie, Douglas has a record of a flooding event in November 2002 on the Ballybrack Stream, where considerable damage to property occurred.

6.5.34 In June 2012, extremely heavy rainfall and steep catchment gave rise to flooding of the Ballybrack Stream to the south of the Douglas Village. The stream burst its banks upstream of the village centre, knocked down two walls and incurred damage to property and community hall. Flood waters then flowed onto Church Road, then made its way down Church Lane, West Douglas Street and in an easterly direction to East Douglas Street. Douglas Community Park also encounters flood waters as the Ballybrack Stream burst its banks. The Ballybrack trash screen became blocked due to the volume of debris being conveyed in the stream as a result of the extreme rainfall event.

6.5.35 For the first time, national standards based on best international practice, The Planning System and Flood Risk Management – Guidelines for Planning Authorities were published in November 2009. Subsequent to the publication of the Guidelines, the Cork County Council acquired appropriate mapping of areas susceptible to flooding to assist in its duties as a planning authority and applied Flood Risk Mapping, as recommended in the 2009 Guidelines, into the Review of the 10 Local Area Plans as adopted in July 2011.The O.P.W. as lead Authority for flooding in Ireland endorsed and welcomed the Council's timely approach to Flood Risk.

6.5.36 The inclusion of Indicative Flood Extent maps for the settlements of the electoral area is the first step in managing flood risk in the future. The maps are indicative in nature and are intended to primarily function as a screening tool. The areas at risk may be more or less extensive in practice than indicated in the flood mapping. The mapping will be refined where possible over time as more detailed flood risk assessments are completed by the OPW. The maps do not take into account flood defences or manmade structures such as bridges, weirs or culverts. This is accordance with the requirements of the Guidelines which specify an undefended assessment of risk.

6.5.37 In the Carrigaline Electoral Area Local Area Plan 2011, a Strategic Flood Risk Assessment was undertaken and it identified a number of areas susceptible to flood risk as a result of the County Flood Map that was produced based on CFRAMs study for the River Lee Catchment. This indicative mapping is shown on an extract of the Local Area Plan for Douglas area below.

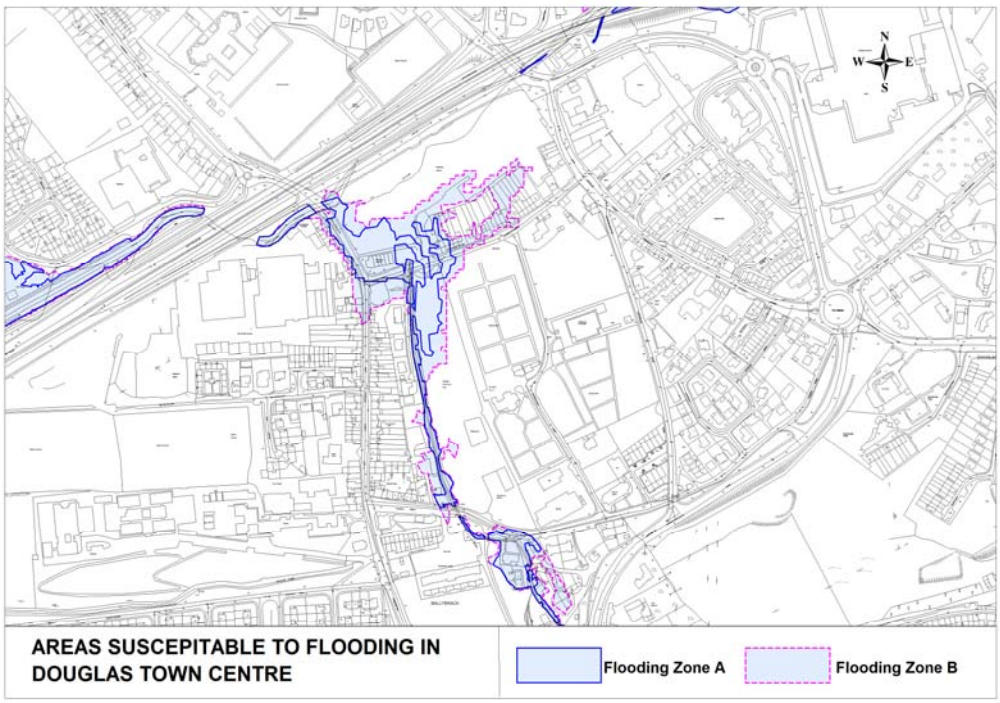
6.5.38 The extent of the flood risk is shown as following the tributary that originates in Donnybrook and flows northwards through the park and is culverted under the Douglas Village Shopping Centre at Church Road and joins the Tramore River immediately south of the N40.

6.5.39 Previous flooding events in Douglas have taken place in 2002 and 2012 along the Ballybrack Stream. Significant Damage to property has been experienced.

Proposed Flood Mitigation Works/Studies

6.5.40 The Douglas area was considered in the OPW's Lee CFRAM study but no works were suggested. Following the June 2012 event, the OPW have asked Cork County Council to progress a study of the catchment. Cork County Council is currently preparing the Consultants brief for the Douglas Flood Risk Assessment and Management Study. This study will be procured shortly.

Figure 6: Areas Susceptible to Flooding in Douglas Town Centre



Non Implementation of the DLUTS

6.5.41 The DLUTS outlines the strategy for the long term development of these lands. The DLUTS will facilitate the most appropriate transportation solution to the existing network of the area. Such development will impact on the quality of waters within and adjoining the site if not properly controlled. In addition, loading on the public water and sewer networks will arise, that would otherwise not occur.

6.6 Soil and Geology

6.6.1 Soil is defined as the top layer of the earth's crust, an extremely complex, variable and living medium and is formed by mineral particles, organic matter, water, air and living organisms. Soil performs a number of key environmental, social and economic functions that are vital for life. Plants and crops are dependent on soil for the supply of water, nutrients and as a medium for growing. Soil stores, filters, buffers and transforms substances that are introduced into the environment and this quality is crucial in producing and protecting water supplies and for regulating greenhouse gases. Soil is a provider of raw materials. Soil is also an incredible habitat and gene pool, in excess of 5 tonnes of live organisms can exist in a hectare of arable soil. Soil is a fundamental component of our landscape and cultural heritage. Soil is a non-renewable resource, which performs many vital functions: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. In order to perform its many functions, soil condition must be maintained. However, the value of soil, a largely non-renewable resource, is not always appreciated. Soil degradation is accelerating, with negative effects on human health, natural ecosystems and climate change, as well as on our economy.

6.7 Soil Types

6.7.1 The general consensus is that soil quality in Ireland is good; however, this is based on limited information and therefore the degree of certainty is low. The ultimate purpose of knowing and assessing soil quality and potential threats is not to achieve, for example, high soil aggregate stability, biological activity, or some other soil property; rather the purpose is to protect and improve long-term agricultural and forestry productivity, water and air quality, and the habitats of all living organisms and humans (Environmental Protection Agency (2008) State of the Environment Report p174).

6.7.2 The dominate soil type in the area are acid brown earths and podzolics which provide a mix of productive and moderately productive soils enabling grassland and crop production with the main agricultural use being grassland and cereal crops. Productive soils should be retained for vegetation and construction considered on unproductive soils. Soil disturbance should be kept to a minimum and tree planting should be encouraged.

Table 9 Douglas Soil Type

Rolling Lowland	Brown Podzolics 60% Less depleted of nutrients than podzols, good physical characteristics	Acid Brown Earths 40% Most occur on lime-deficient parent materials, therefore acidic in nature, relatively mature and well drained	Old Red Sandstone, lower avonian shale and ryolite glacial till

Threats

1 Degradation

6.7.3 Soil is constantly changing and evolving, and while some degradation processes are natural, human activity can accelerate these processes, and introduce others, and thereby impair the soil's capacity to carry out the functions we require from it. Erosion by wind and water, surface sealing, loss of organic matter, contamination, landslides, loss of soil biodiversity, compaction and salinisation are soil threats that can lead to a reduction in soil functionality. Peat extraction and land-use changes such as increased urbanisation or ploughing of rough or permanent grassland for tillage and energy crops will lead to increased Soil organic matter (SOM) loss from soils. It is likely that increased soil temperatures as a result of global warming will increase biological activity in the soil, resulting in losses of organic carbon, as carbon dioxide and methane, to the atmosphere.

2 Soil Erosion

6.7.4 Soil erosion is a process whereby soil is worn away by physical processes such as wind and flowing water. Soil erosion also impacts on water courses, in which the eroded sediments can result in fish kills or eutrophication. Soil erosion occurs as a result of poor soil management practices on vulnerable soils including inappropriate cropping regimes, overgrazing, and direct access to watercourses. Forestry activities can also cause significant soil erosion.

3 Surface Sealing

6.7.5 Soil is sealed when it is taken into the built environment as a result of development for housing, industry, transport and other physical infrastructure. By using soil as a physical support medium, clearly other soil functions are lost, e.g. food production; environmental

interactions; and support for ecosystems, habitats and biodiversity. It is likely, given the location of our towns and urban areas on the flatter, more easily accessible lands, that our most versatile and good quality soils are being lost to urbanisation. There is also growing evidence that the urban sealing of soils leads to rapid and enhanced runoff during rainstorms and this in turn is a significant contributor to downstream urban and other forms of riverine flooding. There is no comprehensive information on the quantity and quality of soil being lost to surface sealing in Ireland on an annual basis or the consequences of this in terms of loss of soil functionality and increased flooding risks. (EPA 2008).

4 Soil Contamination

6.7.6 Soil can be contaminated by a wide range of potential pollutants, through either local (point source) contamination or diffuse contamination. Contamination from point sources can arise as a result of leakages and accidental spillages from commercial activities that use the soil for support or space, e.g. petroleum storage tanks, old gas work sites, tanneries, timber treatment or landfills. Diffuse contamination relates to land spreading of agricultural and industrial organic wastes to exploit the soil's ecological capabilities to utilize, filter, absorb, buffer and transform these wastes. Problems arise where the soil's assimilative and/or buffering capacity is exceeded and where the wastes contain potentially toxic contaminants.

6.7.7 In particular, peat cutting can be damaging to vegetation, hydrology and landscape. Unlike many of our European counterparts, Ireland has yet to develop environmental quality standards for soil to assist in delivering a consistent approach to the management of contaminated soils that is protective of human health and the wider environment. Given that soil data coverage of Ireland is incomplete and exists in many variable and disparate forms tackling issues such as quantifying the extent of soil threats in Ireland will be extremely difficult and it is not the purpose of this strategy to carry out this survey. The information available is deficient to quantify the extent of soil threats in Ireland. Nevertheless our soil needs to be afforded the same protection as is given to air and water.

6.7.8 Indirectly land use development proposed in the area must be conscious of removed and eroded soil being washed into rivers during heavy rainfall as it contains an increased nutrient content, which can damage the balance of aquatic ecosystems by shifting their species composition, supporting more nutrient-loving species. This can lead to the eutrophication of rivers and lakes.

Features of geological/ geomorphologic interest

6.7.9 To date sites of geological interest have not been comprehensively covered by the existing nature conservation designations. This is currently being addressed by the Department of Environment Heritage and Local Government and the Geological Survey of Ireland who are drawing up a list of sites of geological interest that will be proposed as Natural Heritage Areas. The 2009 Cork County Development Plan identifies areas of geological interest in the county.

Table 10 Features of geological/ geomorphologic interest

Site	Geological Interest	Location
Cork Harbour	Coastal Geomorphology – structural features, raised beaches; Devonian (ORS)	Cork Harbour

Non Implementation of the DLUTS

6.7.10 There would be no coordinated approach to the use of land which is a finite resource. In addition as much of the existing village is built up, this plan provides an opportunity for a co-ordinated approach to building suitable sites in the village study area.

6.8 Air, Noise and Climatic Factors

Air quality

6.8.1 In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well being of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed. The principles to this European approach are set out under the Air Quality Framework Directive 1996 as transposed into Irish law under the Environmental Protection Agency Act 1992 (Ambient Air Quality Assessment and Management) Regulations 1999 (SI No. 33 of 1999). Directives lay down limits or thresholds for specific pollutants including sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead, carbon monoxide and benzene, ozone and polyaromatic hydrocarbons, arsenic, nickel, cadmium and mercury in ambient air.

6.8.2 In order to comply with these directives, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (SI No. 271 of 2002). The main areas defined in each zone are:

- Zone A: Dublin Conurbation.
- Zone B: Cork Conurbation.
- Zone C: 21 Other cities and large towns comprising Galway, Limerick, Waterford, Clonmel, Kilkenny, Sligo, Drogheda, Wexford, Athlone, Ennis, Bray, Naas, Carlow, Tralee and Dundalk.
- Zone D: Rural Ireland, i.e. the remainder of the State - small towns and rural areas of the country - excluding Zones A, B and C.

6.8.3 Douglas is located in Zone B. Air quality monitoring and assessments are undertaken at two locations within the administrative area of Cork County Council: Glashaboy and Cork Harbour. Recent air quality monitoring reports published by the EPA indicate that the air quality is good in these two locations.

6.8.4 The dominant influence on the climate in County Cork and Douglas is the Atlantic Ocean. The mean annual wind speed in the County is approximately 5-6 m/sec. Mean annual rainfall varies across the County, ranging from up to 1800-2000 mm in the western parts to 1000-1200 mm in the eastern parts. The prevailing winds in the County are also predominantly from the south, southwest, west or northwest.

6.8.5 Air quality is generally good in the southwest of Ireland as it is located in an area with a relatively mild climate and has an almost continuous movement of clean air. It is now evident that, due mainly to the very significant increase of vehicles on the public roads, the biggest threat now facing air quality is emissions from road traffic.

6.8.6 Emissions of pollutants from vehicles, power stations, industry, domestic fuel burning and agriculture can have local, national, international or global effects. Emissions of carbon dioxide and other greenhouse gases are enhancing the greenhouse effect and causing global warming. In 2005, Ireland's greenhouse gas emissions increased by 25.4% above the 1990 levels. The most significant and sustained increase in greenhouse gas emissions of 160% has been due to the transport sector, mainly due to road transport. Significant reductions of

nitrogen oxide from road transport is required if Ireland is to meet its commitments under the National Emissions Ceiling (NEC) Directive by 2010. The National Climate Change Strategy 2007-2012 was designed to demonstrate how Ireland will meet its 2008-2012 commitments regarding compliance with the Kyoto Protocol.

6.8.7 The EU Emissions Trading Directive (2003/87/EC) has been implemented to achieve a reduction in greenhouse gases for all member states of the EU. The directive was transposed into Irish Law by the European Communities (Greenhouse Gas Emissions Trading) Regulations 2004 (S.I. No. 437 of 2004). The Environmental Protection Agency has been assigned responsibility for its implementation in Ireland. Under these regulations greenhouse gas emissions permits are authorised to various holders who undertake named activities resulting in emissions of carbon dioxides from listed emission points. Allowances for emissions to air of greenhouse gases are allocated through the National Allocation Plan.

Potential Point Sources of Emissions to Air

1. IPPC Licensed Facilities

6.8.8 The EPA has been licensing certain large-scale industrial and agriculture activities since 1994. Originally the licensing system was known as Integrated Pollution Control (IPC) licensing, governed by the Environmental Protection Agency Act, 1992. The Act was amended in 2003 by the Protection of the Environment Act, 2003 which gave effect to the Integrated Pollution Prevention Control (IPPC) Directive. Detailed procedures concerning the IPPC licensing process are set out in the EPA Acts 1992 to 2007 and the associated licensing regulations.

6.8.9 IPPC licences aim to prevent or reduce emissions to air, water and land, reduce waste and use energy/resources efficiently. An IPPC license is a single integrated license which covers all emissions from the facility and its environmental management. All related operations that the license holder carries in connection with the activity are controlled by this license. Before a license is granted, the EPA must be satisfied that emissions from the activity do not cause a significant adverse environmental impact.

6.8.10 Within the Study area there is no licensed facility.

2. Road Transport

6.8.11 The increase in vehicle ownership and in road transport in general is sustaining emissions of NOX even though improved technologies are reducing the emissions from individual vehicles. To meet the target of the NEC Ceiling of 65,000 tonnes of NOX by 2010 Ireland will need to encourage the availability and use of public transport and other forms of sustainable travel (e.g. cycling, walking) throughout the country.

6.8.12 Analysis of the 2006 Census data has identified a significant problem with car-based commuting out of Douglas due to the lack of local employment opportunities. Douglas has one of the highest volumes of travel to work to the three main employment centres of Ringaskiddy, Little Island and the Airport Business Park. Opportunities exist to provide greater incentives for employees to uptake a model shift to the bus.

6.8.13 One of the overarching reasons for the preparation of the Douglas LUTS is the need to provide alternative solutions to the unacceptable levels of existing traffic congestion caused, in part, by the location of 5 schools in close proximity to the town centre. Part of the National Smarter Travel Policy is to seek a more sustainable travel pattern for our towns and cities. This involves all modes of travel; roads, bus, cycle and pedestrian movement.

3. Other Sources

6.8.14 Other greenhouse gases include methane from agriculture and landfills and nitrogen oxides primarily arising from agriculture. Nationally the emissions of greenhouse gases from the

energy sector in 2005 were 38% percent above the 1990 levels showing an increased demand for electricity. While some variations in emissions from the residential sector over that period has occurred and seems to reflect a shift from the use of coal and peat to oil and gas, these reductions were negated by the increases in population and housing stock in Ireland.

Climatic Factors

1. Greenhouse Gases

6.8.15 In order to reduce greenhouse gas emissions the internationally agreed Kyoto Protocol established emissions reduction targets for developing countries. Ireland's emission target for greenhouse gases is to limit the increase in their combined emissions during the five-year period 2008-2012 to 13 per cent above 1990 levels. Based on the inventory figures for 2006, the EPA estimates that Ireland's emissions in 2006 were 25.5 per cent higher than the base line estimate that underlies Ireland's allowable emissions for the period 2008-2012, as agreed in the peer review of Ireland's 2006 submission to the United Nations Framework Convention on Climate Change. With regard to overall emissions, Agriculture is the single largest contributor, at 27.7% of the total, followed by Energy (power generation & oil refining) at 22.3% and Transport at 19.7%.

6.8.16 The remaining 30% is made up by the Residential sector at 10.4%, Industry and Commercial at 17.2%, and Waste at 2.6%. Transport continues to be the dominant growth sector with emissions at 682,000 tonnes higher in 2006 than in 2005. This represents a 5.2% increase on 2005 levels and 165% increase on the 1990 transport emissions. Road transport accounts for 97% of the transport sector emissions. The increase in the GHG emissions from the transport sector reflects sustained increases in fuel consumption with petrol usage up 3.4% and diesel consumption up 7.9% from the previous year.

2. Climate Change

6.8.17 Climate change refers to any change in climate over time, whether due to natural variability or as a result of human activity. The release of greenhouse gases into the atmosphere as a result of human activities adds to natural climate variability by increasing the naturally occurring greenhouse effect. This greenhouse effect occurs in the atmosphere and is caused by greenhouse gases which exist naturally in the atmosphere. The greenhouse gases retain the radiation which is released from the earth as a result of heating by the sun. This retention maintains a global temperature which is suitable for ecosystems and life. Climate change is not limited to changes in temperatures or weather. It can also mean changes in the occurrence of extreme and unstable weather conditions, storms and floods, droughts and coastal erosion.

Potential Effects of Changed Climate

6.8.18 As increased temperatures will lead to greater amounts of water vapour in the atmosphere and an accelerated global water cycle, it is reasonable to expect that river catchment areas will be exposed to a greater risk of flooding. The increase in winter precipitation will be likely to produce a significant increase in the more intense discharge episodes, raising the risk of future flooding.

6.8.19 Within the Agriculture, Aquaculture and Fisheries sectors changed weather patterns typified by wetter winters and drier summers are likely to give rise to more challenging conditions This may reduce the need for fertilizer in areas of poorly drained soils (EPA, 2009 Climate Change – Refining the Impacts for Ireland). An expected rise in sea level may have implications for aquaculture and result in a shift of the North Atlantic Drift and therefore water temperatures. Estuarine systems are important nursery and breeding areas for many commercial fish species and fisheries may be impacted on due to saline intrusion, salinity

gradients, flooding, sedimentation, warmer temperatures, etc. may disrupt spawning and nursery grounds and shellfish production.

6.8.20 In terms of Landscape, Biodiversity, Flora and Fauna, it is likely that changes will occur in biodiversity with 'life cycles' being altered for many species and the availability of migration or ecological corridors will be important in the long-term shifts/movements of habitats. There is a likelihood of new non-native species thriving in the environment and the increase of pests and diseases occurring. Other temperature dependent species may come under increasing pressure and result in species loss. There may be a loss of ecological goods and services and habitat loss along the coastlines (due to sea level rise and increasing storm surges), saline inundation landwards, wetlands and estuaries impacts (Source: Failte Ireland, heritage Council (April, 2009) Climate Change, Heritage and Tourism: Implications for Ireland's Coast and Inland Waterways). Breeding seabird colonies and wintering waterfowl may be impacted due to sea-level change.

6.8.21 Weather patterns may also be subject to change. It is likely that more extreme weather patterns will emerge such as storms and increased rainfall, flooding and droughts with increased mean annual temperatures, rainfall and drier summers. It is likely that there will be increased incidences of flooding. Alluvial flooding, greater coastal erosion and the gradual inundation of low lying areas following tidal surges are likely to occur. Drinking water sources may be affected.

6.8.22 The EPA (2009) report 'Climate Change – Refining the Impacts for Ireland' identifies that there are likely to be significant impacts on hydrology and pressures on water resources. Changes in precipitation and evaporation will impact on the surface and sub-surface hydrological cycle. It is expected that there will be a significant reduction in soil moisture storage and groundwater recharge for longer sustained periods increasing the risk of drought (EPA, 2009). The protection of safe and secure water supplies will be a significant issue especially where local authorities rely heavily on groundwater resources. There may be saline intrusion into island drinking water supplies off the coast.

Existing Issues

6.8.23 Air quality is generally good in County Cork and Douglas as it is located in an area with a relatively mild climate and has an almost continuous movement of clean air. The biggest threat now facing air quality is emissions from road traffic. Thus there are proposals in the Draft Strategy to continue to promote sustainable travelling via improvements to the public transport network, walking and cycling. The availability for more local employment opportunities would help reduce employment based commuting out of Douglas.

6.8.24 As outlined previously, Climate change will lead to significant changes in the environment of the Region and beyond. The draft stategy contains objective supporting and endorsing the National Climate Change Strategy and seeking an integrated approach to land-use and transportation planning in order to reduce greenhouse gas emissions.

Noise

6.8.25 Noise abatement measures were constructed when the N40 was upgraded between the Lee Tunnel and the Kinsale road fly over back in 2005/06 These have been highly effective in reducing noise penetration into the adjoining residential areas. It is essential that an ongoing budget for maintenance of these barriers is carried out.

Figure 7: Noise abatement measures similarly used by the NRA on the N40

Non Implementation of the DLUTS

6.8.26 Increases in the use of catalytic converters, cleaner fuels, better engine technology and maintenance is generally reducing the pollution emitted per motor vehicle. However, this reduction is probably being offset by the increase in the number of cars as well as the increase in the volume and incidences of traffic congestion which may in turn lead to increases in air and noise pollution in the future.

6.8.27 In the absence of the Strategy, the realisation of objectives relating to encouraging development within the core of the town close to existing services and transport facilities would be made more difficult. The Strategy inter alia provides an opportunity to provide for the regeneration of the core of the town which are close to existing high quality public transport linkages. This regeneration would provide for an increased population which would be less dependent upon private modes for transportation and would therefore be likely to generate less transport related greenhouse gas emissions than populations located further away from the town centre. In the absence of the Strategy regeneration of the areas provided under them would not be achieved and an opportunity to prevent the generation of future transport related greenhouse gas emissions would be missed.

6.9 Cultural Heritage including Architectural and Archaeological Heritage

6.9.1 Cultural heritage includes inherited artefacts and intangible attributes that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations. The 2009 Cork County Development Plan, and incorporated into the Carrigaline Local Area Plan, has stated it is the Council's policy to:

- Protect the architectural heritage of the County
- Facilitate public access to National Monuments
- Preserve and maintain existing archaeological monuments within the county and to safeguard the integrity of the setting of archaeological sites.

6.9.2 The Heritage Plan (2005-2010) has identified a number of objectives, including inter alia:

- To raise awareness and to promote appreciation and enjoyment of the heritage of Co. Cork.
- To develop and encourage best practice in relation to the management and care of heritage in Co. Cork and to deliver practical actions to achieve this
- To gather and disseminate information about heritage in Co. Cork.

6.9.3 The built environment refers to all features built by man in the environment including buildings and other structures such as bridges, archaeological sites and field boundaries. Non-structural elements, such as historic gardens, stone walls, ditches and street furniture, make a significant contribution to our built heritage. A lack of awareness of their inherent and associative value can result in the loss of these elements and subsequent erosion of heritage assets. While not every structure is of sufficient importance to warrant the rigors of special protection, the conservation of good examples of the built heritage is vital if a sense of continuity with the past is to be maintained.

6.9.4 The principle legislation that provides the protection to our architectural heritage is the Planning and Development Act, 2000 – 2007. The Minister for Environment, Heritage and Local government is responsible for the protection of archaeological heritage, including the licensing of archaeological excavations, through the exercise of powers under the national Monuments Acts 1930 to 2004.

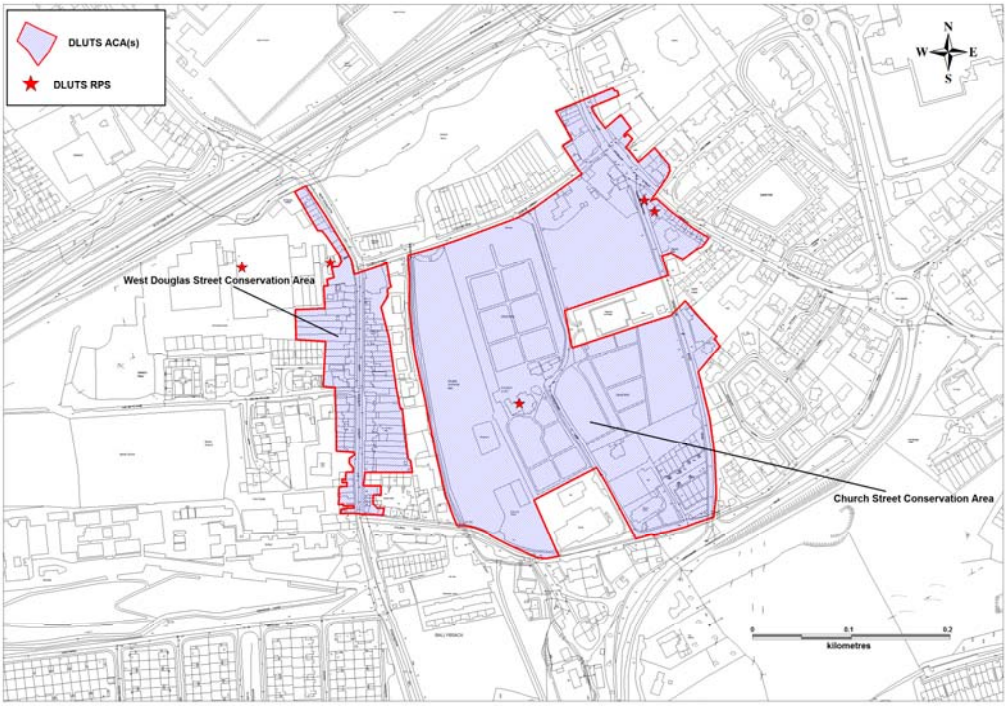
6.9.5 In addition the National Inventory of Architectural Heritage of the Department of Environment, Heritage and Local Government is carrying out a survey which involves identifying and recording the architectural heritage of Ireland from 1700 to the present day.

Architectural Conservation Area

6.9.6 Two separate and distinct ACAs are identified in the village, at West Douglas Street Conservation Area and Church Street Conservation Area. The policy regarding development within the ACA's is contained in the County Development Plan 2009 (Volume 2).

6.9.7 ENV 4-6: "It is an objective to conserve and enhance the special character of the Architectural Conservation Areas included in this plan. These Architectural Conservation Areas are shown on the Architectural Conservation Area Maps in Volume 3 and are also listed in Volume 2 of this Plan. The special character of an area includes its traditional building stock and material finishes, spaces, streetscape, landscape and setting."

Figure 8: Architectural Conservation Areas



Record of Protected Structures (RPS)

6.9.8 The County Development Plan 2009 lists 8 structures on the RPS in the study area. These are listed below

Table 11: Record of Protected Structures (RPS)

00478	Windsor House
00479	Maryborough House Hotel
00481	St Lukes Church of Ireland Church
00482	Douglas Woollen Mills
00684	Former Garda Station
00752	Maryborough Lodge
01243	St Patricks Woollen Mills
01267	3 Bay, 2 – Storey dwelling

National Inventory of Architectural Heritage (NIAH)

6.9.9 The NIAH survey for Douglas has been completed and has identified 24 buildings/structures in the Douglas area. Of those 17 are located in the study area.

Table 12: National Inventory of Architectural Heritage (NIAH) relating to Douglas

Name	Description	Location
Douglas Commercial Estate (Woollen Mills)	Engine House	West Douglas Street
	Water Tower	
	Woollen Mill	
1-7 St Patrick's Terrace	Terrace of eight houses, built c.1885	
St Columbas Boys National School	Detached five-bay single storey school built c.1970	
Ballybrack House	Gates and Walls	Donnybrook Hill
	Detached three bed two storey house over basement built c.1820	
River View B&B	Detached three-bay two storey house built c.1880	East Douglas Street
School house studio	Detached ten bay single storey former school dated 1938	Carrigaline Road
St Lukes Church of Ireland	Sextons House built 1879	Churchyard Lane
	Church built 1875	
John Slye Scout Hall	Detached eight bay single storey former school, dated 1931	
St Columbas Roman Catholic Church	Church	
Detached three bed two storey house	Built c.1930	Church Road
Pair of semi detached three and four bay two storey houses	Built c.1930	Church Road
The Rectory	Detached five bay two storey former rectory	Carrigaline Road
Single arch road bridge Carrying Carrigaline Road over Church Road	Built c.1820	

Archaeology

6.9.10 The areas archaeological monuments can be identified from the Record of Monuments and Places for County Cork, the relevant archaeological Inventory for County Cork and the national monuments service data on www.archaeology.ie which identifies 7 features within the study area.

CO 074 089 Country House

6.9.11 Description: To SE of Douglas. This is a large early 18th century 3-storey house over basement. Entrance front (N), side elevations and interior refurbished in mid/late18th century. Seven-bay garden front (S) of early 18th century appearance; 3-storey (basement not visible) with 3-bay central breakfront framed by quoins. Stone bank course divides each floor. Slim sash windows with shallow reveals and prominent keystone, decrease in size with height. Most of ground floor windows replaced in mid-18th century refurbishment. Plain rectangular door on E side with rectangular light; large inserted central door with block-and-start stone surround. Weather slating decreases in size with height. Hipped roof with stone

cornice; weather slating beneath has single course of scalloped slates along bottom edge. Entrance front (N) of 7 bays with 3-bay central breakfront framed by quoins. Stone bank course divides each floor. Central rectangular door with stone surrounding supporting pediment; approached by wide stone steps. Sash windows decrease in size with height. West elevation of 5-bays. East elevation has central stairway addition with one storey addition to N; originally ballroom and library burnt in 1914 and rebuilt as kitchen. Good 18th-century detail in interior (Bence-Jones 1978, 204). Farm buildings around courtyard to E with arched entrance to N. Ornate one-storey lodge to W, shown in de Breffny and Ffolliot (1975, 205) with low square columns stepping up gable (in crow step fashion) which no longer survive; similar to N transept in Rathcormack C of I church (CO044-04902-). Now a hotel (Maryborough House).

CO 074 095 Mill Woollen

6.9.12 No description available

CO 074 097 Graveyard

6.9.13 Description: In Douglas, on W side of road to graveyard (CO074-098---). Shown on 1842 OS 6-inch map as square yard (c. 55m N-S; c. 60m E-W) with rectangular 'church' on N side; on 1900 OS 6-inch map extended to N and S to form sub-rectangular area (c. 260m N-S; c. 95m E-W); present plan as 1900 OS 6-inch map. St Lukes C of I Church in centre; built 1785; rebuilt 1875 (Foley 1991, 42) into present cruciform plan.

CO 074 098 Graveyard

6.9.14 Description: In Douglas, on E-side of road to graveyard (CO074-097---). Shown on 1842 OS 6-inch map as sub rectangular area (c. 65m N-S; c. 30m E-W) with Watch House on E periphery. Now extended to E to form rectangular area (c. 65m N-S; c. 130m E-W) enclosed by stone wall. Bishop Dive Downes, in 1699 (Lunham 1909, 169) records 'a burying place in an open field 'where the foundations of a church could still be seen. According to Foley (1991, 39) this church was at the W side of the graveyard where some carved stones were found. Present R.C. Chapel (St Columbas) is c. 70m to S; extended 1907 (Foley 1991, 39)

CO 086 014 Ringfort

6.9.15 Description: In pasture, on W-facing slope. Circular area (43.2m E-W; 41.6m N-S) enclosed by earthen bank (H 1.35m) with shallow fosse. Interior level; circular depression (diam. 1.6m) in centre.

CO 086 100 Mill Flax

6.9.16 Description: Roadside in Donnybrook. Rectangular 5-story, 10-bay brick-built flax spinning mill designed by R. Brash and built in 1866 for Wallis and Pollock; 1-bay extension to E. Mill foundation of concrete; damaged by fire in 1919 and roof replaced. Internal flooring consists of a matrix of brick, segmental 'jack' arches which are supported on four tiers of cast-iron girders. Two-storey engine and boiler house attached at E end housed Inglis Corliss engine (C. Rynne, forthcoming). Two-storey gabled brick-built offices attached to E. Long one-storey brick-built range to W with modern buildings attached. Closed in 1885 but reopened in 1890 after being re-fitted as a woollen mill (Foley 1991, 31). All now part of industrial estate.

C0 086 102 Country House

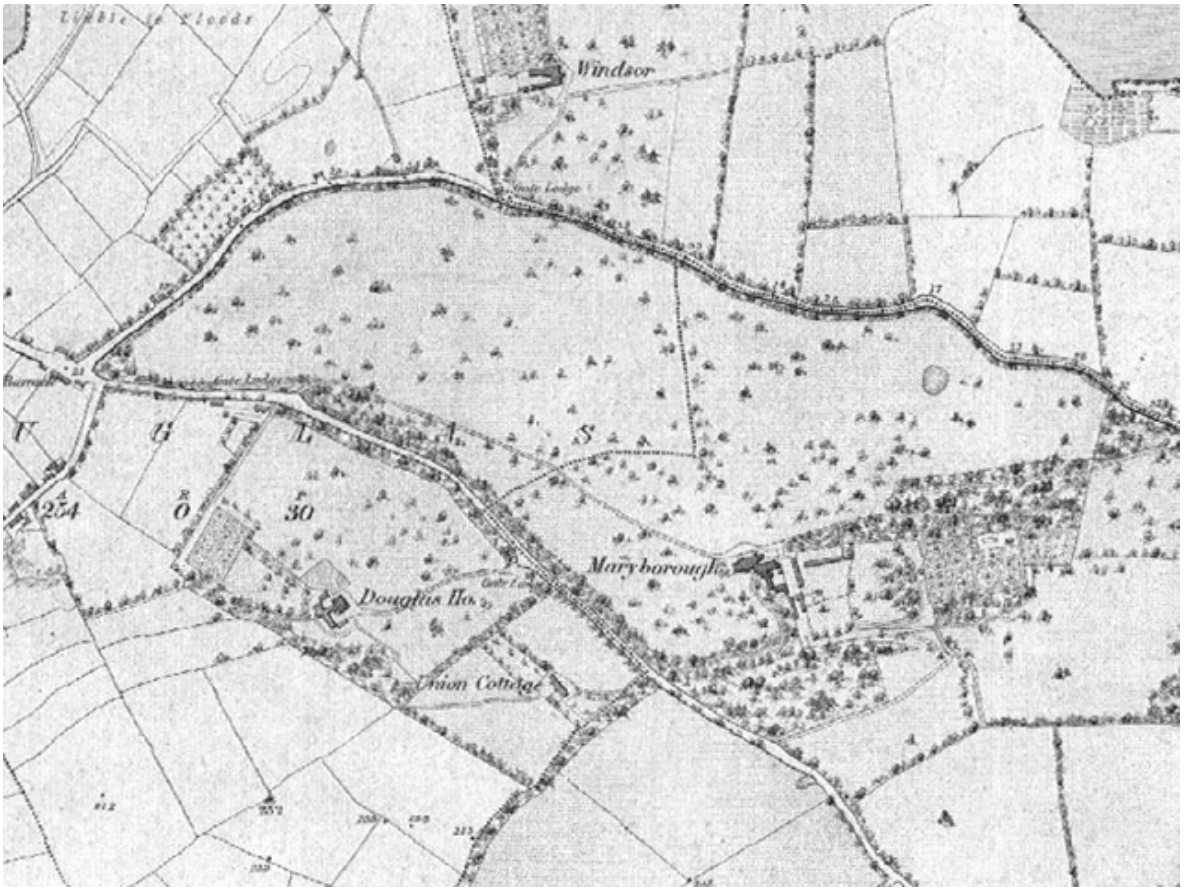
6.9.17 Description: Late 18th/early 19th century one storey house with 2-storey square towers at both ends. Entrance front (E) of 5 bays, central rectangular door with limestone surround; rectangular light over door. Wide blocked sidelights flank door. Sash windows with glazing bars; central dormer window. Towers project slightly forward of front elevation; pointed

window opes, all on first floor blocked. Wide half-hipped 2-storey projections to rear. Remains of weather slating visible.

Cultural Heritage Impact Assessment

6.9.18 A Cultural Heritage Impact Audit has be undertaken by Cork County Council as part of the DLUTS project and details are identified in this Environment Report. This assessment identiies any features (known or potential) of cultural heritage significance relative to the proposed development area, the perceived significance of such sites, and mitigation proposals where cultural heritage is deemed likely to impact on the design of the project.

Figure 9: Historic map showing the location of Maryborough House and Douglas house



6.9.19 Historic map showing the location of Maryborough House and Douglas house to the south of Douglas village. Both are within the study area. Maryborough House is now a hotel and is surrounded by residential suburbs and Douglas House is in a residential area. Therefore as they are located in established built up areas no further threats or impacts are immediately forseen.

Impacts of Cultural heritage and Archaeology in the absence of the DLUTS

- Possibility of further deterioration/accelerated deterioration of the ACAs due to continued/unchecked traffic congestion
- New or improved road solutions may impact on archaeological/architectural features in the study area.

Landscape

6.9.20 Landscapes are areas which are perceived by people and are made up of a number of layers:

- landform, which results from geological and geo-morphological history;
- land cover, which includes vegetation, water, human settlements;
- human values which are a result of historical, cultural, religious and other understandings and interactions with landform and land cover.

Landscape Character Assessment

6.9.21 Landscape Character Assessment (LCA) attempts to describe landscapes in terms of their character in an objective way. This can be used to inform decision making in relation to the protection of the environment, natural resources and heritage; it can be used to monitor change and can be used to guide development.

6.9.22 County Cork contains significant areas of landscape importance, which are important not only for their intrinsic value as places of natural beauty but also because they provide a real asset for residents and visitors alike in terms of recreation and tourism and other uses. Cork County Council has prepared a Draft landscape strategy for Cork County. This draft strategy aims to provide an explanation of cork County's landscape by way of describing what the landscape actually entails, while highlighting how areas within the county have their own distinctiveness and character. The landscape type for this area has been identified in the Table 14 below.

Landscape in the Existing Environment

6.9.23 Cork County Council has prepared a Draft Landscape Strategy for Cork County. This Draft Strategy aims to provide an explanation of Cork County's landscape by way of describing what the landscape actually entails, while highlighting how areas within the County have their own distinctiveness and character

Table 13: Scenic Landscape and Scenic Routes Carrigaline Electoral Area

Scenic Landscape Areas near Settlements	Scenic Routes
Passage West, Crosshaven, Carrigaline and Myrtleville	S54 S55 S56 S57 S58 S59

Table 14: Landscape Character Types within the Carrigaline Electoral Area

Landscape Character Types	Main Settlements located within LCT	LCT Value	LCT Sensitivity	LCT Importance
City Harbour and Estuary	South City Environs Passage West Ringaskiddy	Very High	Very High	National

Non Implementation of the DLUTS

6.9.24 In the absence of the Strategy, development would be likely to occur in a less co-ordinated basis which could have more significant cumulative impacts on the landscape. However, Development Management would continue to safeguard the landscape resources that have been highlighted above with designations from the County Development Plan offering protection to areas of strategic landscape importance.

6.10 Material Assets

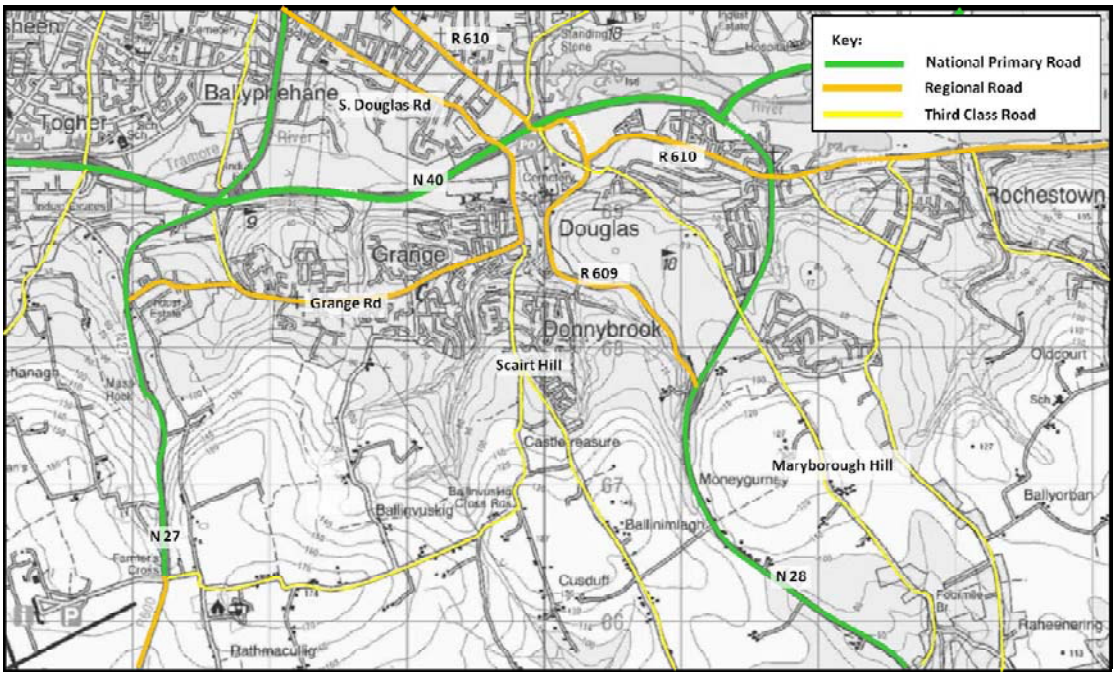
Waste Management

6.10.1 Cork County Council no longer provides a refuse and recyclables collection service. It will be for a private operator to provide a service here. There are existing public bring sites in the vicinity located in the Douglas Court Shopping Centre, in the Douglas Community Park, and in Ryan's SuperValu Grange, and at the Public Civic Amenity Site at Kinsale Road Cork (Cork City Council)

Road Network

6.10.2 The study area is surrounded on three sides by major national roads; the N27 to the airport, the N28 to Carrigaline and Ringaskiddy and the South Ring Road (N40), which forms the northern boundary. There are two off-ramps and one on-ramp on the N40 originating in Douglas and there is significant traffic generated to these ramps. In addition, there are a number of distributer roads serving Douglas residential areas, all terminating in the town centre; the R610 (Rochestown Road); the R609 (Carrigaline Road) and other roads to Maryborough Woods, Donnybrook and Grange as shown on the map below. These five major roads connect onto the two major distributer roads into the City along Douglas and South Douglas Roads.

Figure 10: Road Network in Study Area



6.10.3 The implication of this road network is to encourage high car use for people living within the area and to encourage high levels of through traffic (i.e. traffic that does not have an origin or destination within the study area) passing through the area from Carrigaline to the City Centre for example. Generally the road capacity within the Douglas area is limited, particularly within the village centre where a number of roads converge creating significant traffic management operational problems. There is, also, considerable competition for road space within Douglas particularly during peak traffic times primarily due to significant levels of commuter traffic, high levels of through traffic and the large amounts of school related traffic.

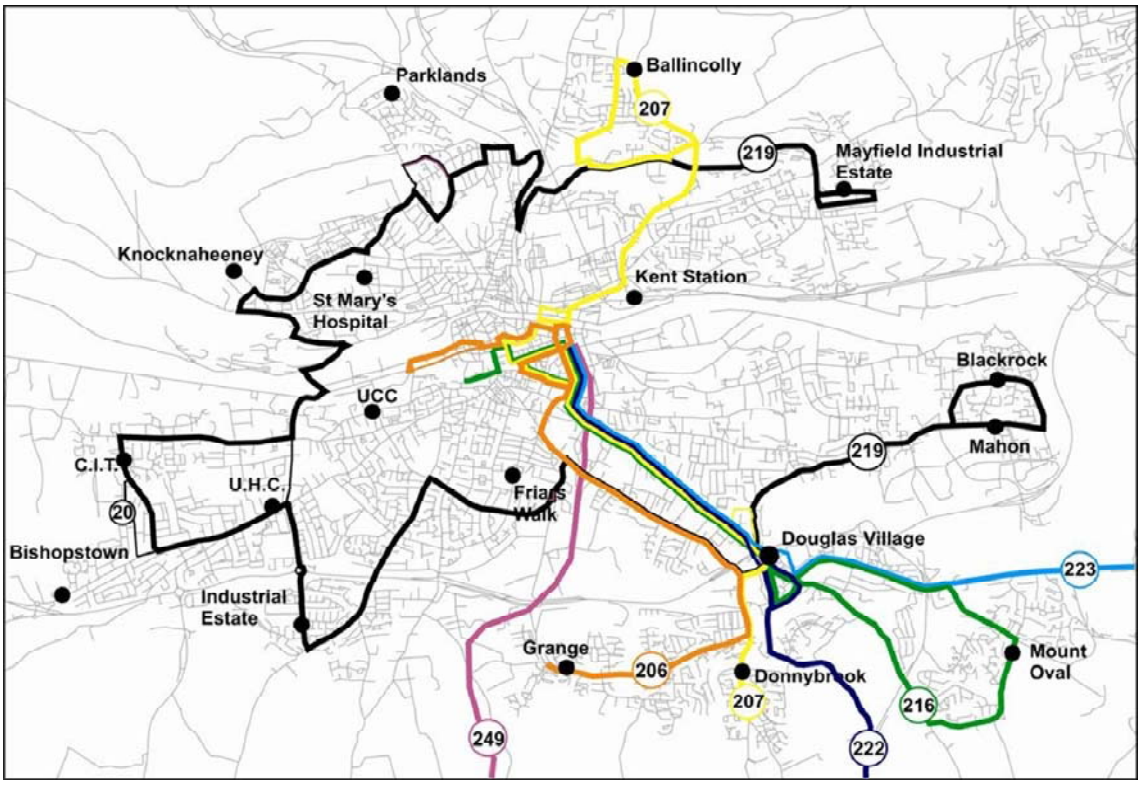
Public Transport

6.10.4 Although the study area is well served by the public bus service (206, 207, 216, 219, 222, and 223) as shown on map 11 below, the low levels of public transport use for work and education trips in the Douglas area indicate that public transport, cycling and walking do not provide an attractive option when compared to car. This is not simply a reflection of the

current public transport offering. It would require significant public transport investment and policies over the long term to support a large shift to public transport use for commuting (i.e. parking restraint at key destinations, bus priority, public transport orientated developments etc.) to get more people to travel to work (and a lesser extent to education) by public transport.

6.10.5 The statistics do however indicate that given the very low levels of public transport use for travelling to work there is a large untapped market for the public transport system to target and that even minor enhancements of the public transport offering (i.e. through improvement schemes) could yield more use of the system. The use of public transport for education trips is higher than that of work trips in Douglas. Further enhancement to the public transport offer should encourage more use of the public transport system for education trips, especially in the wider review area. Walking and cycling travel modes to education is also low in the study area.

Map 11: Bus Routes in Study Area



6.10.6 The project intends to undertake significant surveys of existing traffic patterns in Douglas (both vehicular and non vehicular) as well as surveys of the people using the existing infrastructure to determine their needs and aspirations. The environmental consequences of these surveys and options for intervention will be examined in the Environmental Report.

Non Implementation of the DLUTS

6.10.7 In the absence of the DLUTS Strategy, there would be an uncoordinated approach to road network upgrading and provision of sufficient public transport capacity to meet future population needs.

7 Chapter 7: SEA Objectives and Targets

7.1 Introduction

7.1.1 This section aims to identify the relevant Environmental Protection Objectives (EPOs). SEA objectives are used to help show whether the policies and recommendations of the intended strategy are beneficial for the environment, to compare the environmental effects of alternatives, or to suggest improvements. The Environmental Protection Objectives set out in this section are set out under a range of topics and are used as the standards against which the future development scenarios, strategic aims, strategic principles and development policies of the strategy can be evaluated, to help to identify areas in which significant adverse impacts are likely to occur, if unmitigated.

7.1.2 The SEA objectives are separate from the strategy policies although they can influence each other and even overlap. In line with the requirements of the SEA Directive, they must cover environmental issues including biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape and the interrelationship between them. An indicative list of environmental protection objectives is outlined in the SEA Guidelines for the implementation of the SEA Directive, which was complied having regard to the checklist of national, European and international policy documents, strategies, guidelines, Directives, Conventions etc.

7.1.3 The objectives have been developed based on the baseline data and environmental issues identified for the draft strategy. The primary source used in formulating the EPOs was Table 4B of the SEA Guidelines; however, this list has been amended to ensure it is relevant to the area within the study area. While all of the environmental protection objectives were considered to be important, there are some which will have a greater influence on the strategy preparation than others.

7.1.4 Indicators are used to monitor the effectiveness of the Draft Strategy in meeting the SEA environmental protection objectives and targets and act as a benchmark against which the strategy's performance is measured. The selection of indicators has been informed by the assessment of the baseline environment and the scoping process. However, indicators are also influenced by the availability of information. The list of indicators is given in Chapter 11 – SEA Monitoring and these may change in the SEA Statement.

7.1.5 The following table sets out the environmental objectives and targets for the environmental aspects that are likely to be affected by the Draft Strategy.

Table 15: EPO's and Monitoring Targets

	Environmental Objective	**Targets**
	Biodiversity	
B1	Conserve the diversity of habitats and species and to avoid significant adverse impacts (direct, cumulative and indirect).	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources and to improve protection for protected sites and species including a provision of adequate and appropriate buffer zones. Conserve the diversity of habitats and species in non-designated sites.

B2	Protect habitats from invasive species and promote awareness of and support control and eradication programmes for invasive species	No new invasive species in County Cork and no increase in coverage of existing invasive species
B3	Protect designated sites include Natura 2000 sites (SACs and SPAs) under Article 6 of the Habitats Directive. Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 Network	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources and to improve protection for protected sites and species including a provision of adequate and appropriate buffer zones. Conserve the diversity of habitats and species in non-designated sites.
	Population and Human Health	
POP1	Improve people's quality of life based on high-quality residential, working and recreational environments and on sustainable travel patterns.	Enhance provision of, and access to, amenity space within Douglas. Increase number of walking and cycle friendly measures associated with Douglas. Increase modal shift to public transport and reduction in journey to work (time/distance).
POP2	To protect human health from risks or nuisances arising from exposure to incompatible land uses/developments	Avoid the location of inappropriate activities that impact on the quality of the town centre.
POP3	Minimise noise, vibration and emissions from traffic, industrial processes and extractive industry	Use of Construction Management Plans to minimise adverse impacts during construction phase(s).
	Soils and Geology	
S1	Maintain soil integrity and quality	Soil management to inform detailed designs within study area. Use of Waste Management Plans to minimise adverse impacts arising from pollution
S2	To maximise the sustainable reuse of Brownfield lands and the existing built environment, rather than developing Greenfield lands while also protecting agriculturally productive lands.	Identification of Brownfield lands within the town centre area and assessing the reduction in quantity of Brownfield lands during the lifetime of the strategy.
	Water Quality	
W1	Improve water quality and the management of watercourses to comply with the standards of the	Improvement, or at least no deterioration, in water quality in Douglas Estuary and Cork Harbour

	Water Framework Directive and incorporate the objectives of the Floods Directive into sustainable planning and development	and groundwater. Appropriate management of zones vulnerable to flooding.
W2	Make best use of existing water infrastructure and promote the sustainable development of new town centre area.	Ensure that connectivity is maintained with the existing water and waste water infrastructure in Douglas.
W3	To maintain and improve the quality of drinking water supplies	Maintain and improve drinking water quality to comply with the requirements of the European Communities (Drinking Water) Regulations and to prevent leakage in new systems
	Air Quality and Climate	
A1	Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency	Maintain good air quality standards
	Cultural Heritage	
CH1	Promote the protection and conservation of the cultural heritage	To protect all cultural features within the plan area and where necessary to impact upon same to manage and record action in accordance with National Heritage Policies.
	Landscape	
L1	Protect natural and historic landscapes and features within them in a sustainable manner	Integrate natural & historic landscape features into detailed design
	Material Assets	
Mat 1	Reduce risk of flooding	Avoidance of development in flood plains or in areas at risk of flooding
Mat 2	To ensure that drinking water supplies are free of contamination	Improve efficiency in distribution of potable water to the population
Mat 3	Maximise sustainable modes of transport	Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety

8 Chapter 8: Consideration of Alternatives

8.1 Introduction

8.1.1 The following section identifies and describes the alternative scenarios considered during the drafting process of the land use and transportation strategy. The alternative scenarios that were considered for the strategy are discussed and the preferred scenario from an environmental perspective is provided. Mitigation measures which attempt to prevent, reduce and as fully as possible offset any significant adverse effects of the environment of implementing the preferred alternative are identified in this chapter where applicable.

8.1.2 Section 3.14 of the DoEHLG Guidelines notes that the higher the level of the plan, the more strategic the options which are likely to be available. Conversely, lower tier plans will be framed in a policy context set by the level(s) above them. In the case of Douglas this includes the National Spatial Strategy, the Regional Planning Guidelines for the South West Region, the Cork Area Strategic Plan Update 2008, Cork County Development Plan 2009 and the Carrigaline Electoral Area Local Area Plan 2011. From a strategic perspective, Douglas forms part of the Cork Gateway and is located in the southern suburbs of Cork City. In keeping with the broader aims of the NSS and RPG, the 2008 CASP Update, the Cork County Development Plan and the Local Area Plan do not propose significant population growth in Douglas in the period to 2020. However, the Douglas LUTS has a 20 year time horizon and the alternative scenarios and main policies of the strategy are set out on this basis.

8.1.3 It is evident that most of the land within the Douglas area has been developed and new urban development will need to use existing brownfield lands and the limited number of undeveloped (Greenfield) sites within the study area.

8.1.4 On the basis of such strategic policy, existing settlement patterns and land availability for Douglas, the alternatives for the DLUTS should therefore be based upon retaining the compact pattern of development that has occurred to date, preserving and enhancing the town centre as the economic service provider to the urban area and enabling Douglas to realise its role as part of the development of the Cork Gateway.

8.2 Methodology

8.2.1 The aim of this section is to evaluate reasonable alternatives for the DLUTS. In order to carry out an evaluation of the alternatives identified in the Environmental Report it is necessary to determine where development will lead to pressure that is likely to conflict with environmental issues that were highlighted in the environmental baseline.

8.2.2 During the preparation process of the draft study, 3 Scenarios were proposed. These are briefly outlined in this chapter and the preferred Scenario (i.e. the Scenario that forms the basis of the draft) has been presented. Reasons why the draft adopted its preferred scenario have also been explained in this chapter. If the SEA evaluation of the scenario's finds that the preferred scenario is not the most sustainable scenario from an environmental perspective then mitigation measures have been provided.

8.3 The Scenarios

8.3.1 The SEA assessment was based on alternative scenarios and each of the proposed development options were assessed against the EPO's, types of cumulative effects and individual environmental issues that were identified in the environmental baseline.

8.3.2 For the DLUTS area, 3 alternative scenarios have been identified that could achieve the objectives set out above and manage the level of growth up to 2032. The scenarios that were considered in the preparation of the draft strategy are as follows;

8.3.3 **Scenario** 1 **– 'No Policy Change Option'** is a plot based development approach. Each application would be treated on its own merits in line with current planning principles. This option allows for existing development management process and private sector driven initiatives for development that could result in uncoordinated development based on first come first served basis that may compromise orderly comprehensive development of the town centre in the future.

8.3.4 The key environmental issues emerging in this scenario are:

- The plot based development approach may result in a threat to existing habitats on an individual basis that may ultimately cumulatively jeopardise the Douglas area.
- Vehicular congestion at road junctions and consequential air pollution and increases in journey times will result in a decrease in the quality of life for residents in Douglas.
- Additional Greenfield development on peripheral lands will result in unsustainable travel patterns for Douglas.
- There will be more pressure for Greenfield development on peripheral land that may result in loss of landscape value in the area.
- The increased stormwater runoff from future development is likely to reduce water quality in the longer term.
- This scenario is unlikely to result in the pressure to remove or alter existing cultural heritage buildings.
- Any new development on the periphery of the town centre could contribute to an increase in flood risk in the town centre.

8.3.5 **Scenario 2 – 'Smart Mix Option'** is an integrated mixed development approach that supports Smarter Travel Initiatives and may result in a fully integrated land use and transportation strategy that minimises transport conflicts and enhances land use capability. It consolidates the existing land uses and provides a balanced mix of development that enhances the profile of the centre.

8.3.6 The key environmental issues emerging in this scenario are:

- Emphasis of this scenario is on the redevelopment of town centre brownfield sites to maximise their potential and limiting the peripheral development of Greenfield sites, which may have a positive effect on existing habitats.
- This scenario will encourage a reduction in journey times, congestion and air pollution and therefore will improve quality of life for the residents.
- There will be a significant increase in human health in the area if smarter travel options such as walking, cycling and public transport are introduced.
- There will be very little pressure on the use of Greenfield lands for development in this scenario so that existing landscape features could be retained.
- The increased stormwater runoff from future development is unlikely to reduce water quality in the longer term.
- This scenario is unlikely to result in the pressure to remove or alter existing cultural heritage buildings.
- It is likely that development of this scenario will result in little or no change to the risk of flooding in Douglas.

8.3.7 **Scenario 3 – 'Maximum Development Option'** assumes that the study area is fully developed as a high density mixed use area, which will include the relocation of existing sporting and education facilities out of the town centre. This option will provide an opportunity to maximise the density of development on both Greenfield and brownfield sites in the study area (X-03a and b). This will result in additional land becoming available in the town centre for mixed use development.

8.3.8 The key environmental issues emerging in this scenario are:

- The development of the periphery of the study area would generate unsustainable travel to work patterns
- The development of the existing sports and education facilities for urban development would result in a loss of habitat and recreation facilities to the community
- The development of Greenfield land on the periphery of the town centre would result in a loss of of critical landscape features in Douglas, which form the backdrop to the village.
- An increase in the run-off of stormwater from high density development will result in a decrease in water quality in Douglas.
- This scenario could result in the pressure to remove or alter existing cultural heritage buildings or higher densities could result in adverse environmental affects around existing cultural heritage areas.
- With the increase in surface water runoff and hard standing in the town centre and additional peripheral development, there is a possibility that this scenario could result in increased risk to flooding in parts of Douglas.

8.4 Selection of Preferred Development Scenario

8.4.1 In order to select a preferred development scenario, the cumulative environmental effects of each scenario need to be evaluated against the environmental receptors as shown in the Table 16 below.

Table 16: Types of Cumulative Effects

Receptors	Types of Cumulative Effects
Population & Human Health	Deterioration of quality of life
Water Resources	Deterioration in Water Quality
Biodiversity	Loss of habitats
Landscape and Visual Impact	Loss of Landscape Features
Cultural Heritage, Architectural and Archaeological heritage.	Removal of cultural heritage
Material Assets	Risk of flooding

8.4.2 Table 17, makes the comparison of each scenario and the likely cumulative effects. The evaluation of the scenarios is based on a value judgment of the extent to which there is significant environmental effects resulting from the alternative (positive or negative). Where the cumulative effects are not known, then a neutral score is registered and where there is a perceived negative effect, a negative score is registered.

Table 17: Comparison of Alternatives - Cumulative Effects

Scenario Type	Possible Cumulative Effects						
	Loss of habitats	Deterioration of quality of life	Loss of landscape features	Deterioration in water quality	Loss of cultural heritage	Risk of flooding	
Alternative Scenario 1 No Policy Change	–	–	?	0	0	?	
Alternative Scenario 2 Smart Mix	+	+	0	0	0	0	
Alternative Scenario 3 High Density	–	–	–	–	–	–	

Key:
+ Likely to have no significant effect - likely to have a negative effect 0 neutral ? uncertain

8.4.3 Having considered each proposed scenario, it was decided that Scenario 2 – Smart Mix was considered the most appropriate approach. This scenario was deemed the most appropriate because:-

1) It presented a sustainable, equitable model of development, which balanced environmental concerns with the need to facilitate population growth and economic development.
2) On the other hand. Scenario 1 is an un-cordinated approach to future development that would result in a threat to existing habitats and existing built environments; increased traffic congestion with a consequential reduction in the quality of life for residents.
3) Scenario 3 could result in an unsustainable demand for infrastructure and services while potentially relegating environmental considerations to the periphery.

9 Chapter 9: Environmental Assessment of the Draft Strategy

9.1 Introduction

9.1.1 The purpose of this section of the Environmental Report is to predict and evaluate as far as possible the environmental effects of this Strategy. This section evaluates the Town's Development Objectives against the Environmental Protection Objectives (EPOs).

9.1.2 A matrix approach is used to evaluate the environmental effects of implementing the plan. Significant environmental effects of the plan have been predicted to determine whether the plan has negative, positive, uncertain or no likely effects.

9.1.3 Arising from this analysis, the Environmental Report provides recommendations on what mitigation measures will be taken. Mitigation measures can take the form of:

- Amend the wording of an existing objective
- Delete the objective
- Addition of a new objective

9.1.4 In formulating the strategy of the Draft every effort has been made to minimise environmental impact or mitigate it where it cannot be avoided and policies and objectives have been carefully worded to include protective mitigation measures.

9.1.5 Chapter 10 describes mitigation measures and how these measures aim to prevent, reduce or compensate for any potential negative or uncertain effects of implementing the plan.

Table 18: Environmental Assessment of Development Objectives within the Draft Douglas Land use & Transportation Strategy

Objectives	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Comment
LU-01	B1, B2, B3, S1,W1,W2, W3, CH1, L1.	POP1, POP2, POP3, S2, A1, MAT2, MAT3,		MAT 1	**Adequate Protective mitigation measures are included in the Strategy**
LU-02	B1, B2, B3, S1,W1,W2, W3, CH1, L1.	POP1, POP2, POP3, S2, A1, MAT2, MAT3,		MAT 1	**Adequate Protective mitigation measures are included in the Strategy**
LU-03	B1, B2, B3, S1,W1,W2, W3, CH1, S2, A1, MAT 1, MAT2, L1.	POP1, POP2, POP3, MAT3.			

Objectives	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Comment
LU-04	B1, B2, B3, S1,W1,W2, W3, MAT2, A1, L1,	POP1, POP2, POP3, S2, MAT3.		CH1, MAT1	**Adequate Protective mitigation measures are included in the Strategy**
LU-05	B1, B2, B3, POP3, MAT 1, MAT2, A1, W1,W2, W3, CH1, L1.	POP1, POP2, , S1, S2, MAT3.			
TC-01	B1, B2, B3, S1,W1,W2, W3, L1	POP1, POP2, POP3, S2, A1, MAT2, MAT3,		CH1,MAT1	**Adequate Protective mitigation measures are included in the Strategy**
TC-02	B1, B2, B3, S1,W1,W2, W3. POP1, POP2, POP3, S2, A1, CH1, L1, MAT2, MAT3.			MAT1,	**Adequate Protective mitigation measures are included in the Strategy**
TC-03	S2, W1,W2, W3, MAT2, A1, POP1, POP2,POP3,	MAT3,		B1, B2, B3, S1, CH1, L1, MAT1	**Adequate Protective mitigation measures are included in the Strategy**
TC-04	B1, B2, B3, S1, CH1, L1, W1,W2, W3, MAT1	POP1, POP2, POP3, S2, A1, MAT2, MAT3,			
TC-05	B1, B2, B3, S1, CH1, L1, W1,W2, W3, MAT1	POP1, POP2, POP3, S2, A1, MAT2, MAT3,			
UD-01	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			

Objectives	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Comment
UD-02	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-03	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-04	B1, B2, B3, S1, L1, MAT2, W1,W2, W3. MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-05	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-06	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-07	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-08	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-09	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-10	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			

Objectives	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Comment
UD-11	B1, B2, B3, S1, L1, MAT2, W1,W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,			
UD-12	B1, B2, B3, S1, L1, MAT2, W2, W3, MAT1	POP1, POP2, POP3, CH1, S2, MAT3, A1,		W1	**Adequate Protective mitigation measures are included in the Strategy**
T-01	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-02	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-03	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-04	B2, B3, S1,W1,W2, W3, MAT1, MAT2.	POP1, POP2, S2, A1, MAT3.		CH1, L1, B1,POP3	**Adequate Protective mitigation measures are included in the Strategy**
T-05	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-06	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-07	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-08	B1, B2, B3, S1,W1,W2,	POP1, POP2,			

Objectives	No likely interaction with status of EPOs	Likely to improve status of EPOs	Potential Conflict with status of EPOs	Uncertain interaction with status of EPOs	Comment
	W3, CH1, L1, MAT1, MAT2.	POP3, S2, A1, MAT3.			
T-09	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-11	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-12	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			
T-13	B1, B2, B3, S1,W1,W2, W3, CH1, L1, MAT1, MAT2.	POP1, POP2, POP3, S2, A1, MAT3.			

10 Chapter 10: Mitigation Measures

10.1 Introduction

10.1.1 This section will outline any possible mitigation measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of the area arising from the implementation of the Plan. This section seeks to tie together the SEA process. Environmental issues have been identified in Chapter 6 and the impact of the plan is outlined in Chapter 9. As a result of this analysis and in light of the SEA process, certain mitigation measures have been identified.

10.1.2 Mitigation involves ameliorating significant negative effects. Where the environmental assessment identifies significant adverse effects, consideration is given in the first instance to preventing such impacts or where this is not possible to lessening or offsetting those effects. Mitigation measures can be generally divided into those that:

- Avoid effects,
- Reduce the magnitude or extent, probability and/or severity of effect,
- Repair effects after they have occurred
- Compensate for effects, by balancing out negative impacts with positive ones.

10.1.3 Mitigation measures could include:

- The choice of an alternative, with less significant environmental effect,
- The addition of policies to the plan to reduce likely impacts from other policies,
- Refining policy/objective wording,
- Adding new policy criteria,
- Creating Supplementary Planning Guidance to add more detail to the Plan.

10.1.4 The methodology for the provision of mitigation measures for this plan was primarily to address the strategic level through the assessment of Alternative Scenarios in Chapter 8 and to address specific environmental consideration in Chapter 6.

10.2 Mitigation Measures

Biodiversity, Flora and Fauna

10.2.1 The Draft Douglas Land use and Transportation Strategy may have the potential to conflict with the conservation of non-designated species located within the Draft Strategy area and on adjoining lands. To offset potential conflicts the Strategy has included a policy to protect where possible habitats that are part of the ecological network.

10.2.2 Proposals for development will be required to take into account existing landscape features including trees and hedgerows on site and to retain these where possible as part of the landscape character of the village.

Mitigation Measure:

10.2.3 Areas where there is a threat to the risk of existing habitats, policies should include reference to the word 'sustainable' in order to ensure adequate consideration is given to mitigating against potential negative effects from potentially unsustainable forms of economic development on the environment of the site and town centre as a whole.

Population and Human Health

10.2.4 The main vision for the DLUTS project is to improve the quality of life for the residents in Douglas through improved pedestrian and cycling accessibility to land uses and facilities. One of the policies the construction of a new bridge over the Ballybrack Stream may cause environmental issues such as increased visual and noise pollution to existing residents. In

general, any redevelopment of the existing brownfield sites, the road network and other infrastructure will improve the quality of life for the residents.

10.2.5 The lack of local employment opportunities and high levels of commuting out of Douglas detract from the quality of life of residents. Options to encourage a greater modal shift to sustainable transport modes need to be encouraged to tackle the current car-based commuting problem, together with the development of the local economy to deliver more local employment opportunities. The Strategy concurrently aims to improve cycling and pedestrian facilities in the town centre as well as improve car journey times to deliver this objective in a targeted manner.

Mitigation Measure:

10.2.6 Where any new development such as a bridge causes undue noise pollution to surrounding residents, measure shall be put in place to reduce these impacts.

Soils and Geology

10.2.7 Most of the study area in Douglas that is being improved is on brownfield land, so there is very little damage to soils integrity likely.

Water

10.2.8 All of Douglas lands are adequately served by potable water supplies and wastewater infrastructure. Any new development on the brownfield and greenfields lands will need to be connected to this existing infrastructure. Deterioration in water quality as a result of this new development is unlikely.

Air Quality and Climate Change

10.2.9 The policies to improve the quality of life in Douglas will result in improvements to air quality and it is considered that there would be no adverse effects on the climate as a result of the proposed interventions.

Cultural Heritage and Landscape

10.2.10 A number of policies in the Draft Strategy were considered to have an uncertain interaction with EPO's in particular CH1 which seeks 'to promote the protection and conservation of the cultural heritage' and L1 which requires 'the protection of natural and historic landscapes'. While the potential for an uncertain interaction is acknowledged it is considered that there are adequate policies included within the Draft Strategy which will provide adequate mitigation against any potential for negative effects.

Material Assets - Flooding

10.2.11 There are policies to increase the footprint of existing brownfield sites in the town centre, that lie within the area identified at risk of flooding. In addition, there are sites outside the town centre that could be developed and this development may contribute to increased risk of flooding downstream. This increase in footprint may result in increased storm-water runoff and it will be important to, where necessary, include measures on site that will mitigate the threat to increased flooding.

Mitigation Measure:

10.2.12 All such lands which are shown to be at risk of flooding will be subjected to the requirements of The Planning System and Flood Risk Management Guidelines 2009 and require the submission of a site specific flood risk assessment as part of the planning application. When incorporated into the Amendment to the Carrigaline Local Area Plan it will be important to include objectives that provide guidance to developers of land on potential flood risk.

10.3 Overall Conclusion

10.3.1 Whilst an examination of the proposed development policies in the Draft Strategy would appear to indicate that mitigation may be required in some circumstances, it is considered that where potential conflict or uncertainty has been demonstrated, that there are in general adequate compensatory policies to negate any potential significant impacts from the proposed Draft Strategy. This demonstrates that the preparation of the Draft Strategy has been very pro-active in including positive environmental objectives in relation to key infrastructural improvements, protection of heritage and amenity and so on.

11 Chapter 11: SEA Monitoring

11.1 Introduction

11.1.1 The SEA Directive requires that the significant environmental effects of the implementation of plans are monitored in order to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action. Monitoring can also be used to analyse whether the plan is achieving its environmental protection objectives and targets, whether such objectives need to be re-examined and whether the proposed mitigation measures are being implemented.

11.1.2 Cork County Council is required to monitor the significant environmental effects arising from the implementation of the Draft Strategy. This Environmental Report puts forward proposals for monitoring the Draft Strategy. The primary purpose of monitoring is to cross check significant environmental impacts which arise during the implementation stage against those predicted during the plans preparation stage.

11.1.3 Monitoring is often based on indicators which measure changes in the environment, for example the CSO provides important data in relation to demographic changes and can therefore act as an indicator to measure population change in a study area. Employment data can also be similarly used. Measurements for indicators should come from existing monitoring sources and no new monitoring should be required to take place. The indicators identified in the following section will be used to monitor the predicted environmental impacts of implementing the plan. These indicators (data) will be assessed for future reviews of the plan in order to determine its effect on the environment.

11.1.4 Most of the sources of data are available to Cork County Council but close co-operation with other authorities may be required in some instances e.g. National Parks and Wildlife Service (NPWS), Environmental Protection Agency etc. In all cases the indicators will both quantify and simplify the information and will also enable both the public and the policy makers to access and understand the information more clearly.

11.2 Monitoring of Flood Risk

11.2.1 Information in relation to flood risk will be monitored and reviewed by the Cork County Council and the Flood Risk Assessment will be updated as appropriate as new information becomes available. There are a number of key outputs from possible future studies and datasets which could inform any update of the FRA as availability allows. A list of potential sources of information which will inform an FRA review is provided in the table below.

Table 19: Potential Sources of information on Flood Risk

Data	Source	Timeframe
Preliminary flood risk maps - including pluvial and groundwater	OPW under the Floods Directive	2013
CFRAM Studies ▪ Preliminary Flood Risk Assessment ▪ production of the flood maps ▪ production of Flood Risk management Plans	OPW	▪ ▪ End 2011 ▪ 2013 ▪ 2015
County Development Plan Updates	Cork County Council	2013
Flood maps of other sources, such as canal breach and drainage networks	Various	Unknown
Significant flood events	Various	Unknown

Table 19: Potential Sources of information on Flood Risk		
Data	**Source**	**Timeframe**
Changes to Planning and / or Flood Management Policy	DoEHLG / OPW / Cork County Council	Unknown
SFRAs for Electoral Area Local Area Plans	Cork County Council	Upon LAP review
SFRAs for Town Plans	Cork County Council / Town Councils	Upon Plan review
Detailed FRAs	Various	Unknown
Flood Defence Feasibility / Design Reports	OPW primarily	Unknown

11.3 EPOs, Targets and Indicators

11.3.1 The following table shows selected EPOs and targets. Indicators are provided also. These indicators allow quantitative measures of trends and progress over time relating to the EPOs used in the evaluation. The targets and indicators may be subject to change through the publication of the SEA statement which will go into more detail on SEA monitoring and sources of data.

Table 20: EPO's & Monitoring Targets and Indicators

	Environmental Objective	Targets	Monitoring Indicators	Data Source	Accessibility
Biodiversity					
B1	Conserve the diversity of habitats and species and to avoid significant adverse impacts (direct, cumulative and indirect).	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources and to improve protection for protected sites and species including a provision of adequate and appropriate buffer zones. Conserve the diversity of habitats and	Retain integrity of existing habitats and species relative to the baseline year of 2011.	The Heritage Section of Cork County Council, Department of the Environment, Community and Local Government, National Parks and Wildlife Service.	Dependent on external information. Some information potentially available within Cork County Council.

		species in non-designated sites.			
B2	Protect habitats from invasive species and promote awareness of and support control and eradication programmes for invasive species	No new invasive species in County Cork and no increase in coverage of existing invasive species	New types of invasive species or increase in coverage of existing invasive species	National Biodiversity Centre	Dependent on external information.
B3	Protect designated sites include Natura 2000 sites (SACs and SPAs) under Article 6 of the Habitats Directive. Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 Network	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources and to improve protection for protected sites and species including provision of adequate and appropriate buffer zones. Conserve the diversity of habitats and species in non-designated sites.			
Population and Human Health					
POP1	Improve people's quality of life based on high-quality residential, working and recreational environments and	Enhance provision of, and access to, amenity space within Douglas. Increase number of walking and	Number of inappropriate uses permitted within the town.	Cork County Council	Available within Cork County Council

	on sustainable travel patterns.	cycle friendly measures associated with Douglas. Increase modal shift to public transport and reduction in journey to work (time/distance).			
		Enhance provision of, and access to, amenity space within Douglas.	Numbers of amenity areas provided within Douglas, number of accesses to amenities areas within Douglas	Cork County Council.	Available from within Cork County Council
		Increase number of cycle friendly measures associated with Douglas	Number of cycle friendly measures provided in the area.	Cork County Council.	Available from within Cork County Council
		Increase number of pedestrian friendly measures associated with Douglas.	Number of pedestrian friendly measures provided in the area.	Cork County Council.	Available from within Cork County Council
		Increase modal shift to public transport and reduction in journey to work (time/distance)	Journey to work times; % of commuters using public transport; % of commuters cycling to work; % of commuters walking to work;	CSO	Dependent on external information

		Use of Construction Management Plans to minimise adverse impacts during construction phase(s)	Number of Construction Management Plans provided to inform development proposals in Douglas.	Cork County Council	Available from within Cork County Council
POP2	To protect human health from risks or nuisances arising from exposure to incompatible land uses/developments	Avoid the location of inappropriate activities that impact on the quality of the town centre.	Number of inappropriate uses permitted within the town centre	Cork County Council	Available within the Cork County Council
POP3	Minimise noise, vibration and emissions from traffic, industrial processes and extractive industry	Use of Construction Management Plans to minimise adverse impacts during construction phase(s).	Number of Construction Management Plans provided to inform development proposals	Cork County Council	Available from Cork County Council
Soils and Geology					
S1	Maintain soil integrity and quality	Soil management to inform detailed designs within study area. Use of Waste Management Plans to minimise adverse impacts arising from pollution	Number of Soil Management Plans provided within the Development Plan area.	Cork County Council	Available from within Cork County Council
		Use of Waste Management Plans to minimise adverse impacts arising from pollution	Number of Waste Management Plans provided within the Development Plan area	Cork County Council	Available from within Cork County Council
S2	To maximise the sustainable reuse of Brownfield lands	Identification of Brownfield lands within	Reduction in quantity of Brownfield	Cork County Council	Available from within Cork County

	and the existing built environment, rather than developing Greenfield lands while also protecting agriculturally productive lands.	the town centre area and assessing the reduction in quantity of Brownfield lands during the lifetime of the strategy.	lands available during the lifetime of the plan		Council
Water Quality					
W1	Improve water quality and the management of watercourses to comply with the standards of the Water Framework Directive and incorporate the objectives of the Floods Directive into sustainable planning and development	Improvement, or at least no deterioration, in water quality in Douglas Estuary and Cork Harbour and groundwater. Appropriate management of zones vulnerable to flooding.	Achievement of the Objectives of the River Basin Management Plans; % increase or decrease in numbers of water bodies at good status compared with baselines of 2009.	Water Framework Directive: RBD's, EPA, Cork County Council	Dependent on external information. Some information potentially available within Cork County Council
		Appropriate management of zones vulnerable to flooding	Compliance with *The Planning System and Flood Risk Management Guidelines 2009,* amount of new developments within flood plain	Cork County Council	Available from within Cork County Council
W2	Make best use of existing water infrastructure and promote the sustainable development of a new town centre.	Ensure that connectivity is maintained to the existing water and waste water infrastructure in Douglas.	Operation of Carrigrennan Sewerage Scheme serving the village.	EPA and Cork County Council	Dependent on external information and information available within Cork County Council
W3	To maintain and improve the quality of drinking water supplies	Maintain and improve drinking water quality to comply with	Compliance with Regulations, % leakage within system	EPA and Cork County Council	Dependent on external information and information

		the requirements of the European Communities (Drinking Water) Regulations and to prevent leakage in new systems			available within Cork County Council
Air Quality and Climate					
A1	Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency	Maintain good air quality standards	To remain within good air quality standards	EPA	Dependent on external information
Cultural Heritage					
CH1	Promote the protection and conservation of cultural heritage	To protect all cultural features within the plan area and where necessary to impact upon same to manage and record action in accordance with National Heritage Policies.	Number of cultural features lost within village area.	Cork County Council	Available from within Cork County Council
Landscape					
L1	Protect natural and historic landscapes and features within them in a sustainable manner	Integrate natural & historic landscape features into detailed design	% of natural and historic landscape lost within village boundary, number of features within natural and historic landscape lost	Cork County Council	Available from within Cork County Council

			within town boundary.		
Material Assets					
Mat 1	Reduce risk of flooding	Avoidance of development in flood plains or in areas at risk of flooding	Compliance with the Flood Risk Guidelines 2009.	Cork County Council and OPW	Available from within Cork County Council
Mat 2	To ensure that drinking water supplies are free of contamination	Improve efficiency in distribution of potable water to the population	Compliance with European Communities (Drinking Water) Regulations and reduce leakages in existing infrastructure	Cork County Council	Available from within Cork County Council
Mat 3	Maximise sustainable modes of transport	Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety	Compliance with sustainable travel targets in Smarter Travel	Cork County Council	Available from within Cork County Council

SEA Environmental Statement

Douglas Land Use and Transportation Strategy

August 2013

Prepared by Planning Policy Unit

Cork County Council

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APPENDIX A: SEA Evaluation of proposed changes to Douglas LUTS Strategy

1. Introduction

A strategic environmental assessment statement is required to fulfill the requirements of Article 179 G of the Planning and Development (SEA) Regulations 2004. This document forms the final part of the requirements for the Strategic Environmental Assessment of the Douglas Land Use and Transportation Strategy (DLUTS).

Background to the Douglas LUTS

The Carrigaline Electoral Area Local Area Plan (2011) identified an opportunity for the Douglas area "to evolve into a fully functional mixed use higher order centre in terms of its development density and its retail offer with an improved public transport, accessibility and parking demand management system". The Local Area Plan proposed that a Land Use and Transportation Study (LUTS) should be prepared for the Douglas area as a priority. Public perception is that there is significant traffic congestion in the area, especially in the school term and there is a danger of urban decay in the village caused by increasing vacancy and poor public realm.

The Douglas Land Use and Transport Study (DLUTS) is a response to resolving the competing demands for more housing and retail development and balancing this with the provision for better transportation, environment and community facilities. This DLUTS Study has been prepared for Douglas and the Local Area Plan has zoned two Special Policy Areas around the Douglas Town Centre (X-03a) and around the land described as the Douglas Golf Course (X-03b).

SEA Definition

In essence, SEA is a formal systematic evaluation of the likely significant environmental effects of implementing the Strategy. It is a valuable process to integrate environmental issues into the decision making process at the earliest opportunity.

Legislative Context

The EU Strategic Environmental Assessment (SEA) Directive 2001/42/EC introduced the requirement that SEA be carried out on plans and programmes for a wide range of sectors including land use plans. The SEA Directive was transposed into Irish Law under the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436 of 2004, it became operational on 21 July 2004. The SEA directive and the instruments transposing it into Irish law require that after the adoption of a plan or programme, the plan or programme making authority is required to make a statement available to the public and competent environmental authorities. This statement is referred to as an SEA Statement

Content of SEA Statement

In terms of Article 179G of the *Planning and Development (Strategic Environmental Assessment) Regulations 2004*, the SEA Statement is required to include information which summarises:

(a) How environmental considerations have been integrated into the strategy;
(b) How the environmental report submissions and observations made to the planning authority in response to the draft Final Report and associated documentation, including the Environmental Report; any consultations have been taken into account during the Planning Authority's consideration of the Draft Report.
(c) The reasons for choosing the Final Report as adopted, in the light of the other reasonable alternatives dealt with; and
(d) The measures decided upon to monitor, the significant environmental effects of implementation of the Final Report.

2. How environmental considerations have been integrated into the strategy

The SEA process took place in tandem with the formulation of the Draft Strategy. A draft Environmental Report was prepared at the same time as the preparation of the draft Strategy.

Consultation

Extensive consultation with the public, key stakeholders, interest groups, landowners, public representatives and agencies took place at regular intervals during the preparation of the Draft Strategy. The Strategy and SEA process was prepared by the County Council technical team that included a traffic and transport consultancy firm.

Informal public consultation consisted of three public exhibitions held in Douglas at key stages of the process. The land use proposals and the detail within the Draft Strategy have been formulated through a process which involved public consultation.

An initial scoping brief was circulated to the Environmental Protection Agency in December 2012 and an informal discussion was held to discuss the way forward in the preparation of an Environmental Report for this project. Consequently, the Draft Strategy and accompanying Environmental Report and Habitats Directive Screening Report were produced and placed on formal public consultation during January - March 2013. Submissions were received from public and state bodies. A number of the comments received from the submissions resulted in proposed changes to the draft Strategy and comments were raised about clarification of text in the Environmental Report. A summary of the submissions received are contained in the 3rd Public Consultation Report and section three of this report deals with the issues raised from the submissions and observations.

SEA Stages and Draft DLUTS Strategy

The consideration of environmental issues took place throughout the preparation of the Draft Strategy, facilitated by the technical team. The SEA process comprises distinct stages to ensure the incorporation of environmental issues, a brief synopsis of those stages is as follows:

Scoping- The scoping process was carried out to determine the extent of the environmental issues and the level of detail to be included in the environmental report. This process highlighted the significant issues and took place in consultation with the environmental authorities.

Environmental Report -Having established the likely significant issues in the scoping report, baseline information was collected to provide accurate description of the environment. The environmental

receptors identified during the scoping process were: biodiversity, population and human health, soil and geology, water quality, landscape, material assets, cultural heritage and air quality and climate. The key environmental issues within each receptor were identified. Environmental Protection Objectives were formulated for the environmental receptors considered to be the most significant.

Alternatives-The consideration of reasonable alternatives taking account of the objectives and geographical scope of the draft Strategy are required by the SEA Directive. Reasonable options within the site were identified at a preliminary stage and their possible environmental consequences. The options were evaluated using a matrix and qualitative assessment of the Draft Strategy. The preferred option is based on the minimisation of impacts on the environment and also the most sustainable approach for the site.

Evaluation-The evaluation of the likely impacts and their significance is the core of the SEA process. The Specific Development Policies for Douglas were evaluated against the Environmental Protection Objectives (EPO) for the site to determine the potential impacts of the draft Strategy on the Environment. The likely effects were categorised into potential positive, potential negative, no effects and uncertain. The potential negative effects were further disaggregated into negative and likely to be mitigated and negative unlikely to be mitigated. The potential cumulative effect was also assessed in section 8 of the Environmental Report. The assessment highlighted that the majority of the policies will either improve the state of the EPO or else are unlikely to interact with them adversely. However, a certain amount of policies are more likely to have either an uncertain or negative impact and in these cases it is recommended that mitigation objectives be included so as to minimise damage to the relevant EPO.

Mitigation-The SEA process has been an iterative one which informed the preparation of the Draft Strategy. Therefore, consideration was given in the first instance to prevent negative effects on the environment which reduces the need for extensive mitigation. Some mitigation measures were required to reduce the magnitude of the certain impacts and also to mitigate against potential adverse impacts on the environment. Following publication of the Draft Strategy, various amendments were made to the draft Strategy.

The following table outlines the key aspects of the SEA process namely; EPO's and targets for the study area.

Environmental Protection Objectives (EPO's) and Targets to be achieved

	Environmental Protection Objective	**Targets**
	Biodiversity	
B1	Conserve the diversity of habitats and species and to avoid significant adverse impacts (direct, cumulative and indirect).	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources and to improve protection for protected sites and species including a provision of adequate and appropriate buffer

		zones. Conserve the diversity of habitats and species in non-designated sites.
B2	Protect habitats from invasive species and promote awareness of and support control and eradication programmes for invasive species.	No new invasive species in County Cork and no increase in coverage of existing invasive species.
B3	Protect designated sites include Natura 2000 sites (SACs and SPAs) under Article 6 of the Habitats Directive. Conserve and protect, or maintain and restore Natura 2000 sites and the Natura 2000 Network	No significant adverse impacts, (direct, cumulative and indirect impacts), to relevant habitats, species or their sustaining resources and to improve protection for protected sites and species including a provision of adequate and appropriate buffer zones. Conserve the diversity of habitats and species in non-designated sites.
	Population and Human Health	
POP1	Improve people's quality of life based on high-quality residential, working and recreational environments and on sustainable travel patterns.	Enhance provision of, and access to, amenity space within Douglas. Increase number of walking and cycle friendly measures associated with Douglas. Increase modal shift to public transport and reduction in journey to work (time/distance).
POP2	To protect human health from risks or nuisances arising from exposure to incompatible land uses/developments.	Avoid the location of inappropriate activities that impact on the quality of the town centre.
POP3	Minimise noise, vibration and emissions from traffic, industrial processes and extractive industry	Use of Construction Management Plans to minimise adverse impacts during construction phase(s).

	Soils and Geology	
S1	Maintain soil integrity and quality	Soil management to inform detailed designs within study area. Use of Waste Management Plans to minimize adverse impacts arising from pollution
S2	To maximize the sustainable reuse of Brownfield lands and the existing built environment, rather than developing Greenfield lands while also protecting agriculturally productive lands.	Identification of Brownfield lands within the town centre area and assessing the reduction in quantity of Brownfield lands during the lifetime of the strategy.
	Water Quality	
W1	Improve water quality and the management of watercourses to comply with the standards of the Water Framework Directive and incorporate the objectives of the Floods Directive into sustainable planning and development	Improvement, or at least no deterioration, in water quality in Douglas Estuary and Cork Harbour and groundwater. Appropriate management of zones vulnerable to flooding.
W2	Make best use of existing water infrastructure and promote the sustainable development of new town centre area.	Ensure that connectivity is maintained with the existing water and waste water infrastructure in Douglas.
W3	To maintain and improve the quality of drinking water supplies	Maintain and improve drinking water quality to comply with the requirements of the European Communities (Drinking Water) Regulations and to prevent leakage in new systems
	Air Quality and Climate	
A1	Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and	Maintain good air quality standards

	energy efficiency.	
	Cultural Heritage	
CH1	Promote the protection and conservation of the cultural heritage	To protect all cultural features within the plan area and where necessary to impact upon same to manage and record action in accordance with National Heritage Policies.
	Landscape	
L1	Protect natural and historic landscapes and features within them in a sustainable manner	Integrate natural & historic landscape features into detailed design
	Material Assets	
Mat 1	Reduce risk of flooding	Avoidance of development in flood plains or in areas at risk of flooding
Mat 2	To ensure that drinking water supplies are free of contamination	Improve efficiency in distribution of potable water to the population
Mat 3	Maximize sustainable modes of transport	Provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety

3. Submissions to Draft Strategy and Draft Environmental Report

The Draft Strategy and accompanying documents were submitted to the public representatives in January 2013 and the period of public consultation commenced on the 30th and 31st January 2013. The draft Environmental Report and Habitats Directive Screening Reports were also submitted to the elected members and put on public display. A total of 56 submissions were received from public and state bodies. Most of the submissions received are related to specific non environmental issues in the Draft Strategy. An SEA Evaluation of the proposed changes using the EPO's shows that the proposed changes will not result in any significant environmental effects on Douglas. The changes emanating from the submissions are shown on Appendix A. They are mainly points of clarification rather than introducing new policies.

However, in terms of the Environmental Report, one submission requested a factual modification to the text about the Flood Event on 28th June 2012. The submission also requested a factual change to the name Ballybrack River to Stream. One of the submissions requested that the Environmental Report include a factual reference to a Flood Risk Assessment and Management Study that is being undertaken by Cork County Council. These factual modifications to the text of the draft Environmental Reports are as follows:-

	Suggested factual modifications to draft Environmental Report
	a) Replace "Ballybrack River" with "Ballybrack Stream" in the whole document. b) Delete the following text in paragraph 6.5.34 :- "*It flowed through the community park and blocked the trash screen at the Church Street culvert with debris collected upstream. This resulted in storm water flooding properties on Church Street and entering the Douglas Village Shopping Centre. Serious flood damage was incurred in the shopping centre and also along Douglas East and West Roads"* and replace with the following:- "*Flood waters then flowed onto Church Road, then made its way down Church Lane, West Douglas Street and in an easterly direction to East Douglas Street. Douglas Community Park also encounters flood waters as the Ballybrack Stream burst its banks. The Ballybrack trash screen became blocked due to the volume of debris being conveyed in the stream as a result of the extreme rainfall event."* c) Insert new paragraph 6.5.40 as follows:- "***Proposed Flood Mitigation Works/Studies*** *The Douglas area was considered in the OPW's Lee CFRAM study but no works were suggested. Following the June 2012 event, the OPW have asked Cork County Council to progress a study of the catchment. Cork County Council is currently preparing the Consultants brief for the Douglas Flood Risk Assessment and Management Study. This study will be procured shortly."*

The submissions that were received in relation to other changes to the draft Strategy or relevant to the SEA process were assessed and consequently informed the recommendations to the draft Strategy. The 3rd Public Consultation Report contains all the changes to the Strategy. In general, most of the proposed changes are supporting the environmental protection objectives as outlined in the draft Environmental Report. There are no amendments, additions or omissions which would present a significant negative impact on the environmental protection objectives or on the environment based on the evaluation. The amendments would not result in a change to the overall assessment or evaluation in the environmental report.

The proposed changes to the draft Douglas LUTS and the draft Environmental Report were presented to the Area Committee in June 2013 and were adopted by the Full County Council at their meeting on 8th July 2013.

4. Consideration of Alternatives

The SEA assessment was based on alternative scenarios and each of the proposed development options were assessed against the EPO's, types of cumulative effects and individual environmental issues that were identified in the environmental baseline.

For the DLUTS area, 3 alternative scenarios have been identified that could achieve the objectives set out above and manage the level of growth up to 2032. The scenarios that were considered in the preparation of the draft strategy are as follows;

Scenario 1 – 'No Policy Change Option' is a plot based development approach. Each application would be treated on its own merits in line with current planning principles. This option allows for existing development management process and private sector driven initiatives for development that could result in uncoordinated development based on first come first served basis that may compromise orderly comprehensive development of the town centre in the future. The key environmental issues emerging in this scenario are:

- The plot based development approach may result in a threat to existing habitats on an individual basis that may ultimately cumulatively jeopardize the Douglas area.
- Vehicular congestion at road junctions and consequential air pollution and increases in journey times will result in a decrease in the quality of life for residents in Douglas.
- Additional Greenfield development on peripheral lands will result in unsustainable travel patterns for Douglas.
- There will be more pressure for Greenfield development on peripheral land that may result in loss of landscape value in the area.
- The increased storm water runoff from future development is likely to reduce water quality in the longer term.
- This scenario is unlikely to result in the pressure to remove or alter existing cultural heritage buildings.
- Any new development on the periphery of the town centre could contribute to an increase in flood risk in the town centre.

Scenario 2 – 'Smart Mix Option' is an integrated mixed development approach that supports Smarter Travel Initiatives and may result in a fully integrated land use and transportation strategy that minimizes transport conflicts and enhances land use capability. It consolidates the existing land uses and provides a balanced mix of development that enhances the profile of the centre. The key environmental issues emerging in this scenario are:

- Emphasis of this scenario is on the redevelopment of town centre Brownfield sites to maximize their potential and limiting the peripheral development of Greenfield sites, which may have a positive effect on existing habitats.

- This scenario will encourage a reduction in journey times, congestion and air pollution and therefore will improve quality of life for the residents.

- There will be a significant increase in human health in the area if smarter travel options such as walking, cycling and public transport are introduced.

- There will be very little pressure on the use of Greenfield lands for development in this scenario so that existing landscape features could be retained.

- The increased storm water runoff from future development is unlikely to reduce water quality in the longer term.

- This scenario is unlikely to result in the pressure to remove or alter existing cultural heritage buildings.

- It is likely that development of this scenario will result in little or no change to the risk of flooding in Douglas.

Scenario 3 – 'Maximum Development Option' assumes that the study area is fully developed as a high density mixed use area, which will include the relocation of existing sporting and education facilities out of the town centre. This option will provide an opportunity to maximize the density of development on both Greenfield and Brownfield sites in the study area (X-03a and b). This will result in additional land becoming available in the town centre for mixed use development. The key environmental issues emerging in this scenario are:

- The development of the periphery of the study area would generate unsustainable travel to work patterns

- The development of the existing sports and education facilities for urban development would result in a loss of habitat and recreation facilities to the community

- The development of Greenfield land on the periphery of the town centre would result in a loss of critical landscape features in Douglas, which form the backdrop to the village.

- An increase in the run-off of storm water from high density development will result in a decrease in water quality in Douglas.

- This scenario could result in the pressure to remove or alter existing cultural heritage buildings or higher densities could result in adverse environmental affects around existing cultural heritage areas.

- With the increase in surface water runoff and hard standing in the town centre and additional peripheral development, there is a possibility that this scenario could result in increased risk to flooding in parts of Douglas.

5. Selection of Preferred Development Scenario

In order to select a preferred development scenario, the cumulative environmental effects of each scenario need to be evaluated against the environmental receptors as shown in the table below.

Types of Cumulative Effects Receptors	**Types of Cumulative Effects**
Population & Human Health	Deterioration of quality of life
Water Resources	Deterioration in Water Quality
Biodiversity	Loss of habitats
Landscape and Visual Impact	Loss of Landscape Features
Cultural Heritage, Architectural and Archaeological heritage.	Removal of cultural heritage
Material Assets	Risk of flooding

The table below makes the comparison of each scenario and the likely cumulative effects. The evaluation of the scenarios is based on a value judgment of the extent to which there is significant environmental effects resulting from the alternative (positive or negative). Where the cumulative effects are not known, then a neutral score is registered and where there is a perceived negative effect, a negative score is registered.

Table : Comparison of Alternatives - Cumulative Effects								
	Possible Cumulative Effects							
Scenario Type	Loss of habitats	Deterioration of quality of life	Loss of landscape features	Deterioration in water quality	Loss of cultural heritage	Risk of flooding		Comments
Alternative Scenario 1 No Policy Change	–	–	?	0	0	?		Likely to have significant cumulative effects.
Alternative Scenario 2 Smart Mix	+	+	0	0	0	0		Least likely to have significant cumulative effects.
Alternative Scenario 3 High Density	–	–	–	–	–	–		Most likely to have significant cumulative effects.
Key: + Likely to have no significant effect - likely to have a negative effect 0 neutral ? uncertain								

6. Monitoring

The SEA Directive requires that the significant environmental effects of implementing the Douglas LUTS Strategy are monitored. This will provide for the identification at an early stage of unforeseen adverse effects, appropriate remedial action can then be undertaken. Monitoring can also be used to analyze whether the Strategy is achieving its environmental protection objectives and targets, or whether such objectives need to be re-examined and finally whether the proposed mitigation measures are being implemented.

It is the responsibility of Cork County Council to monitor the significant environmental effects of the implementation of this project. Indicators are used to measure change in the environment. The indicators were identified in section 10 of the Environmental Report, these will be used to monitor the predicted environmental impacts of implementing the Strategy.

As a result of the submissions received during the public consultation period, a significant change to the Implementation Policy of the Douglas LUTS Strategy has been prepared to reflect a more structured approach to implementation. The changes to the final report are as shown below:-

	Implementation and Monitoring Strategy ***1. Introduction*** *The DLUTS is a 20 year programme of multi-disciplinary actions covering sustainable land use planning, urban design and transportation. In order to manage appropriately this programme, it is necessary to introduce an Implementation and Monitoring Group (IMG), that will co-ordinate both the programme of works and monitor its progress in relation to its overall vision.* ***2. Structure of Implementation and Monitoring Group (IMG)*** *The Implementation and Monitoring Group (IMG) will be set up within the Cork County Council, reporting directly to the Assistant County Manager (ACM) and comprising the following persons:-* • *Director of Service (Chair of the Group and Champion of the Project)* • *Area Engineer – Carrigaline* • *Development Management Planner* • *Planning Policy Unit* • *Architects Department* • *Transport Engineer* ***3. Function of IMG*** *The first function of the IMG will be to prepare an Inception Report of work to be carried out. In principle, the following functions will need to be included in the Inception Report:-* • *Preparation of the Amendment to the Carrigaline Local Area Plan.* • *Implementation of the programme of works in association with the NTA.* • *Implementation of Sustainable Schools Travel Plan* • *Statutory Planning Processes (Part 8)* *The IMG will meet bi monthly and will inform the Carrigaline Area Committee and the Key Stakeholders regularly. Consultation with the City Council will be necessary on cross boundary issues. Once the Town Centre Management Group is set up, it will provide the IMG with information on current issues being faced in Douglas.* *The second function of the IMG will be to identify indicators for monitoring the progress of the project. These indicators can be divided into:-* • *land use planning (land availability, retail vacancy, employment surveys, planning applications)* • *urban design indicators (public realm improvements and new buildings)* • *transport indicators (to include pedestrian counts at key locations to monitor footfall, transfer to other sustainable modes, improvements to public transport journey times, queuing and car journey times on the road*

	network, increases in walking and cycling network, number of junction improvements) • *environmental indicators (habitats, water quality, population and human health, air quality, cultural heritage, landscape and material assets).*

Table 20 in the Environmental Report shows the selected EPOs, targets, indicators and data source. The department responsible for data collection is outlined where applicable in the data source column as per the EPA's submission. A new column has been added identifying appropriate thresholds where appropriate. The threshold is defined in terms of chronological or quantitative measures. The indicators and targets will be used by the Implementation and Monitoring Group (IMG) to identify progress in the implementation of the strategy ensuring that the environmental protection objectives are not compromised.

7. **Conclusion**

Through the SEA process, the preparation of the Douglas LUTS Strategy, as approved, provides for a more robust strategy that minimizes environmental effects and provides a framework for continued monitoring of the implementation of the project (including environmental indicators). The benefits to Douglas after implementing the project will be that there will be less traffic congestion, improved public amenity areas, improved public realm, more jobs will be brought to the area thereby reducing the need for people to travel long distances for work, increased walking and cycling to school and work that will improve the health of the local population so that Douglas will be a more pleasant place to visit and do business in and be a healthier place to live in.

The proposed changes to the draft Douglas LUTS as a result of the submissions received from the public consultation period have been evaluated against the EPO's for likely significant environmental effects. During this evaluation , it became clear that these changes will not have any significant negative environmental effects on Douglas. (see Appendix A).

Appendix A: SEA Evaluation of proposed changes to draft Douglas LUTS Strategy

Change No.	Proposed Change	SEA Evaluation
	General	
1	All references to public transport only corridor to be replaced by public transport priority corridor on East Douglas Street.	Screened out
2	All reference to hours of operation of the public transport corridor (i.e. 08.00-18.00) on East Douglas Street to be removed.	Screened out
3	All reference to the removal of Topaz to be replaced with a desire to relocate the filling station in the longer term. The Topaz Garage will be referred to as the filling station.	Screened out
	Chapter 1 Introduction	
4	Insert the following text at 1.1.5:- The DLUTS Strategy is not a zoning plan but the recommendations may be incorporated into an amendment to the Carrigaline Electoral Area Local Area Plan. Insert the following text into 1.5.21:- ***"Carrigaline Electoral Area Local Area Plan 2011*** *The Carrigaline Electoral Area Local Area Plan (2011) identified an opportunity for the Douglas area "to evolve into a fully functional mixed use higher order centre in terms of its development density and its retail offer with an improved public transport, accessibility and parking demand management system". It proposed in the Local Area Plan that a Land Use and Transportation Study (LUTS) should be prepared for the Douglas areas as a priority.* *The proposed Douglas Land Use and Transport Study (DLUTS) is a response to resolving the competing demands for more housing and retail development and balancing this with the provision for better transportation, environment and community facilities. This LUTS Study will be prepared for Douglas and the Local Area Plan has zoned two Special Policy Areas around the Douglas Town Centre (X-03a) and around the land described as the Douglas Golf Course (X-03b)."*	Screened out
	Chapter 2 DLUTS Methodology	
	No Changes Necessary	
	Chapter 3 Existing Land Use Conditions in Douglas	
5	Insert the following text at 3.7.11:- "The recent planning permission from An Bord Pleanala for the change of use from a cinema to a discount food store and ancillary retail facilities."	Screened out

	Insert the following text in paragraph 3.10.5:- "Other sporting facilities in close proximity or adjacent to the study area include Douglas Tennis Club, Nemo Rangers GAA Club, Tramore Athletic Soccer Club, Ceanntar na Cathrach GAA pitches in Ballinlough, Gus Healy Swimming Pool and Cork Con Rugby Club." Insert bullet point under Issues emerging:- • Whilst there are numerous sporting facilities in Douglas, there is a need for additional playing pitches to be provided to serve the growing demand in the area.	Screened out
Chapter 4 Existing Public Realm Conditions in Douglas		
	No Changes Necessary	
Chapter 5 Existing Transport Conditions in Douglas		
	No Changes Necessary	
Chapter 6 Guiding Principles		
	No Changes Necessary	
Chapter 7 Developing and Evaluating DLUTS		
	No Changes Necessary	
Chapter 8 DLUTS Land Use Strategy		
6	Insert the following text at 8.1.4:- The DLUTS Strategy is not a zoning plan but the recommendations may be incorporated into an amendment to the Carrigaline Electoral Area Local Area Plan. Delete "Action Area Plans" and replace with "Overall Development Scheme" in LU-01	Screened out
7	National policy regarding flooding	Screened out
8	Insert the following text in paragraph 8.4.20 *"On the basis of public consultation, submissions received and endorsed by public representatives, the study recognises the growing demand for playing pitches and other community facilities in Douglas. The DLUTS Study area is the preferred location for a multi-purpose leisure facility however, it may not be possible or practicable to accommodate the demand for sports pitches here. Other locations within the wider Douglas area outside of the DLUTS Study area or locations within the adjoining Green Belt have the potential to accommodate this additional demand. In the short to medium term, Clubs wishing to provide sports pitches should be encouraged to consider these options".* Amend the following text in paragraph 8.4.21 *"There is a requirement for a multi-purposes leisure facility in*	Screened out

	Douglas to cater for sports clubs, community organisations and leisure. This facility should be located in or near to the Town Centre to serve the community as a whole. The preferred location for this facility is adjacent to the existing GAA playing pitches and schools for ease of access for the users. Road access to the lands to the west of the GAA playing pitches will require careful assessment." Insert new paragraph 8.4.23 and existing paragraph 8.4.20 to be inserted before paragraph 8.4.17 and titled Douglas Golf Course. In order to address this need there are three key steps to delivering of this facility 1. Put a land use zoning framework in place reflecting the recommendations of this study through an amendment to the Local Area Plan 2. Consider acquisition and ownership issues and take appropriate steps 3. If unsuccessful consider a broader approach to identify alternatives **Amend Table 8.5: Land Use Policy LU-05 (all new text)** Policy No. / General Land Use Policies – Community Facilities and Recreation LU-5: The DLUTS study area is the preferred location for the provision of a multi-purpose leisure facility in Douglas to cater for sports clubs, community organizations and leisure activities. In addition, playing fields, parks and walkways/cycleways that provide a link to the Tramore Valley Park over the N40 and access to Vernon Mount walkway through to Grange, should be provided. Improved access from the south to the community park via the Mangla and from the north via improved crossing points should be provided. Within the park, improved lighting, landscaping and security measures should also be provided. Existing schools will remain the in their present locations and future schools will need to be located in close proximity to their residential areas. Existing recreational and sports facilities will	Screened out Screened out Screened out

<table>
<tr>
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<tr><td></td><td>be retained in their present locations (including Douglas Golf Club and Douglas GAA).

It may not be possible or practicable to accommodate the demand for sports pitches in the DLUTS study area. Other locations within the wider Douglas area, outside of the DLUTS Study area, or locations within the adjoining Green Belt have the potential to accommodate this additional demand. In the short to medium term, Clubs wishing to provide sports pitches should be encouraged to consider these options.</td></tr>
</table>

Change to Golf Course – insert new bullet point under 8.4.17

• The golf course sensitivity test for the 2032 Land Use Evaluation was done using the performance indicators in Chapter 7 (7.4.6) which showed that the location of large amounts of residential development on the periphery of the village will result in more unsustainable car dependency and further traffic congestion for the village.
</td>
<td>Screened out</td>
</tr>
<tr>
<td>9</td>
<td>
Insert new text and policy box after Table 8.5 for Car Parking as follows:-

Car Parking for New Development
8.4.24 A county wide strategy for parking is under consideration in the County Development Plan review process currently underway. It is envisaged that the parking strategy will place greater emphasis on walking, cycling and public transport use. Therefore, in Douglas, car parking in any new development shall adhere to the revised parking policy in the County Development Plan that will support national policies in relation to Sustainable Travel.
<table>
<tr><th>Policy No</th><th>General Policy - Car Parking for new development</th></tr>
<tr><td>LU -06</td><td>The car parking standards for new development within the Town Centre Precincts shall be guided by the revised parking policy in the County Development Plan that will support current national policy, (Smarter Travel – A Sustainable Transport Future - 2009).</td></tr>
</table>
</td>
<td>Screened out</td>
</tr>
</table>

10	In TC-01 remove the reference to *"Action Area Plan or Development Brief" and replace with "Overall Planning or Development Scheme."* Change to Section 8.6 Woollen Mills – in TC-01 on Table 8.6 remove *"The majority of the existing surface car park should be removed and replaced with a multi storey car park" and replace with "Car parking for new development should follow the policy identified in LU -06."*	Screened out
11	Change to Section 8.8 Barry's Field – remove part of 8.8.3 which *says "However, it should not be a surface level car park but possibly a landscaped surface car park with commercial activity on the ground floor." Insert the following in TC-03 at the end "Car parking for new development should follow the policy identified in LU -06."* Change the text in TC-03 as follows:- *"Consideration of the construction of a new municipal car park of at least 200 bays with the provision of improved pedestrian linkages from west to east."*	Screened out
12	Insert the following text in 8.9.2 as a bullet point at the end: - *"The recent planning permission from An Bord Pleanala for the change of use from a cinema to a discount food store and ancillary retail facilities."* Change to Table 8.10 Cinema Site – remove the reference to *"Action Area Plan or Development Brief" in TC-04 and replace with "Overall Planning or Development Scheme for the entire site, taking account of the planning permission granted to the existing cinema. Development on the site can be implemented on a phased basis."*	Screened out
13	Also in TC-04, remove *"Parking provision shall be based on the Metropolitan Parking Strategy."* And replace with *"Car parking for new development should follow the policy identified in LU -06."*	Screened out
14	Change to Section 8.11 Douglas Court Shopping Area - Change to Table 8.10 Douglas Court Shopping Centre – remove the reference to *"Action Area Plan or Development Brief" in TC-05 and replace with "Overall Planning or Development Scheme."*	Screened out
15	Also in TC-05, remove *"The extensive surface car park is open and lacks definition and is not appropriate for this site and should be removed and replaced by a multi-storey car park which is more appropriate to town centre urban form"* and	Screened out

<table>
<tr><td></td><td>replace it with “Car parking for new development should follow the policy identified in LU -06.”</td><td></td></tr>
<tr><td colspan="3">Chapter 9 Urban Design Strategy</td></tr>
<tr><td>16</td><td>Change text in UD-04 as follows:-“Beneficial desire lines have been identified in Douglas (see Table 9.1) and these shall be sensitively and sustainably improved where possible.”

In paragraph 9.5.9 remove the reference to “Action Area Plan or Development Brief” and replace with “Overall Planning or Development Scheme.”

Also in paragraph 9.5.9 insert the following text:- “The recent planning permission from An Bord Pleanala for the change of use from a cinema to a discount food store and ancillary retail facilities.”

In UD 9 remove the reference to “Comprehensive Design Brief” and replace with “Overall Planning or Development Scheme.”</td><td>Screened out</td></tr>
<tr><td colspan="3">Chapter 10 Transport Strategy</td></tr>
<tr><td>17</td><td>Public Parking Policy outline- Replace text under Parking Management (10.4.26 and 27) with the following:-

Car Parking for New Development
8.4.26 A county wide strategy for parking is under consideration in the County Development Plan review process currently underway. It is envisaged that the parking strategy will place greater emphasis on walking, cycling and public transport use. Therefore, in Douglas, car parking in any new development shall adhere to the revised parking policy in the County Development Plan that will support national policies in relation to Sustainable Travel.
<table>
<tr><th>Policy No</th><th>General Policy - Car Parking for new development</th></tr>
<tr><td>LU -06</td><td>The car parking standards for new development within the Town Centre Precincts shall be guided by the revised parking policy in the County Development Plan that will support current national policy, (Smarter Travel – A Sustainable Transport Future - 2009).</td></tr>
</table></td><td>Screened out</td></tr>
<tr><td>18</td><td>Sections 10.6.14 to 10.6.16 to be rewritten to include</td><td>Screened out</td></tr>
</table>

	reference to Public Transport Priority Corridor.	
19	Figure 10.7 (Public Transport Corridor on East Douglas Street) – remove reference to *PT Only between 08.00 and 18.00* and replace with Public Transport Priority Corridor.	Screened out
20	Sections 10.8.7 - Presentation of the benefits of Douglas Village circulation plan to be included focussing particularly on the rationale/benefit of making Church Road one-way eastbound and discuss access options to the Church and school.	Screened out
21	Section 10.8.8 to be reworded to include new description for East Douglas Street Public Transport Priority Corridor supporting traffic management arrangements.	Screened out
22	Figure 10.13 (Village Centre Primary Traffic Management Measures) to be replaced with new figure showing arrangements for East Douglas Street.	Screened out
23	Section 10.8.9 to describe Public Transport Priority Corridor.	Screened out
24	Figure 10.14 (Proposed Shared Space on East Douglas Street) to be changed. Reference to *PT Only between 08.00 and 18.00* to be replaced with Public Transport Priority Corridor.	Screened out
25	Figures 10.17 and 18 (Future Village Centre Circulation) to be removed	Screened out
26	Add new paragraph after 10.8.21, as follows: *"To further protect the strategic road network we recommend that on the N40 South Douglas Road Off-Ramp and the N28 Rochestown Road Off-Ramp be fitted with a Double Loop Vehicle Detection system to ensure queuing does not back onto the N40 and N28 from the Off-Ramps and South Douglas and Rochestown roads respectively (i.e. if the queue formation on the off-ramp exceeded an agreed length, a 'hurry' call is introduced to 'Flush' the queue). It is also recommended that some form of ramp-metering be applied at the Rochestown On-Ramp at the N28 to maintain the efficient operating capacity of the N28 at this point. It is further recommended that the operation of the traffic control system proposed for the Douglas area should work in tandem with future demand management policies and proposals envisaged by the NRA for the N40 and N28."*	Screened out
27	Reference to a pedestrian crossing on Grange Road to be added at paragraph 10.9.3	Screened out
28	Reference to traffic calming on Inchvale Road to be added at	Screened out

	paragraph 10.9.3	
	Chapter 11 Implementation of DLUTS	
29	Insert the following text in paragraph 11.3: ***Implementation and Monitoring Strategy*** ***4. Introduction*** *The DLUTS is a 20 year programme of multi-disciplinary actions covering sustainable land use planning, urban design and transportation. In order to manage appropriately this programme, it is necessary to introduce an Implementation and Monitoring Group (IMG), that will co-ordinate both the programme of works and monitor its progress in relation to its overall vision.* ***5. Structure of Implementation and Monitoring Group (IMG)*** *The Implementation and Monitoring Group (IMG) will be set up within the Cork County Council, reporting directly to the Assistant County Manager (ACM) and comprising the following persons:-* • *Director of Service (Chair of the Group and Champion of the Project)* • *Area Engineer – Carrigaline* • *Development Management Planner* • *Planning Policy Unit* • *Architects Department* • *Transport Engineer* ***6. Function of IMG*** *The first function of the IMG will be to prepare an Inception Report of work to be carried out. In principle, the following functions will need to be included in the Inception Report:-* • *Preparation of the Amendment to the Carrigaline Local Area Plan.* • *Implementation of the programme of works in association with the NTA.* • *Implementation of Sustainable Schools Travel Plan* • *Statutory Planning Processes (Part 8)* *The IMG will meet bi monthly and will inform the Carrigaline Area Committee and the Key Stakeholders regularly. Consultation with the City Council will be necessary on cross boundary issues. Once the Town*	Screened out.

	Centre Management Group is set up, it will provide the IMG with information on current issues being faced in Douglas. *The second function of the IMG will be to identify indicators for monitoring the progress of the project. These indicators can be divided into:-* • *land use planning (land availability, retail vacancy, employment surveys, planning applications)* • *urban design indicators (public realm improvements and new buildings)* • *transport indicators (to include pedestrian counts at key locations to monitor footfall, transfer to other sustainable modes, improvements to public transport journey times, queuing and car journey times on the road network, increases in walking and cycling network, number of junction improvements)* • *environmental indicators (habitats, water quality, population and human health, air quality, cultural heritage, landscape and material assets).* 7. ***Outputs of IMG** – progress reports on the above.*	
	Chapter 12 Conclusions & Recommendations	
30	All above changes to be incorporated into Chapter 12 as required.	All submissions
	Habitats Directive Screening Report	
31	Remove the sentence on item 3.1 on page 6 of the Habitats Directive Screening Report : *" There has been flooding in Douglas at times of heavy rainfall in recent years when flows have exceeded the capacity of this river."*	Screened out
	Environmental Report	
32	Replace "Ballybrack River" with "Ballybrack Stream" in the whole document. Delete the following text in paragraph 6.5.34 :- "*It flowed through the community park and blocked the trash screen at the Church Street culvert with debris collected*	Screened out

	upstream. This resulted in storm water flooding properties on Church Street and entering the Douglas Village Shopping Centre. Serious flood damage was incurred in the shopping centre and also along Douglas East and West Roads" and replace with the following:- *"Flood waters then flowed onto Church Road, then made its way down Church Lane, West Douglas Street and in an easterly direction to East Douglas Street. Douglas Community Park also encounters flood waters as the Ballybrack Stream burst its banks. The Ballybrack trash screen became blocked due to the volume of debris being conveyed in the stream as a result of the extreme rainfall event."* Insert new paragraph 6.5.40 as follows:- "***Proposed Flood Mitigation Works/Studies*** *The Douglas area was considered in the OPW's Lee CFRAM study but no works were suggested. Following the June 2012 event, the OPW have asked Cork County Council to progress a study of the catchment. Cork County Council is currently preparing the Consultants brief for the Douglas Flood Risk Assessment and Management Study. This study will be procured shortly."*	

Habitats Directive Screening Report

Douglas Land Use and Transport Strategy (DLUTS)

Prepared by Cork County Council Planning Policy Unit
February 2013

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1 Introduction

1.1 Context

Cork County Council is in the process of preparing a Land Use and Transport Strategy (DLUTS) for the suburban town of Douglas. The strategy is a response to resolving the competing demands for more housing and retail development within the town, and balancing this with the provision for better transportation, environment and community facilities. The DLUT Strategy is being prepared as an action of the Carrigaline Electoral Area Local Area Plan (2011). It identifies potential land uses and establishes urban design policy for two Special Policy Areas which were zoned in the Carrigaline Electoral Area Local Area Plan 2011, and it proposes a transport strategy for the town.

The overall aim of the Douglas Land Use Transport Strategy is to ensure that there is an integrated approach to land use planning, urban design and transportation engineering for the future development of Douglas. Specifically, the goals of this strategy are:

- to provide a framework for future planning decisions;
- devise a strategy to optimise the traffic and transport network;
- provide a guide to the investment in transport infrastructure;
- identify the capacity of the town centre for additional retail and other development;
- inform the future of two areas zoned 'Special Policy Areas' (Douglas Town Centre X-03a and the lands described as Douglas Golf Course X-03b) in the Carrigaline Electoral Area Local Area Plan (2011);
- make Douglas a more competitive and vibrant urban centre in the metropolitan area of Cork.

This is a non statutory strategy, however, it is intended that key proposals emerging from this document will be transposed into the Carrigaline Electoral Area Local Area Plan once adopted by Cork County Council.

In accordance with the European Communities (Birds and Natural Habitats) Regulations 2011, the impacts of statutory and non-statutory plans, not covered within the meaning of the Planning Acts 2000-2011, that establish publish policy in relation to land use for on certain sites that are designated for the protection of nature (Natura 2000 sites[1]), must be assessed as an integral part of the process of drafting of the plan. This is to determine whether or not the implementation of plan policies could have negative consequences for the habitats or plant and animal species for which these sites are

[1] Natura 2000 sites include Special Areas of Conservation designated under the Habitats Directive and Special Protection Areas designated under the Birds Directive. Special Areas of Conservation are sites that are protected because they support particular habitats and/or plant and animal species that have been identified to be threatened at EU community level. Special Protection Areas are sites that are protected for the conservation of species of birds that are in danger of extinction, or are rare or vulnerable. Special Protection Areas may also be sites that are particularly important for migratory birds. Such sites include internationally important wetlands.

designated. This assessment process is called a Habitats Directive Assessment (HDA) and must be carried out at all stages of the plan making process.

This document represents the first phase of the Habitats Directive Assessment process (Screening of Douglas draft Land Use and Transport Strategy 2013). It has involved the identification of any Natura 2000 sites which could potentially be affected by policies and proposals set out in the strategy, and the completion of a preliminary assessment (screening) of the potential for these policies to have significant impacts on these sites and their qualifying features. It makes recommendations for the final iteration of the report. It should be read in conjunction with the Douglas Land Use and Transport Strategy draft Final Report.

1.2 Legislative Background Habitats Directive Assessment

Habitats Directive Assessment is an iterative process which runs parallel to and informs the plan making process. It involves analysis and review of draft policies as they emerge during each stage of plan making, to ensure that their implementation will not impact on sites designated for nature conservation, nor on the habitats or species for which they are designated. Within this process, regard must also be had to the potential for policies to contribute to impacts which on their own may be acceptable, but which could be significant when considered in combination with the impacts arising from the implementation of other plans or policies.

The process may result in the development of new policy areas and/or the modification or removal of certain policies or proposals to be presented in the final plan. At the end of the plan making process, an Appropriate Assessment Conclusion Statement will be produced which contains a summary of how ecological considerations in relation to Natura 2000 sites have been integrated into the plan. The final Natura Impact Report and a declaration in relation to the potential for the plan to affect the integrity of Natura 2000 sites within its potential impact zone will also be produced at this time.

The European Union has provided guidance as to how to complete a Habitats Directive Assessment for land use plans which identifies four main stages in the process as follows:

Screening assessment

The process which identifies whether the plan, either alone or in combination with other projects or plans, could affect any Natura 2000 sites and considers whether these impacts could be significant. No further assessment is required if potentially significant impacts on Natura 2000 sites are ruled out at this stage.

Appropriate assessment

Where the possibility of significant impacts on one or more Natura 2000 sites has been identified during the screening process, detailed assessment of the plan and its potential to impact on identified sites is required. This is called an Appropriate Assessment. It involves consideration as to whether the plan could have adverse impacts on the integrity of any Natura 2000 sites identified during screening, either alone or in combination with other projects or plans, having regard to the site's structure and function and its conservation objectives.

Additionally, where impacts are identified, it involves an assessment of the potential mitigation of those impacts. No further assessment is required, if it can be concluded that the plan will not give rise to adverse impacts on the integrity of any Natura 2000 site having regard to mitigation which is proposed.

Assessment of alternative solutions
Should the Appropriate Assessment fail to rule out the potential for adverse impacts on the overall integrity of one or more Natura 2000 sites, and where it is decided that the plan should proceed, despite such impacts, then it is required to demonstrate that no alternative solutions exist. Stage three of a Habitats Directive Assessment involves the assessment of alternative solutions. To proceed any further, it must be proven that no viable alternatives exist.

Assessment where no alternative solutions exist and where adverse impacts remain.
Where it has been shown that there are no viable alternative solutions to avoid adverse impacts on one or more Natura 2000 sites, then it must also be shown that there are imperative reasons of overriding public interest to allow the plan to proceed. In such cases, compensatory measures must be put in place in advance of the implementation of the plan. The fourth stage of the habitats directive assessment process involves the assessment of the proposed compensatory measures.

2 Methodology

2.1 Data Sources

The assessment of potential impacts on the integrity of Natura 2000 sites in this strategy is based on a desktop review of information relating to these sites and to the habitats and species that they support, and personal knowledge of many of the sites. References and data used are cited in the back of this report.

2.2 Consultation

The Douglas Land Use and Transport Strategy, the SEA Environmental Report and this (Habitats Directive) Screening Report will be referred to Statutory Consultees and will be available for review by the general public during the Public Consultation phase which runs from January 29th to 15th March.

2.3 Approach

The approach taken in the making of this assessment follows the European Communities, 2002 Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC and Environment, Heritage and Local Government 2009 Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities.

3 Strategy Details

3.1 Study Area

The DLUTS applies to a Study Area centred on the suburban town of Douglas (see Figure 1). Douglas is situated in a lowlying area on the southern shore of the Douglas Estuary which feeds into Lough Mahon which forms part of the greater Cork Harbour. The Douglas Estuary and Lough Mahon forms part of the Cork Harbour Special Protection Area. The Tramore River feeds into the estuary from the west, and the Ballybrack Stream which feeds up through the town from the south.

The town is bounded by Cork City to the north and other built up areas including Grange to the west and Rochestown to the east. Originally Douglas was a small and distinct village that developed in close proximity to two rivers, namely, the Tramore and Ballybrack. Historically, this association and plentiful supply of water made it an ideal location for the development of the linen industry.

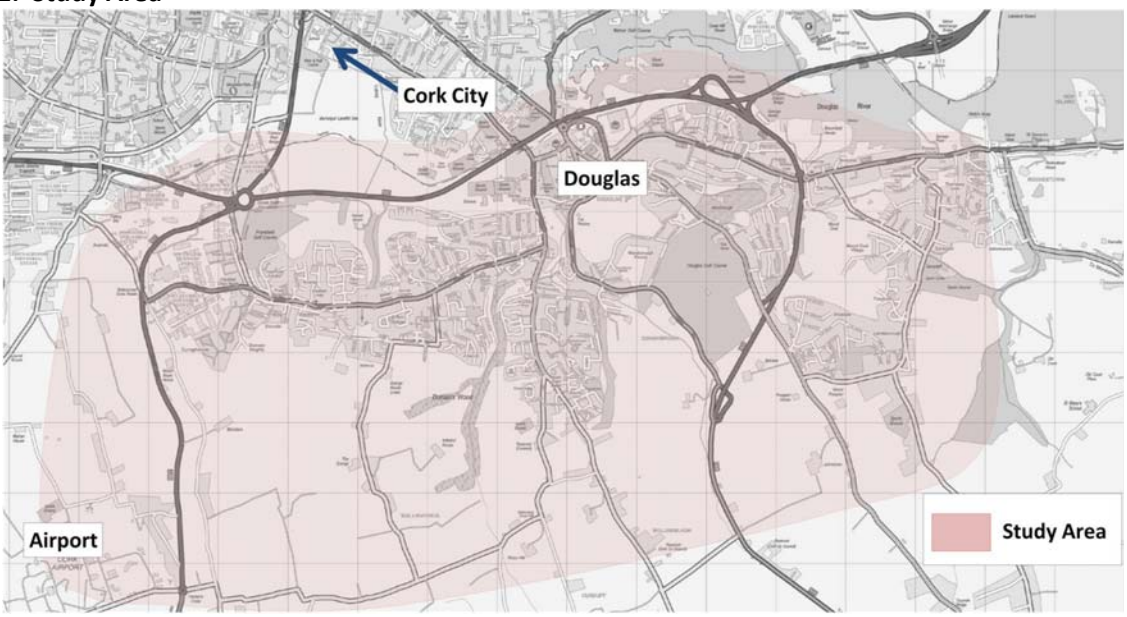
Today Douglas is a high density mixed use settlement which serves an expanding suburban area. It acts as the focal point for a very large suburban population which stretches from Turners Cross to the north (Cork City) to Donnybrook, Frankfield and Grange to the south and from Rochestown in the east, to Lehenagh More in the west. Policies of the Carrigaline Electoral Area Local Area Plan 2011, support the continued development of the towns retail and commercial centre, and the expansion of its population.

Douglas is served by drinking water from the treatment works at Inniscarra. There are no issues with water supply in the strategy area.

Wastewater from Douglas feeds into the Cork Main Drainage Scheme and is conveyed to a waste water treatment plant at Carrigrenan, Little Island. This treatment plant can currently facilitate a population equivalent of 413,000.

Surface water generally discharges to the Tramore River through a public storm water trunk sewer. There is a major public storm water pumping station adjacent to the Ballet School building on the opposite side of the road to Douglas Cinema.

Figure 1: Study Area



3.2 The Douglas Land Use and Transport Strategy (DLUTS)

As part of the development of this strategy, baseline data on traffic and landuse for a study area centred on Douglas was collated and analysed. The Study Area includes Douglas Town Centre and two Special Policy Areas zoned in the Carrigaline Electoral Area Plan. These data were used to identify options for future land use in two areas which were zoned as Special Policy Areas in the Carrigaline Local Area Plan, and to propose new traffic infrastructure and management arrangements to cater for anticipated increased demand and pressure from road users and pedestrians in the Douglas area. The strategy also proposes policy for improving the public realm within the town centre.

A summary of the policy proposals emerging from the strategy can be summarised under three themes and include the following:

Landuse

- Five key sites within the town centre have been identified for development, improvement or re-development. These are located within Special Policy Area X-03(a) (see Map 2). They are the Woollen Mills, the Douglas Village Shopping Centre, Barrys Field, the Cinema site and the Douglas Court Shopping Centre. It is stated in the draft Strategy that detailed development proposals for these areas will be contingent upon the findings and recommendations arising from site level flood risk assessment, and that in the case of the Woollen Mills and the Douglas Court Shopping Centre sites, that developers will be required to provide for the attenuation and disposal of stormwater by incorporating SuDS into project designs within any such areas.
- The need for a multi-purpose leisure facility has been identified in the strategy. It is suggested that this would be located in close proximity to the GAA grounds;
- It is proposed to retain the schools in their current locations;

- It is proposed the Douglas Golf Club which forms Special Policy Area X-03(b) be retained as a recreational open space facility;
- It is proposed to retain greenfield land which forms part of Special Policy Area X-03(a) to the east of the Douglas Court Shopping Centre as open space;
- It is proposed that land at Ballybrack House which form part of Special Policy Area X-03(a) can be used for the development of new link road and for the extension of existing Lions Club cottages to the South;
- It is proposed that land to the south of Douglas which forms part of Special Policy Area X-03(a) (known as the O'Flynn and O'Brien Land) is not suitable for development other than as a public park and as amenity land.

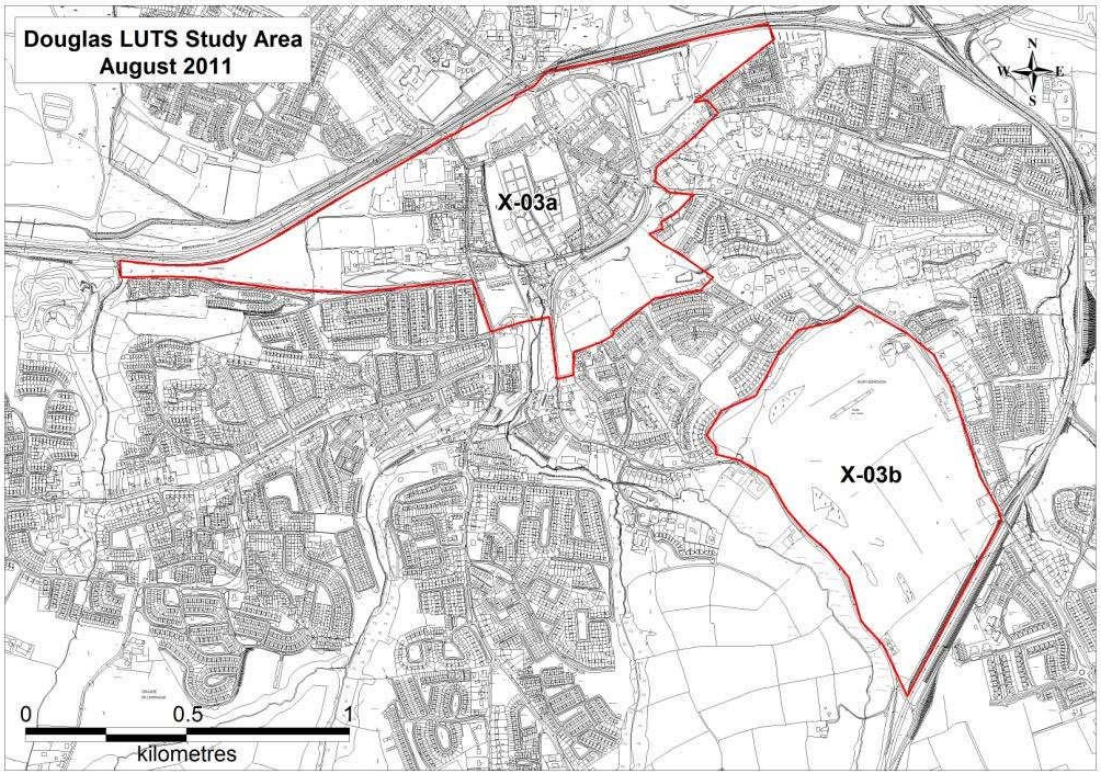
Traffic Management and Infrastructure

- Develop a new link road to the south of Douglas Village between the existing junction of Donnybrook Hill with Grange Road the Carrigaline Road;
- Introduce a pay and display parking system;
- Provide dedicated zones for parking demands identified
- Introduce a residents permit scheme;
- Improve traffic flow in the town by making changes at a number of key junctions in the town centre;
- Develop a full pedestrian and cycle network for Douglas, connecting to the Rochestown Passage West Greenway east of Douglas and to the Tramore River Amenity Greenway, west of Douglas;
- Develop school travel plans.

Urban Design

- Upgrade the quality of the public realm throughout Douglas Village to give the village a sense of identity;
- Creation of attractive gateways on all roads entering Douglas Village;
- Increase accessibility to historic religious buildings and graveyards;
- Enhance the amenity opportunities along the Tramore River;
- Enhance the value of open areas behind buildings to increase pedestrian access;
- Development of gateway buildings;
- Redevelopment of derelict sites within the village.

Figure 2: DLUTS Study Area Showing Special Policy Areas X-03a and X-03b



4 Natura 2000 Sites Within the Potential Impact Zone of the Douglas Study Area

There are no designated sites within the Douglas study area. In accordance with national guidance, all Natura 2000 sites within 15km of the study area have been examined to determine whether there is potential for significant impacts arising from the implementation of the plan. The Douglas Estuary and Lough Mahon which occur adjacent to Douglas form part of the **Cork Harbour Special Protection Area**. The **Great Island Channel Special Area of Conservation** is located in the northern channel of Cork Harbour. It is separated from Douglas by the eastern channel of the Harbour and is approximately 5km east of Douglas at the closest point. No other Natura sites occur within 15km of the Study Area. Primary potential impacts on these sites relate to potential for the DLUTS to give rise to impacts on water quality, having regard to the direct hydrological connection between Douglas and Cork Harbour. The potential for the strategy to give rise to impacts on these sites is considered below.

Table 1 sets out the information relating to the Cork Harbour SPA and the Great Island Channel SAC. The habitats and species for which these sites are designated are also listed in Table 1, as are the principle threats which could affect these. **Figure 3** shows the locations of these sites in relation to the Douglas study area.

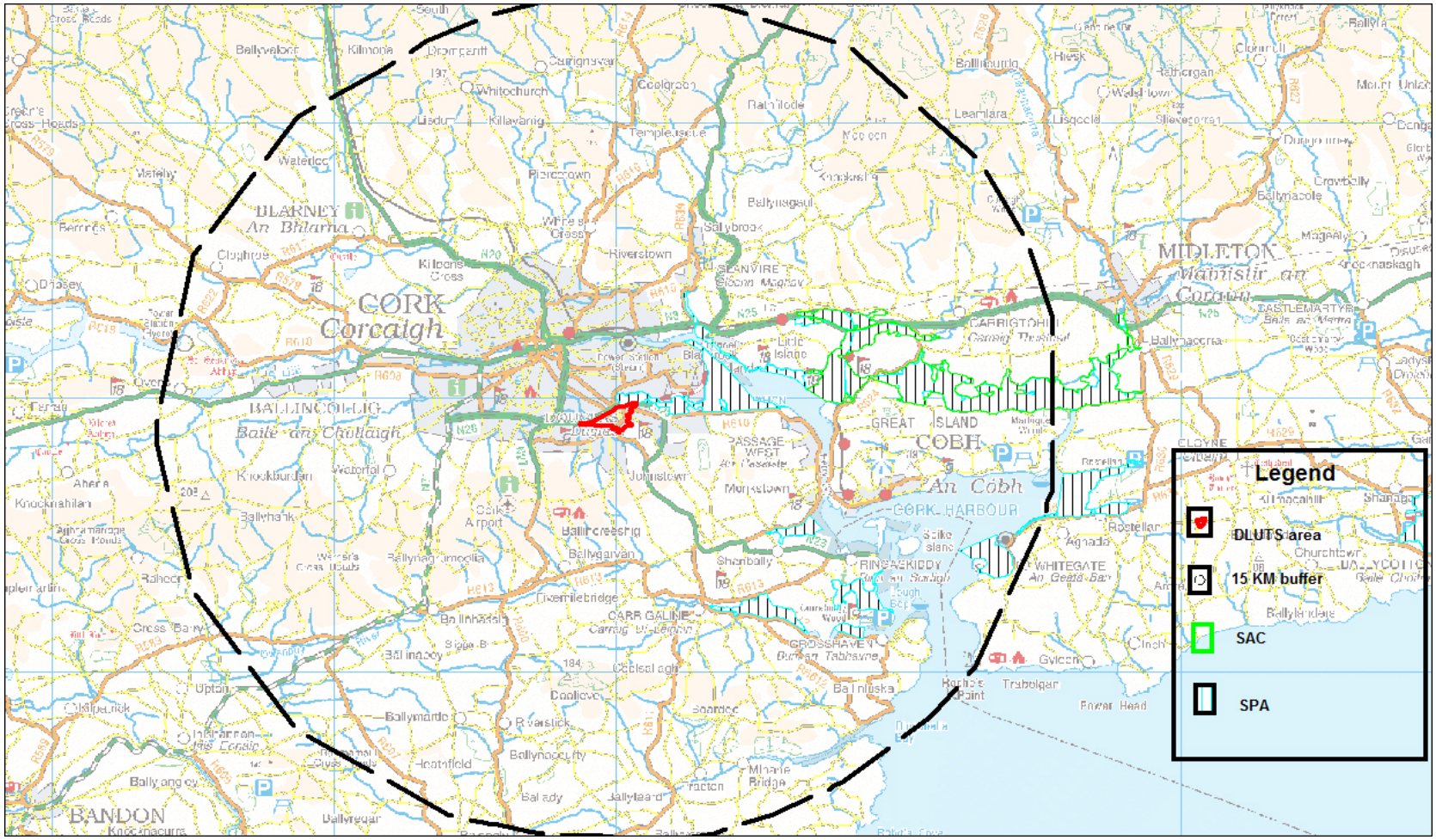
Table 1 Natura 2000 sites within the potential zone of influence of Douglas Land Use and Transport Strategy Area.

Site Name	Site Code	Distance from Special Policy Area	Habitats for which Site is Designated	Species for Which Site is Designated	Key Conditions Required to Support Site Integrity	Threats to Key Conditions
Cork Harbour SPA	4030	Bounds Douglas. Separated by N40 South Link Road	n/a	Occurrence of internationally important numbers of wintering waterbirds. Occurrence of internationally or nationally important numbers of the following species: Cormorant; Shelduck; Oystercatcher; Golden Plover; Lapwing; Dunlin; Black-tailed Godwit; Bar-tailed Godwit; Curlew; Redshank; Occurrence of breeding population of Common Tern;	Protection of site from disturbance. Protection of estuarine habitats upon which birds are dependant for feeding and roosting; Protection of food resources for summer breeding species; Protection of breeding sites of Common Tern;	Activities causing disturbance to birds at breeding sites or at feeding/roosting sites. Activities causing removal of or deterioration to coastal / estuarine habitats within the SPA; Activities affecting water quality in the SPA.

Table 1 Natura 2000 sites within the potential zone of influence of Douglas Land Use and Transport Strategy Area.

Site Name	Site Code	Distance from Special Policy Area	Habitats for which Site is Designated	Species for Which Site is Designated	Key Conditions Required to Support Site Integrity	Threats to Key Conditions
Great Island Channel SAC	02158	6Km	Mudflats and sandflats not covered by seawater at low tide; Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*).	n/a	Protection of estuarine and saltmarsh habitats. Maintenance of high standard of water quality.	Activities giving rise to direct loss of saltmarsh habitat; Land drainage / reclamation; Activities affecting water quality ;

Figure 3 Map of Douglas LUTS Study Area showing Natura 2000 sites within 15km of development boundary.



5 Strategy Analysis

The purpose of this section of the screening is to examine the possibility that the draft Douglas Land Use and Transport Strategy either individually or in combination with other plans and projects, may result in significant negative impacts on either the Cork Harbour SPA or on the Great Island Channel SAC.

Potential impacts which could be significant include:

- direct impacts on habitats listed on Annex I of the Habitats Directive and for which the site is designated;
- reduction in the area of any habitats within the site;
- direct or indirect damage to the physical quality of the environment (e.g. water quality) in the Natura 2000 site.
- serious or ongoing disturbance to species or habitats for which the Natura 2000 site is selected (e.g. increased noise, illumination, human activity);
- direct or indirect damage to the size, characteristics or reproductive ability of populations of species for which the Natura 2000 site is designated;
- activities which interfere with mitigation measures put in place for other plans or projects.

5.1 Summary of Potential Impacts

5.1.1 Habitat Loss

There are no Natura 2000 sites within the Study Area, and no development is proposed within or adjacent to either the Cork Harbour SPA or the Great Island Channel SAC. No direct impacts identified.

5.1.2 Disturbance to Species

Having regard to the physical separation of the Study Area from the Cork Harbour SPA, it is considered that there is no potential for any elements of the Strategy to give rise to disturbance to species for which this site is designated. The Great Island Channel is not designated for any species, and no species of particular conservation concerned have been identified to occur within this site. There is no potential for any elements of the Strategy to give rise to disturbance to species of conservation concern associated with this site.

5.1.3 Impacts on Water Quality

The draft Strategy proposes significant levels of new development in Douglas as well as potentially some redevelopment within areas at risk of flooding. It is considered that there is the potential for construction activities relating to some of the projects proposed within the Study Area including

- proposed new development on greenfield sites;
- redevelopment of brownfield or developed sites (some in flood risk areas);
- public realm renewal proposals (some in flood risk areas);
- junction upgrades; and
- the development of a new East West link road.

to increase the risk of introduction of silts, hydrocarbons and other toxic pollutants into the Douglas Estuary. Any such effect could harm mudflat habitat and its dependant species, including species for which the SPA is designated.

These activities have less potential to give rise to impacts on the Great Island Channel SAC, having regard to the degree of separation there is between Douglas and the SAC. However, the potential for construction related activities to harm habitats for which the SAC is designated cannot be fully discounted, particularly when considered in combination with similar effects arising from other sources.

5.1.4 Potential for Spread of Invasive Species

Japanese Knotweed was identified in a number of locations around Douglas during site survey work. Development facilitated by this strategy could have the potential to spread this species within the SPA.

5.1.5 Possible Cumulative Impacts with Other Plans and Projects

As part of the screening process, consideration must be given to the potential for any plan or project to contribute to impacts which when considered alone might not be significant, but when considered in combination with impacts arising from other plans or projects could be significant.

Cork Harbour and the area around Lough Mahon and the Douglas Estuary is heavily populated and industrialised. A larger number of IPCC licenses, waste licenses and discharge licenses are in effect for facilities that discharge into Cork Harbour. Having regard to the extent of development around the Cork Harbour, the potential for proposals emerging from this Strategy to contribute to impacts which could be significant, in particular in relation to the Cork Harbour SPA, but also, possibly in relation to the Great Island Channel SAC, cannot be discounted.

6 Screening Conclusions and Recommendations

6.1 Construction Related Impacts on Water Quality

While there is potential for projects emerging from the Strategy to give rise to negative impacts on water quality and to consequently give rise to negative impacts on habitats in the SPA, and possibly the SAC, it is considered that this possible effect can best be managed by ensuring the implementation of appropriate environmental protection measures at individual projects stage.

Recommendation 1: It is recommended that this issue be highlighted in the final DLUTS Report.

6.2 Increased Levels of Surface Water Run off to the Douglas Estuary

It is stated in the draft Strategy that the development of SuDS will be required in respect of development at the St. Patricks Mills Site and at the Douglas Court Site, and that such systems would be designed and implemented by individual developers.

Recommendation 2: It is recommended that the requirement for SuDS be extended and should apply to Public Realm Renewal Schemes as well as to other sites identified for development or redevelopment in the draft Strategy. It is recommended that this issue would be addressed in the final DLUTS Report.

6.3 Potential For Spread of Invasive Species into Natura 2000 sites.

While there is potential for construction works generated by this Strategy to cause the spread of invasive alien species into the Cork Harbour SPA, it is considered that having regard to the separation between the Study Area and the SPA, that the potential for this

impact to arise is low. Furthermore, it is considered that this impact can best be managed by ensuring the implementation of appropriate measures to prevent any such spread at individual projects stage. No amendment to the Strategy is required at this stage.

7 Overall Conclusions

The draft Douglas Land Use Transport Strategy has been screened to determine whether it has the potential to give rise to impacts on the Cork Harbour SPA and on the Great Island Channel SAC. There is potential that the implementation of key proposals contained in the Strategy could give rise to negative impacts on water quality in streams and rivers in the Douglas area. These streams discharge to the Douglas Estuary which forms part of the Cork Harbour SPA and is a short distance from Douglas. The introduction of contaminants into the estuary, associated with construction works, or arising from the discharge of surface water runoff from the town into the estuary have the potential to harm mudflat habitats and thereby affect the food chain of species for which the SPA is designated. These impacts could be significant when considered in combination with the high level of developmental pressure which exists around Cork Harbour.

It is considered that the implementation of specific environmental protection measures relating to the protection of watercourse during construction is best dealt with at project stage, however this issue should be highlighted in the final DLUTS report.

It is recommended that the requirement for SuDS be extended and should apply to Public Realm Renewal Schemes as well as to other sites identified for development or redevelopment in the draft Strategy.

Subject to the implementation of the above recommendations, it is considered that potential for the Strategy to give rise to negative impacts on the Cork Harbour SPA and on the Great Island Channel SAC can be ruled out.

8 Next Steps

The Douglas Land Use and Transport Strategy, the SEA Environmental Report and this (Habitats Directive) Screening Report will be referred to Statutory Consultees and will be available for review by the general public during the Public Consultation phase which runs from January 29th to 15th March. It is intended to review submissions made during this phase, and to prepare a response and where necessary propose amendments to the Strategy at the end of March. Proposed amendments to the Strategy will be subject to Habitats Directive Screening, and a final Habitats Directive Screening Report will issue with the DLUTS Final Report which will issue in early April 2013.

9 References

Carrigaline Electoral Area Local Area Plan, 2011. Cork County Council.

Douglas Land Use and Transport Strategy, draft Final Report Prepared for Cork County Council, December 2012.

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European Communities. 2000. Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC. Luxemburg.

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Appendix 1: Assessment of Impacts of Proposed Policies on Natura 2000 sites.

Policy No.	Policy	Potential Impacts on Natura 2000 Sites
LU-1	The Land Use Strategy for the period 2013-2022 will follow existing targets regarding population, retail, residential and employment as contained in the existing statutory planning documents. In line with these targets, it is recommended that:- At least 50% of current retail vacancy filled in the existing retail areas. Support given to the fulfilment of current retail commitments as well as encouraging non-retail office accommodation to be located within the town centre precincts. Action area plans be prepared for the redevelopment of St Patrick Woollen Mills, Cinema Site and Douglas Court	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.
LU 2	To consolidate the town centre into 5 precincts comprising the Woollen Mills, Douglas Village Shopping Centre, Cinema Site, Barry's Fields and Douglas Court Shopping centre. The priority is to fill existing retail vacancy and there will be a plan led approach to town centre development which will, in addition to retail development, encourage additional employment uses to stimulate daytime population. Residential units will be provided as part of mixed use in precincts.	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.
LU 3	To establish a multi-disciplinary "Town Team Partnership" comprising all key stakeholders to provide guidance on the management of the town centre in the co ordination of town marketing campaigns, special occasions and events, opening hours, branding, vacant units, car parking charges, street parades and open air stage shows., community workshops and provision of an information kiosk in the main street for use by town/village residents, security, town centre safety and prepare a town centre design guide for shop frontages.	No impacts identified.
LU 4	Consideration will be given to the sustainable development of 'Back lands' on appropriate sites within Douglas Village. It is acknowledged that back land sites may be capable of being used for different uses including mixed use development. Each use will be looked at on its merits and on the basis of the policies of the current County Development Plan or Local Area plan and any other material considerations. Roadside development within the Village shall be sited and designed to ensure that the development potential of back land sites is not compromised and that suitable vehicular and pedestrian access to these lands is retained.	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.
LU 5	To provide for a multi-purpose leisure facility in Douglas to cater for sports clubs, community organizations and leisure activities. In addition, playing fields, parks and walkways/cycleways that provide a link to the Tramore Valley Park over the N40 and access to Vernon Mount walkway through to Grange should be provided. Access to the community park from the south via the Mangla and to	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.

	the north via improved crossing points could be provided as well as improved lighting and security measures. Future schools will need to be located in close proximity to their residential areas.	
TC-01	It is recommended that an Action Area Plan or Development Brief be prepared for the entire site and which can be implemented on a phased basis. This shall include comprehensive proposals for a mixed use development which caters for a variety of town centre type uses including offices, retail (including urban format retail warehousing in a mixed use building), retail services and some residential. The redevelopment of the site should only result in an increase of 25% to the floorspace to the footprint of the existing buildings. If the developer wishes to increase this density of development they will have to prove that there will be no negative net impact to the proposed improvements to the existing transport network. The site can cater for an additional 70 dwellings. If the developer wishes to increase this density of development they will have to prove that there will be no negative net impact to the proposed improvements to the existing transport network. The redevelopment of the site shall create linked pedestrian routes which will provide safe permeability and connectivity and which shall follow the preferred desire lines to the existing village. Traffic calming management to reduce the severance effect from the woollen Mills to the Douglas village Shopping Centre including additional crossing points. The majority of the existing surface car park should be removed and replaced with a multi-storey car park. The existing historic buildings will be protected and where possible enhanced	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.
TC-02	It is recommended that the vacancy in the shopping centre be filled as a matter of urgency and that improved connectivity be provided as part of the urban design public realm programme.	No impacts identified.
TC-03	It is recommended that the entire site be developed in an integrated manner that will result in the provision of a mixed use development of 4,000sqm which will include office accommodation and commercial development with full frontage development along the Church Street and Carrigaline Road to form a continuous commercial strip with the existing Barry's Pub and Restaurant. If the developer wishes to increase this density of development they will have to prove that there will be no negative net impact to the proposed improvements to the existing transport network. It will be more functional use of land if there was acquisition of the Eircom storage building and yard as part of the Barry' Field site and the removal/or incorporation of the existing dwelling house and outbuildings into an overall site development. Consideration will be given to the construction of a new Municipal Car Park of at least 200 bays with the provision	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.

	of pedestrian linkage from the Community Park through the Church of Ireland church yard along Churchyard Lane and through the site to the Barry's corner, thereby linking with the East Village complex and East Douglas Street. Vehicular access to the site shall be from Church street and the old Carrigaline road.	
TC-04	It is recommended that an Action Area Plan or Development Brief be prepared for the entire site and which can be implemented on a phased basis. This shall include the provision of a comprehensive mixed use development with an additional 5,500sqm non residential floor space and 70 residential units. If the developer wishes to increase this density of development they will have to prove that there will be no negative net impact to the proposed improvements to the existing transport network. The new development will have active ground floor uses, an anchor store, office space and residential units on the whole site incorporating the cinema, the car park, vacant land and the old TSB site and the Topaz garage site. It is desirable to enable the relocation of Topaz Garage and rehabilitation of the site for the construction of a landmark building that will represent the entrance to Douglas Village from the gateway underneath the N40 flyover on Douglas Road. The future buildings should form an edge along the relief road on the north of the site, which will provide a noise barrier to the N40. There should be the provision of a number of pedestrian linkages from East Douglas Street through the site to the pedestrian crossing to Douglas Court on the relief road and from the site to the East Village complex to the south. The development of the site could include a central town square which will host public events, retail and community services. Road access to the site would be provided from the new signalised junction at Douglas Court Crossing. Parking provision shall be based on the Metropolitan Parking Strategy. This development is dependent on promoting smarter travel measures and achieving safer and more user friendly access for pedestrians and cyclists. The above suggested quantum of development assumes that all existing vacancy will be filled before new building takes place.	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.
TC-05	It is recommended that an Action Area Plan or Development Brief be prepared for the entire site and which can be implemented on a phased basis. This shall include the provision of a comprehensive mixed use development with an additional 7,500sqm non residential floor space. If the developer wishes to increase this density of development they will have to prove that there will be no negative net impact to the proposed improvements to the existing transport network. The new development shall cater for a variety of town centre type uses which will add life and vibrancy to the area outside the opening hours of the existing shopping centre.	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.

	Appropriate uses could include offices, retail, retail service (restaurants, public houses etc.) leisure/recreational facility, community buildings and cultural uses. An improvement in the urban environment of the area with the removal of some surface car parking and the provision of a civic space would encourage such uses to locate in this area. The redevelopment of the site shall create linked pedestrian routes which will provide safe permeability and connectivity and which shall follow the preferred desire lines to the existing village. Traffic calming/management to reduce the severance effect from the existing site to the rest of Douglas Village which may include additional crossing points. The extensive surface car park is open and lacks definition and is not appropriate for this site and should be removed and replaced with a multi-storey car park which is more appropriate to town centre urban form. Any new scheme will have to include the wetland site to the rear. At the moment it is informal open/green space. There is an opportunity here for a park or other amenities for the benefit of the wider community. There is potential to create a new urban civic space which could provide for connectivity to the existing wetlands at the east of the site. New development will be encouraged to create a tighter urban form with frontage development onto a new civic space with the creation of an active streetscape, which is more appropriate for this town centre location.	
UD 1	There is a need to increase permeability in Douglas Village by improving the pedestrian environment with the long term intention of allowing easy access from the peripheral outlying areas of Donnybrook, Grange, Frankfield, Maryborough and the Rochestown Road through Douglas into the city centre.	No impacts identified.
UD 2	Within the town centre, it is proposed to improve the general public realm through widening footpaths, introducing raised paved areas at junctions that can facilitate better movement of pedestrians and cyclists, thereby improving connectivity and safety between other land uses. Other public realm features that could be introduced are more green trees and flower beds (landscaping), water features, benches, lighting and removal of overhead wires. A noise barrier is also proposed along the N40 section which overlooks Douglas Village	No impacts identified.
UD 3	Four town centre gateways have been identified in Douglas, the most important two are at the two bridging points over the N40. Others include the Finger Post Roundabout when coming in from the Rochestown Road andDalys Corner on West Douglas Street. Public Realm measures will be implemented to improve their appearance and functionality.	No impacts identified.
UD 4	Beneficial Desire Lines have been identified in Douglas see Table 7.1 and these shall be sustainably improved and	No impacts identified.

	enhanced.	
UD 5	The analysis of Douglas identifies a number of points of Interest (POI) which would allow for potential key development based on their location and uniqueness. It will be important that any proposed developments at these POIs will contain public realm improvement.	No impacts identified.
UD 6	The public realm improvements identified for Douglas Village will seek to bring order and uniformity to the streets to enhance the streetscape, reduce clutter and have a uniform style in street furniture.	No impacts identified.
UD 7	There is a need to increase the pedestrianisation of this area by removing daytime private transport through the street. The street will have public transport access only during the day and will reopen at evening time to allow for night time surveillance. Public Realm improvements will include bus shelters kiosks raised shared surfaces for pedestrian and cyclists..	No impacts identified.
UD 8	It is the intention at this location to create a café/restaurant quarter that will be facilitated by extending the footpaths outside the local restaurants and having outdoor seating and tables. it is imperative that a high quality finish is applied to the public realm such as streetscape urban sculptures and lighting to facilitate a safer more pleasant environment.	No impacts identified.
UD 9	To prepare a comprehensive design brief for this site which would involve all landowners. The design brief for the site needs to consider; the building of a landmark structure at the northern corner, a new building line to extend along the frontage with the existing relief road, this building would be punctuated by pedestrian linkages through it at ground floor with active street frontage. Any new build shall be set back from the relief road to allow more pedestrian circulation and soft landscaping to be incorporated. Improved pedestrian connectivity between Douglas Village Shopping Centre and Douglas Court Shopping Centre and between the site and the East Village. Creation of public spaces within the site that could be focal points for social interaction.	No impacts identified.
UD 10	To realise the immense opportunity presented on this site for increased public realm interventions that promote and enhance connectivity with the Douglas Village SC. The redevelopment of this site will include the retention of all buildings of historic and architectural merit and any new build to enhance this precinct shall compliment the established building fabric. The entrance to West Douglas Street needs to have a raised paved area that encourages increased walking and cycling	No impacts identified.
UD-11	Given the location of this site near the schools in Douglas, it is critical that it is made pedestrian and cycling friendly through public realm improvements. Measures shall include a raised platform at the road junction, improved footpaths and pedestrian/cycling crossing points. These interventions will enhance safety which will encourage parents and children to walk and cycle to the nearby schools.	No impacts identified.
UD-12	The Community Park should be at the centre of life in the	No impacts identified.

	village and should be an integral part of the populations lifestyle choice. Cork County Council in conjunction with the Tidy Towns should support a competition which will provide a fully integrated leisure and passive space in the village to the benefit of residents and visitors alike. Measures shall be impelmented to improve north south and east west connectivity, enhance public safety and install suitable lighting.	
T 01	Implementation of a fully integrated pedestrian and cycle network comprising of both on-street and off-street walk and cycleways, junction upgrades to improve pedestrian and cycle facilities and improved connectivity between and within residential areas.	No impacts identified
T 02	Introduce Shared space on East Douglas Street giving increased priority to pedestrians and cyclists and helping to support economic activity in the area.	No impacts identified
T 03	Introduce a Public Transport Corridor on East Douglas Street, between Church Street and Douglas Relief Road. This will operate as a public transport only street between the hours of 08:00 and 18:00 giving increased priority to public transport services in the village.	No impacts identified
T4	Provide an East – West link road and bridge over the Ballybrack Stream connecting Grange Cross with the Carrigaline Road. This new link road will provide more direct route for pedestrians, cyclists and vehicle traffic travelling from east to west and vice versa. It also creates an opportunity to provide new bus routes linking Carrigaline, Ringaskiddy, Douglas and Cork International Airport.	Potential for construction related activities to have negative impacts on water quality in rivers and streams discharging to Cork Harbour.
T5	Improve the provision of public transport facilities and infrastructure, throughout the DLUTS area.	No impacts identified
T6	Additional Taxi Rank facilities to be provided in the DLUTS area including a night time only rank on Church Yard Lane and all day rank in East Village.	No impacts identified
T7	Implementation of a fully integrated Schools Transport Strategy comprising of; improved walking and cycling network, production of school travel plans, participation in the Green Schools programme, and junction upgrades close to schools.	No impacts identified
T8	Introduce one-way traffic eastbound on Church Road to increase safety and improve traffic circulation.	No impacts identified
T9	Ban right turn off second off ramp from N40 onto Douglas Road to improve circulation and reduce congestion.	No impacts identified
T10	Improve signal control systems within the DLUTS area, including incorporating 10 junctions into Cork City's SCOOT urban traffic control system.	No impacts identified
T11	Introduce a 30kph zone in the Village centre to encourage a more pedestrian and cycle friendly environment.	No impacts identified
T12	Enhancements to 23 junctions in the DLUTS area to improve cycle and pedestrian facilities and to improve the operation of these junctions in terms of movement and safety for all road users.	No impacts identified
T13	Implement a parking management strategy that promotes a shift towards a greater consolidation of parking in the DLUTS area thus reducing the duplication of off-street	No impacts identified

	parking which currently exists.	

Habitats Directive Screening Statement Report

Douglas Land Use and Transport Strategy

Prepared by Cork County Council Planning Policy Unit

August 2013

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Appendix A: Screening of Proposed Changes to Douglas LUTS Strategy

1. Introduction

Context

Cork County Council is in the process of preparing a Land Use and Transport Strategy (DLUTS) for the suburban town of Douglas. The strategy is a response to resolving the competing demands for more housing and retail development within the town, and balancing this with the provision for better transportation, environment and community facilities. The DLUT Strategy is being prepared as an action of the Carrigaline Electoral Area Local Area Plan (2011). It identifies potential land uses and establishes urban design policy for two Special Policy Areas which were zoned in the Carrigaline Electoral Area Local Area Plan 2011, and it proposes a transport strategy for the town.

The overall aim of the Douglas Land Use Transport Strategy is to ensure that there is an integrated approach to land use planning, urban design and transportation engineering for the future development of Douglas. Specifically, the goals of this strategy are:

- to provide a framework for future planning decisions;
- devise a strategy to optimise the traffic and transport network;
- provide a guide to the investment in transport infrastructure;
- identify the capacity of the town centre for additional retail and other development;
- inform the future of two areas zoned 'Special Policy Areas' (Douglas Town Centre X-03a and the lands described as Douglas Golf Course X-03b) in the Carrigaline Electoral Area Local Area Plan (2011);
- make Douglas a more competitive and vibrant urban centre in the metropolitan area of Cork.

This is a non statutory strategy, however, it is intended that key proposals emerging from this document will be transposed into the Carrigaline Electoral Area Local Area Plan once adopted by Cork County Council.

In accordance with the European Communities (Birds and Natural Habitats) Regulations 2011, the impacts of statutory and non-statutory plans, not covered within the meaning of the Planning Acts 2000-2011, that establish/publish policy in relation to land use for on certain sites that are designated for the protection of nature (Natura 2000 sites[1]), must be assessed as an integral part of the process of drafting of the plan. This is to determine whether or not the implementation of plan policies could have negative consequences for the habitats or plant and

[1] Natura 2000 sites include Special Areas of Conservation designated under the Habitats Directive and Special Protection Areas designated under the Birds Directive. Special Areas of Conservation are sites that are protected because they support particular habitats and/or plant and animal species that have been identified to be threatened at EU community level. Special Protection Areas are sites that are protected for the conservation of species of birds that are in danger of extinction, or are rare or vulnerable. Special Protection Areas may also be sites that are particularly important for migratory birds. Such sites include internationally important wetlands.

animal species for which these sites are designated. This assessment process is called a Habitats Directive Assessment (HDA) and must be carried out at all stages of the plan making process.

This document represents the last phase of the Habitats Directive Assessment process (Screening of Douglas draft Land Use and Transport Strategy 2013 changes). It has involved the identification of any Natura 2000 sites which could potentially be affected by policies and proposals set out in the strategy, and the completion of a preliminary assessment (screening) of the potential for these policies to have significant impacts on these sites and their qualifying features. It makes recommendations for the final iteration of the report. It should be read in conjunction with the Douglas Land Use and Transport Strategy Final Report.

Legislative Background Habitats Directive Assessment

Habitats Directive Assessment is an iterative process which runs parallel to and informs the plan making process. It involves analysis and review of draft policies as they emerge during each stage of plan making, to ensure that their implementation will not impact on sites designated for nature conservation, nor on the habitats or species for which they are designated. Within this process, regard must also be had to the potential for policies to contribute to impacts which on their own may be acceptable, but which could be significant when considered in combination with the impacts arising from the implementation of other plans or policies.

The process may result in the development of new policy areas and/or the modification or removal of certain policies or proposals to be presented in the final plan. At the end of the plan making process, an Appropriate Assessment Conclusion Statement will be produced which contains a summary of how ecological considerations in relation to Natura 2000 sites have been integrated into the plan. The final Natura Impact Report and a declaration in relation to the potential for the plan to affect the integrity of Natura 2000 sites within its potential impact zone will also be produced at this time.

The European Union has provided guidance as to how to complete a Habitats Directive Assessment for land use plans which identifies four main stages in the process as follows:

Screening assessment

The process which identifies whether the plan, either alone or in combination with other projects or plans, could affect any Natura 2000 sites and considers whether these impacts could be significant. No further assessment is required if potentially significant impacts on Natura 2000 sites are ruled out at this stage.

Appropriate assessment

Where the possibility of significant impacts on one or more Natura 2000 sites has been identified during the screening process, detailed assessment of the plan and its potential to impact on identified sites is required. This is called an Appropriate Assessment. It involves consideration as to whether the plan could have adverse impacts on the integrity of any Natura

2000 sites identified during screening, either alone or in combination with other projects or plans, having regard to the site's structure and function and its conservation objectives. Additionally, where impacts are identified, it involves an assessment of the potential mitigation of those impacts. No further assessment is required, if it can be concluded that the plan will not give rise to adverse impacts on the integrity of any Natura 2000 site having regard to mitigation which is proposed.

Assessment of alternative solutions

Should the Appropriate Assessment fail to rule out the potential for adverse impacts on the overall integrity of one or more Natura 2000 sites, and where it is decided that the plan should proceed, despite such impacts, then it is required to demonstrate that no alternative solutions exist. Stage three of a Habitats Directive Assessment involves the assessment of alternative solutions. To proceed any further, it must be proven that no viable alternatives exist.

Assessment where no alternative solutions exist and where adverse impacts remain.

Where it has been shown that there are no viable alternative solutions to avoid adverse impacts on one or more Natura 2000 sites, then it must also be shown that there are imperative reasons of overriding public interest to allow the plan to proceed. In such cases, compensatory measures must be put in place in advance of the implementation of the plan. The fourth stage of the habitats directive assessment process involves the assessment of the proposed compensatory measures.

2. Screening Conclusions of draft Douglas LUTS Strategy

The draft Douglas Land Use Transport Strategy was screened to determine whether it had the potential to give rise to impacts on the Cork Harbour SPA and on the Great Island Channel SAC. There is potential that the implementation of key proposals contained in the Strategy could give rise to negative impacts on water quality in streams and rivers in the Douglas area. These streams discharge to the Douglas Estuary which forms part of the Cork Harbour SPA and is a short distance from Douglas. The introduction of contaminants into the estuary, associated with construction works, or arising from the discharge of surface water runoff from the town into the estuary have the potential to harm mudflat habitats and thereby affect the food chain of species for which the SPA is designated. These impacts could be significant when considered in combination with the high level of developmental pressure which exists around Cork Harbour.

It is recommended that the implementation of specific environmental protection measures relating to the protection of watercourse during construction is best dealt with at project stage, however this issue should be highlighted in the final DLUTS report.

It was recommended that the requirement for SuDS be extended and should apply to Public Realm Renewal Schemes as well as to other sites identified for development or redevelopment in the draft Strategy.

These recommendations were implemented in the Final Report so that the potential for the Strategy to give rise to negative impacts on the Cork Harbour SPA and on the Great Island Channel SAC can be ruled out.

3. Screening of Proposed Changes to draft Douglas LUTS Strategy

A number of changes were proposed to be made to the draft strategy arising from consideration of submissions made during the public consultation process which took place between January – March 2013, and arising from directions made by the Carrigaline Area Committee on foot of their meeting in June 2013. The proposed changes are set out in full in the 3rd Public Consultation Report dated July 2013 and are listed in Appendix A attached to this report. The agreed changes are largely concerned with clarifying policies rather than the insertion of new policies.

One of the submissions requested a change to the Habitats Directive Screening Report in respect of the flood risk. It was decided that it would be appropriate to remove the following statement referring to flooding in Douglas.

Remove the sentence on item 3.1 on page 6 " There has been flooding in Douglas at times of heavy rainfall in recent years when flows have exceeded the capacity of this river."

The final changes were adopted by the Full County Council on 8th July 2013. None of these changes are considered to be material to the strategy.

4. Analysis of proposed changes to draft strategy

The proposed changes to the Final Report were examined to identify whether they would be likely to cause significant impacts on any nearby Natura 2000 sites listed in Table 1 of the Habitats Screening Report, having regard to their qualifying features.

The potential for any change to give rise to indirect damage to the physical quality of the environment by affecting water quality or water levels, within the above listed sites are discounted, as the changes do not propose to increase the scale of the development or the population targets for the site. There are no increased requirements in terms of water supply, and there is no projected increase in wastewater generation beyond those set out in the draft strategy.

Consideration was given to direct and indirect impacts which may arise from activities within or near Natura 2000 sites (eg recreational activities) which could be encouraged by any of the proposed changes. No such activities/impacts have been identified.

5. Appropriate Assessment Screening Conclusion Statement

It is concluded that the Douglas LUTS Strategy, as amended, will not give rise to significant impacts on any Natura 2000 sites.

Appendix A: Screening of Proposed Changes to Douglas LUTS Strategy

Change No.	Proposed Change	Potential Impacts on Natura 2000 Sites
	General	
1	All references to public transport only corridor to be replaced by public transport priority corridor on East Douglas Street.	No impacts identified.
2	All reference to hours of operation of the public transport corridor (i.e. 08.00-18.00) on East Douglas Street to be removed.	No impacts identified.
3	All reference to the removal of Topaz to be replaced with a desire to relocate the filling station in the longer term. The Topaz Garage will be referred to as the filling station.	No impacts identified.
	Chapter 1 Introduction	
4	Insert the following text at 1.1.5:- The DLUTS Strategy is not a zoning plan but the recommendations may be incorporated into an amendment to the Carrigaline Electoral Area Local Area Plan. Insert the following text into 1.5.21:- ***"Carrigaline Electoral Area Local Area Plan 2011*** *The Carrigaline Electoral Area Local Area Plan (2011) identified an opportunity for the Douglas area "to evolve into a fully functional mixed use higher order centre in terms of its development density and its retail offer with an improved public transport, accessibility and parking demand management system". It proposed in the Local Area Plan that a Land Use and Transportation Study (LUTS) should be prepared for the Douglas areas as a priority.* *The proposed Douglas Land Use and Transport Study (DLUTS) is a response to resolving the competing demands for more housing and retail development and balancing this with the provision for better transportation, environment and community facilities. This LUTS Study will be prepared for Douglas and the Local Area Plan has zoned two Special Policy Areas around the Douglas Town Centre (X-03a) and around the land described as the Douglas Golf Course (X-03b)."*	No impacts identified.
	Chapter 2 DLUTS Methodology	
	No Changes Necessary	
	Chapter 3 Existing Land Use Conditions in Douglas	
5	Insert the following text at 3.7.11:- "The recent planning	

	permission from An Bord Pleanala for the change of use from a cinema to a discount food store and ancillary retail facilities." Insert the following text in paragraph 3.10.5:- "Other sporting facilities in close proximity or adjacent to the study area include Douglas Tennis Club, Nemo Rangers GAA Club, Tramore Athletic Soccer Club, Ceanntar na Cathrach GAA pitches in Ballinlough, Gus Healy Swimming Pool and Cork Con Rugby Club." Insert bullet point under Issues emerging:- • Whilst there are numerous sporting facilities in Douglas, there is a need for additional playing pitches to be provided to serve the growing demand in the area.	No impacts identified. No impacts identified.
Chapter 4 Existing Public Realm Conditions in Douglas		
	No Changes Necessary	
Chapter 5 Existing Transport Conditions in Douglas		
	No Changes Necessary	
Chapter 6 Guiding Principles		
	No Changes Necessary	
Chapter 7 Developing and Evaluating DLUTS		
	No Changes Necessary	
Chapter 8 DLUTS Land Use Strategy		
6	Insert the following text at 8.1.4:- The DLUTS Strategy is not a zoning plan but the recommendations may be incorporated into an amendment to the Carrigaline Electoral Area Local Area Plan. Delete "Action Area Plans" and replace with "Overall Development Scheme" in LU-01	No impacts identified.
7	National policy regarding flooding	No impacts identified.
8	Insert the following text in paragraph 8.4.20 *"On the basis of public consultation, submissions received and endorsed by public representatives, the study recognises the growing demand for playing pitches and other community facilities in Douglas. The DLUTS Study area is the preferred location for a multi-purpose leisure facility however, it may not be possible or practicable to accommodate the demand for sports pitches here. Other locations within the wider Douglas area outside of the DLUTS Study area or locations within the adjoining Green Belt have the potential to accommodate this additional demand. In the short to medium term, Clubs wishing to provide sports pitches should be encouraged to consider these options".*	No impacts identified.

Amend the following text in paragraph 8.4.21

"There is a requirement for a multi-purposes leisure facility in Douglas to cater for sports clubs, community organisations and leisure. This facility should be located in or near to the Town Centre to serve the community as a whole. The preferred location for this facility is adjacent to the existing GAA playing pitches and schools for ease of access for the users. Road access to the lands to the west of the GAA playing pitches will require careful assessment."

Insert new paragraph 8.4.23 and existing paragraph 8.4.20 to be inserted before paragraph 8.4.17 and titled Douglas Golf Course.

In order to address this need there are three key steps to delivering of this facility

1. Put a land use zoning framework in place reflecting the recommendations of this study through an amendment to the Local Area Plan
2. Consider acquisition and ownership issues and take appropriate steps
3. If unsuccessful consider a broader approach to identify alternatives

Amend Table 8.5: Land Use Policy LU-05 (all new text)

Policy No.	General Land Use Policies – Community Facilities and Recreation
LU-5	The DLUTS study area is the preferred location for the provision of a multi-purpose leisure facility in Douglas to cater for sports clubs, community organizations and leisure activities. In addition, playing fields, parks and walkways/cycleways that provide a link to the Tramore Valley Park over the N40 and access to Vernon Mount walkway through to Grange, should be provided. Improved access from the south to the community park via the Mangla and from the north via improved crossing points should be provided. Within the park, improved lighting, landscaping and security measures should also be provided. Existing schools will remain the in their present locations and future schools will

<table>
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<tr><td></td><td>need to be located in close proximity to their residential areas.

Existing recreational and sports facilities will be retained in their present locations (including Douglas Golf Club and Douglas GAA).

It may not be possible or practicable to accommodate the demand for sports pitches in the DLUTS study area. Other locations within the wider Douglas area, outside of the DLUTS Study area, or locations within the adjoining Green Belt have the potential to accommodate this additional demand. In the short to medium term, Clubs wishing to provide sports pitches should be encouraged to consider these options.</td></tr>
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Change to Golf Course – insert new bullet point under 8.4.17

• The golf course sensitivity test for the 2032 Land Use Evaluation was done using the performance indicators in Chapter 7 (7.4.6) which showed that the location of large amounts of residential development on the periphery of the village will result in more unsustainable car dependency and further traffic congestion for the village.
</td>
<td>No impacts identified.</td>
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Insert new text and policy box after Table 8.5 for Car Parking as follows:-

Car Parking for New Development
8.4.24 A county wide strategy for parking is under consideration in the County Development Plan review process currently underway. It is envisaged that the parking strategy will place greater emphasis on walking, cycling and public transport use. Therefore, in Douglas, car parking in any new development shall adhere to the revised parking policy in the County Development Plan that will support national policies in relation to Sustainable Travel.
<table>
<tr><th>Policy No</th><th>General Policy - Car Parking for new development</th></tr>
<tr><td>LU -06</td><td>The car parking standards for new</td></tr>
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<td>No impacts identified.</td>
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		development within the Town Centre Precincts shall be guided by the revised parking policy in the County Development Plan that will support current national policy, (Smarter Travel – A Sustainable Transport Future - 2009).	
10	In TC-01 remove the reference to *"Action Area Plan or Development Brief" and replace with "Overall Planning or Development Scheme."* Change to Section 8.6 Woollen Mills – in TC-01 on Table 8.6 remove *"The majority of the existing surface car park should be removed and replaced with a multi storey car park" and replace with "Car parking for new development should follow the policy identified in LU -06."*		No impacts identified.
11	Change to Section 8.8 Barry's Field – remove part of 8.8.3 which *says "However, it should not be a surface level car park but possibly a landscaped surface car park with commercial activity on the ground floor." Insert the following in TC-03 at the end "Car parking for new development should follow the policy identified in LU -06."* Change the text in TC-03 as follows:- *"Consideration of the construction of a new municipal car park of at least 200 bays with the provision of improved pedestrian linkages from west to east."*		No impacts identified.
12	Insert the following text in 8.9.2 as a bullet point at the end: - *"The recent planning permission from An Bord Pleanala for the change of use from a cinema to a discount food store and ancillary retail facilities."* Change to Table 8.10 Cinema Site – remove the reference to *"Action Area Plan or Development Brief" in TC-04 and replace with "Overall Planning or Development Scheme for the entire site, taking account of the planning permission granted to the existing cinema. Development on the site can be implemented on a phased basis."*		No impacts identified.
13	Also in TC-04, remove *"Parking provision shall be based on the Metropolitan Parking Strategy."* And replace with *"Car parking for new development should follow the policy identified in LU -06."*		No impacts identified.
14	Change to Section 8.11 Douglas Court Shopping Area - Change		No impacts identified.

	to Table 8.10 Douglas Court Shopping Centre – remove the reference to *"Action Area Plan or Development Brief" in TC-05 and replace with "Overall Planning or Development Scheme."*	
15	Also in TC-05, remove *"The extensive surface car park is open and lacks definition and is not appropriate for this site and should be removed and replaced by a multi-storey car park which is more appropriate to town centre urban form"* and replace it with "Car parking for new development should follow the policy identified in LU -06."	No impacts identified.
Chapter 9 Urban Design Strategy		
16	Change text in UD-04 as follows:-*"Beneficial desire lines have been identified in Douglas (see Table 9.1) and these shall be sensitively and sustainably improved where possible."* In paragraph 9.5.9 remove the reference *to "Action Area Plan or Development Brief" and replace with "Overall Planning or Development Scheme."* Also in paragraph 9.5.9 insert the following text:- *"The recent planning permission from An Bord Pleanala for the change of use from a cinema to a discount food store and ancillary retail facilities."* In UD 9 remove the reference to *"Comprehensive Design Brief" and replace with "Overall Planning or Development Scheme."*	No impacts identified.
Chapter 10 Transport Strategy		
17	Public Parking Policy outline- Replace text under Parking Management (10.4.26 and 27) with the following:- **Car Parking for New Development** 8.4.26 A county wide strategy for parking is under consideration in the County Development Plan review process currently underway. It is envisaged that the parking strategy will place greater emphasis on walking, cycling and public transport use. Therefore, in Douglas, car parking in any new development shall adhere to the revised parking policy in the County Development Plan that will support national policies in relation to Sustainable Travel. **Policy No** | **General Policy - Car Parking for new development**	No impacts identified.

	LU -06 The car parking standards for new development within the Town Centre Precincts shall be guided by the revised parking policy in the County Development Plan that will support current national policy, (Smarter Travel – A Sustainable Transport Future - 2009).	
18	Sections 10.6.14 to 10.6.16 to be rewritten to include reference to Public Transport Priority Corridor.	No impacts identified.
19	Figure 10.7 (Public Transport Corridor on East Douglas Street) – remove reference to *PT Only between 08.00 and 18.00* and replace with Public Transport Priority Corridor.	No impacts identified.
20	Sections 10.8.7 - Presentation of the benefits of Douglas Village circulation plan to be included focussing particularly on the rationale/benefit of making Church Road one-way eastbound and discuss access options to the Church and school.	No impacts identified.
21	Section 10.8.8 to be reworded to include new description for East Douglas Street Public Transport Priority Corridor supporting traffic management arrangements.	No impacts identified.
22	Figure 10.13 (Village Centre Primary Traffic Management Measures) to be replaced with new figure showing arrangements for East Douglas Street.	No impacts identified.
23	Section 10.8.9 to describe Public Transport Priority Corridor.	No impacts identified.
24	Figure 10.14 (Proposed Shared Space on East Douglas Street) to be changed. Reference to *PT Only between 08.00 and 18.00* to be replaced with Public Transport Priority Corridor.	No impacts identified.
25	Figures 10.17 and 18 (Future Village Centre Circulation) to be removed	No impacts identified.
26	Add new paragraph after 10.8.21, as follows: *"To further protect the strategic road network we recommend that on the N40 South Douglas Road Off-Ramp and the N28 Rochestown Road Off-Ramp be fitted with a Double Loop Vehicle Detection system to ensure queuing does not back onto the N40 and N28 from the Off-Ramps and South Douglas and Rochestown roads respectively (i.e. if the queue formation on the off-ramp exceeded an agreed length, a 'hurry' call is introduced to 'Flush' the queue). It is also recommended that*	No impacts identified.

	some form of ramp-metering be applied at the Rochestown On-Ramp at the N28 to maintain the efficient operating capacity of the N28 at this point. It is further recommended that the operation of the traffic control system proposed for the Douglas area should work in tandem with future demand management policies and proposals envisaged by the NRA for the N40 and N28."	
27	Reference to a pedestrian crossing on Grange Road to be added at paragraph 10.9.3	No impacts identified.
28	Reference to traffic calming on Inchvale Road to be added at paragraph 10.9.3	No impacts identified.
Chapter 11 Implementation of DLUTS		
29	Insert the following text in paragraph 11.3: ***Implementation and Monitoring Strategy*** **1. *Introduction*** *The DLUTS is a 20 year programme of multi-disciplinary actions covering sustainable land use planning, urban design and transportation. In order to manage appropriately this programme, it is necessary to introduce an Implementation and Monitoring Group (IMG), that will co-ordinate both the programme of works and monitor its progress in relation to its overall vision.* **2. *Structure of Implementation and Monitoring Group (IMG)*** *The Implementation and Monitoring Group (IMG) will be set up within the Cork County Council, reporting directly to the Assistant County Manager (ACM) and comprising the following persons:-* • *Director of Service (Chair of the Group and Champion of the Project)* • *Area Engineer – Carrigaline* • *Development Management Planner* • *Planning Policy Unit* • *Architects Department* • *Transport Engineer* **3. *Function of IMG*** *The first function of the IMG will be to prepare an Inception Report of work to be carried out. In principle, the following functions will need to be included in the Inception Report:-* • *Preparation of the Amendment to the*	No impacts identified.

	Carrigaline Local Area Plan. • *Implementation of the programme of works in association with the NTA.* • *Implementation of Sustainable Schools Travel Plan* • *Statutory Planning Processes (Part 8)* *The IMG will meet bi monthly and will inform the Carrigaline Area Committee and the Key Stakeholders regularly. Consultation with the City Council will be necessary on cross boundary issues. Once the Town Centre Management Group is set up, it will provide the IMG with information on current issues being faced in Douglas.* *The second function of the IMG will be to identify indicators for monitoring the progress of the project. These indicators can be divided into:-* • *land use planning (land availability, retail vacancy, employment surveys, planning applications)* • *urban design indicators (public realm improvements and new buildings)* • *transport indicators (to include pedestrian counts at key locations to monitor footfall, transfer to other sustainable modes, improvements to public transport journey times, queuing and car journey times on the road network, increases in walking and cycling network, number of junction improvements)* • *environmental indicators (habitats, water quality, population and human health, air quality, cultural heritage, landscape and material assets).* 4. ***Outputs of IMG** – progress reports on the above.*	
Chapter 12 Conclusions & Recommendations		
30	All above changes to be incorporated into Chapter 12 as required.	All submissions
Habitats Directive Screening Report		
31	Remove the sentence on item 3.1 on page 6 of the Habitats Directive Screening Report : *" There has been flooding in Douglas at times of heavy rainfall in recent years when flows have exceeded the*	No impacts identified.

	capacity of this river."	
	Environmental Report	
32	Replace "Ballybrack River" with "Ballybrack Stream" in the whole document. Delete the following text in paragraph 6.5.34 :- *"It flowed through the community park and blocked the trash screen at the Church Street culvert with debris collected upstream. This resulted in storm water flooding properties on Church Street and entering the Douglas Village Shopping Centre. Serious flood damage was incurred in the shopping centre and also along Douglas East and West Roads"* and replace with the following:- *"Flood waters then flowed onto Church Road, then made its way down Church Lane, West Douglas Street and in an easterly direction to East Douglas Street. Douglas Community Park also encounters flood waters as the Ballybrack Stream burst its banks. The Ballybrack trash screen became blocked due to the volume of debris being conveyed in the stream as a result of the extreme rainfall event."* Insert new paragraph 6.5.40 as follows:- "***Proposed Flood Mitigation Works/Studies*** *The Douglas area was considered in the OPW's Lee CFRAM study but no works were suggested. Following the June 2012 event, the OPW have asked Cork County Council to progress a study of the catchment. Cork County Council is currently preparing the Consultants brief for the Douglas Flood Risk Assessment and Management Study. This study will be procured shortly."*	No impacts identified.