



COUNTY DEVELOPMENT PLAN 2016-2022

SEA Statement March 2016

SEA STATEMENT

FOR THE

DÚN LAOGHAIRE-RATHDOWN COUNTY DEVELOPMENT PLAN 2016-2022

STRATEGIC ENVIRONMENTAL ASSESSMENT

for: Dún Laoghaire Rathdown County Council

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Section 1 Introduction

1.1 Terms of Reference

This is the SEA Statement for the Dún Laoghaire Rathdown County Development Plan 2016-2022 Strategic Environmental Assessment (SEA).

1.2 SEA Definition

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic and social considerations.

1.3 Legislative Context

Directive 2001/42/EC of the European Parliament and of the Council, of 27 June 2001, on the assessment of the effects of certain plans and programmes on the environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use planning.

The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (Statutory Instrument Number (SI No. 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of Regulations became operational on 21 July 2004. The Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011) and the Planning and Development (SEA) (Amendment) Regulations 2011 (SI No. 201 of 2011).

Article 7 of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended requires that Strategic Environmental Assessment is undertaken for the preparation of certain Development Plans.

Where SEA is undertaken, the Regulations require that a Statement available to the public and the competent environmental authorities after the making of a Development Plan. This Statement is referred to as an SEA Statement¹.

1.4 Content of the SEA Statement

The SEA Statement is required to include information summarising:

- a) how environmental considerations have been integrated into the Plan;
- b) how the following have been taken into account during the preparation of the Plan:
 - the environmental report,
 - submissions and observations made to the planning authority on the Draft Plan and Environmental Report, and
 - any transboundary consultations [this is not relevant to this SEA]
- c) the reasons for choosing the Plan 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 Plan.

¹ Department of Environment, Heritage and Local Government (2004) Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities, Dublin: Government of Ireland.

1.5 Implications of SEA for the Plan

Dún Laoghaire-Rathdown County Council prepared the Draft Dún Laoghaire-Rathdown County Development Plan in accordance with Sections 11 and 12 of the Planning and Development Act 2000 (as amended).

SEA was undertaken on the Draft Plan in order to comply with the SEA Directive and transposing Regulations – the SEA Environmental Report contains the findings of this assessment. Appropriate Assessment² (AA) was also undertaken on the Draft Plan in order to comply with the Habitats Directive and transposing Regulations – the AA Natura Impact Report contains the findings of this assessment. A Strategic Flood Risk Assessment (SFRA) was also undertaken in order to comply with the Flood Risk Management Guidelines.

The Draft Plan and associated documents, including those relating to the SEA, AA and SFRA processes, were placed on public display and submissions were invited. Submissions were responded to in a Chief Executive's Report. Some submissions resulted in updates being made to SEA, AA and SFRA documentation.

At a Council meeting, on 22nd October 2015, the Members of the Council, by Resolution, proposed Material Alterations to the County Development Plan.

SEA and AA were undertaken on the Proposed Material Alterations and the findings of these assessments accompanied the Proposed Material Alterations on public display.

At a council meeting on the 17th February 2016, a number of the Proposed Material Alterations were adopted as part of the final Plan (some with further modifications) and a number of Proposed Material Alterations were not adopted.

After the adoption of the Plan, the Environmental Report that was originally placed on public display alongside the Draft Plan was updated in order to take account of both recommendations contained in submissions made during the process and changes to the Draft Plan that were made on foot of

submissions. This SEA Statement was also prepared.

Members of the planning authority have taken into account the findings of all relevant SEA output during their consideration of the Draft Plan and before its adoption.

² Appropriate Assessment is an impact assessment process concerning Natura 2000 Sites.

Section 2 How Environmental Considerations were integrated into the Plan

2.1 Introduction

Environmental considerations were integrated into the Plan through:

- Consultations with environmental authorities;
- Communication of environmental sensitivities through the SEA and associated Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes; and
- Suggestions of Plan provisions to mitigate effects.

In addition, far in advance of both the submission of the pre-Draft Plan to the Elected Members for approval and the placing of the Draft Plan (and associated SEA, AA and SFRA documents) on public display, Dún Laoghaire-Rathdown County Council undertook various works in order to inform the preparation of the Plan.

The findings of this strategic work have been integrated into the Plan, contributing towards both environmental protection and management and sustainable development within the County.

Strategic work done by the Council includes the preparation of the following:

- Background work in relation to the Sustainable Communities Strategy
- Background work in relation to the Enterprise and Employment Strategy
- Background work in relation to the Physical Infrastructure Strategy
- Background work in relation to the Built Heritage Strategy
- Background work in relation to the Community Strategy
- Housing Strategy
- Ecological Network
- Review of Wind Energy Strategy
- Review of Landscape Character Areas
- Green Infrastructure Strategy
- Review of DLUFP
- Review of SUFP
- Climate Change proofing

2.2 Consultations

As environmental authorities identified under the Planning and Development (SEA) Regulations, as amended, the following authorities were sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Council: Environmental Protection Agency, Department of Communications, Energy and Natural Resources, Department of Agriculture, Fisheries and Food, Department of the Environment, Community and Local Government, Department of Arts, Heritage and the Gaeltacht, Dublin City Council, South Dublin County Council and Wicklow County Council.

Further detail on submissions made on foot of the SEA scoping notice is provided under Section 3.2.

Furthermore, submissions were made on the Draft Plan and SEA Environmental Report while they were on public display and these resulted in updates being made to the SEA documents (see Section 3.3).

2.3 Communication of environmental sensitivities

2.3.1 Overview

Environmental considerations were integrated into the Draft Plan before it was placed on public display. Environmental sensitivities were mapped in order to identify which areas of the County would be most sensitive to development and would suffer the most adverse effects if growth was to be accommodated in those areas unmitigated.

The sensitivities were communicated to the Plan-making team on a regular basis from the outset of the Plan preparation process. Identifying areas with the most limited carrying

capacity within the Plan area helped future growth to be diverted away from these areas.

Sensitivities included the following:

- CORINE Land Cover Data;
- SPAs, SACs, NHAs, pNHAs and Water Management Units;
- Proposed Natural Heritage Areas;
- Soil Type;
- Geological Heritage Sites;
- Water Framework Directive (WFD) Status of Surface Waters;
- WFD Status of Groundwater;
- Aquifer Productivity;
- Aquifer Vulnerability;
- Entries to the WFD Register of Protected Areas (RPA);
- Occurrence of Available Historical Flood Risk Indicators;
- Archaeological Heritage - Entries to the Record of Monuments and Places;
- Architectural Heritage - Entries to the Record of Protected Structures and Architectural Conservation Areas;
- Landscape Character Assessment; and
- View Points and Scenic Routes.

A number of these sensitivities are mapped on Figure 2.1, Figure 2.2 and Figure 2.3.

In order to identify where most sensitivities within the County occur, a number of the environmental sensitivities listed above were weighted and mapped overlapping each other. Figure 2.4 provides an overlay of environmental sensitivities for the County.

It is emphasised that the occurrence of environmental sensitivities does not preclude development; rather it flags at a strategic level that the mitigation measures - which have been integrated into the Plan - will need to be complied with in order to ensure that the implementation of the Plan contributes towards environmental protection.

The overlay mapping shows that most of the County is of a low to moderate sensitivity. The level of environmental sensitivity increases towards the south west of the County due to ecological designations (including cSAC and pNHA designations), water sensitivities (extremely and highly vulnerable aquifers), sensitive landcover (peat bogs) and landscape designations (scenic routes and viewpoints).

A small number of areas located to the south-west and east of the county were classified as being of Extreme to Acute Vulnerability (sensitivities include hydrological, ecological, landscape and flood risk).

2.3.2 Appropriate Assessment

A Stage 2 Appropriate Assessment (AA) has been undertaken alongside the preparation of the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA concluded that the Plan will not have a significant adverse effect on European Sites, and that the integrity of the European Sites, in view of their conservation interests, will not be adversely affected.

The preparation of the Plan, SEA and AA has taken place concurrently and the findings of the AA have informed both the Plan and the SEA. All recommendations made by the AA were integrated into the Plan.

2.3.3 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) has been undertaken alongside the preparation of the Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

The preparation of the Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Plan and the SEA. All recommendations made by the SFRA have been integrated into the Plan.

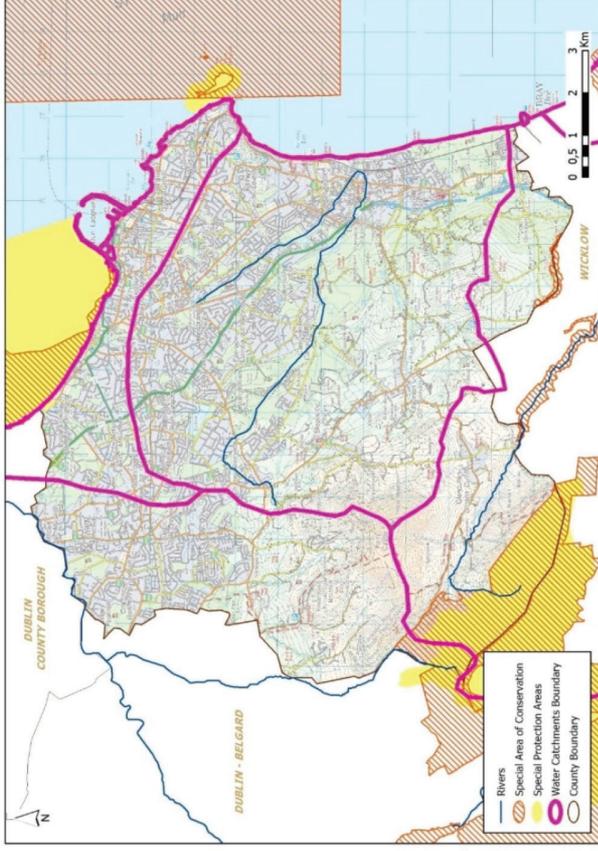
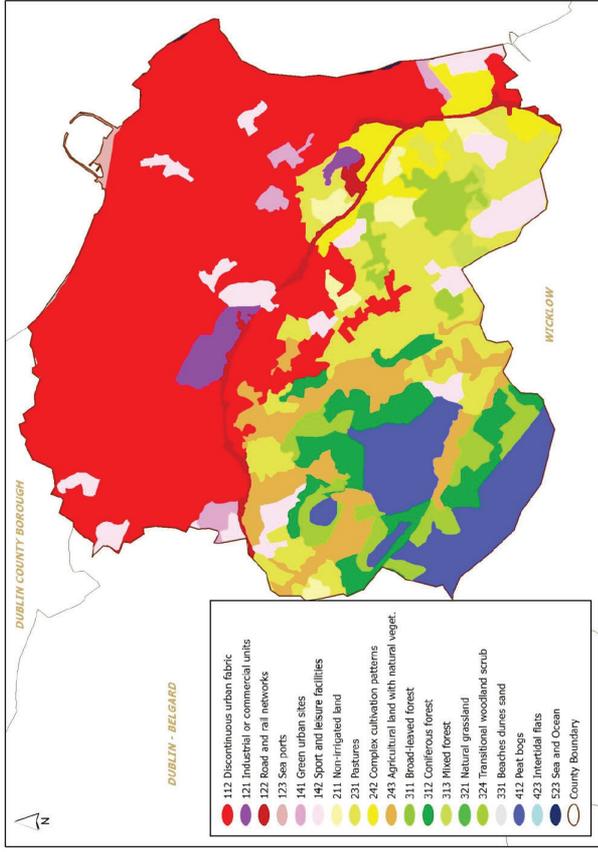
2.4 Suggestions of Plan provisions to mitigate effects

The SEA, AA and SFRA processes suggested various measures for integration into the Plan as provisions (policies and objectives) or parts of provisions in order to mitigate the effects of implementing the Plan and to contribute towards environmental protection and sustainable development.

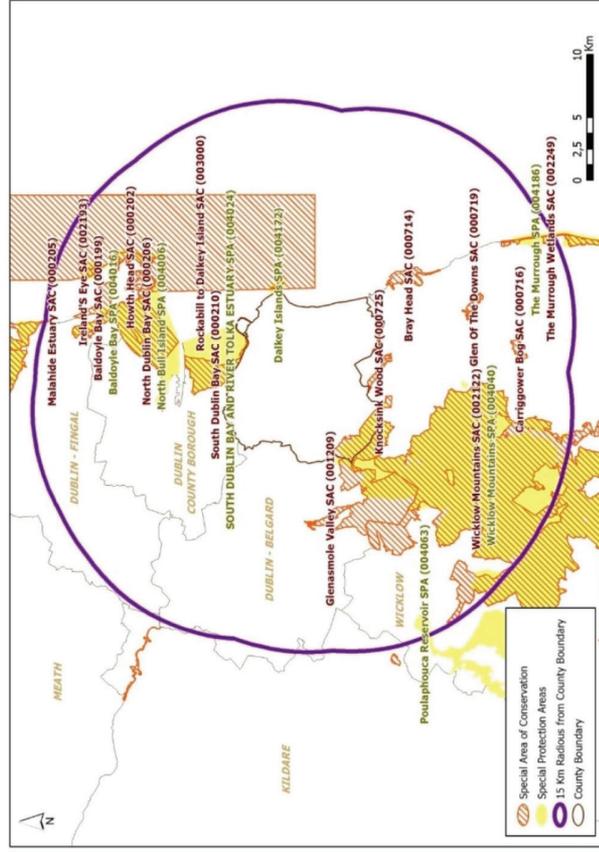
Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset

any significant adverse impacts on the environment of implementing the Plan.

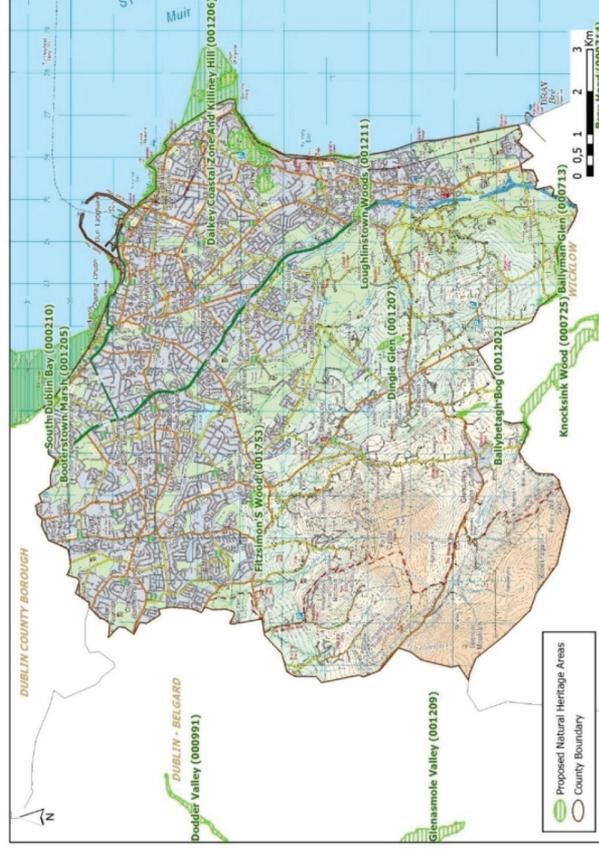
Table 2.1 details key mitigation measure(s) which have been integrated into the Plan under various environmental headings. The integration of these measures into the Plan occurred over a number of iterations and was informed by various communications through the SEA, AA and SFRA processes.



Land Cover Map



SPAs and cSACs with Water Management Units



SPAs and cSACs with names and 15km Buffer Area

Proposed Natural Heritage Areas in the Plan Area

Figure 2.1 Selection of Environmental Sensitivities (Set 1 of 3)

CAAS for Dún Laoghaire Rathdown County Council

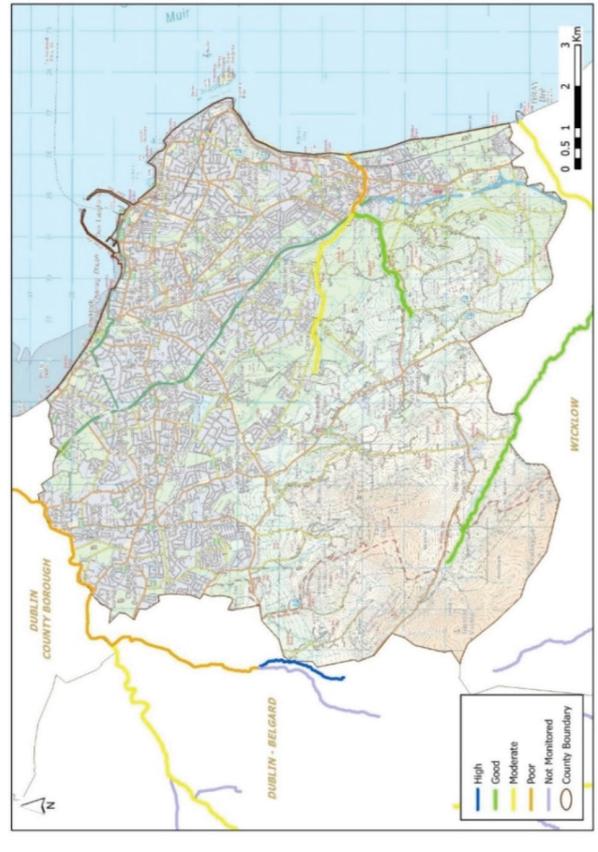
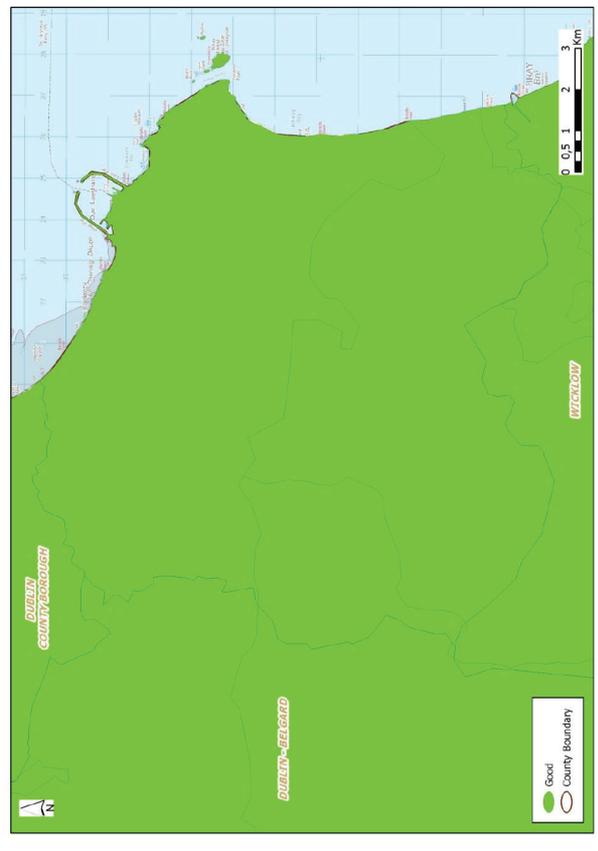
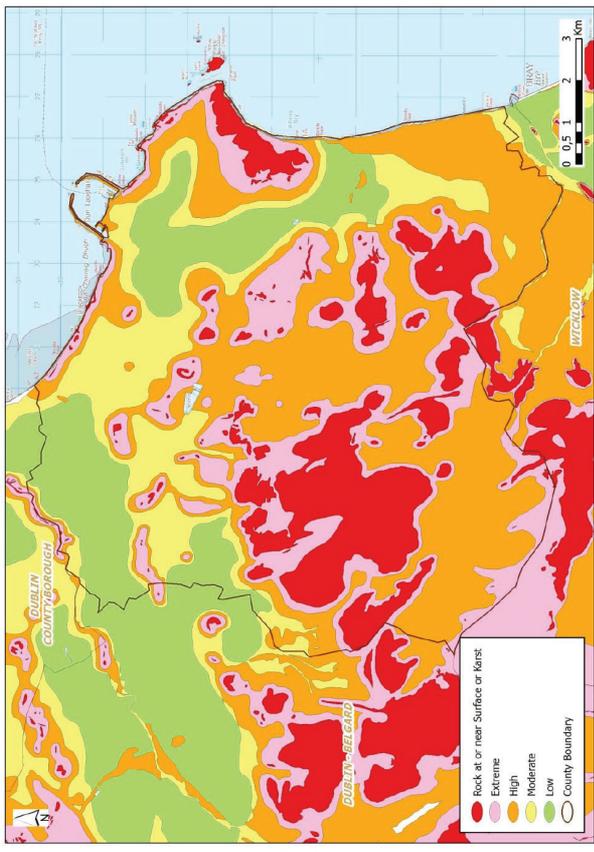
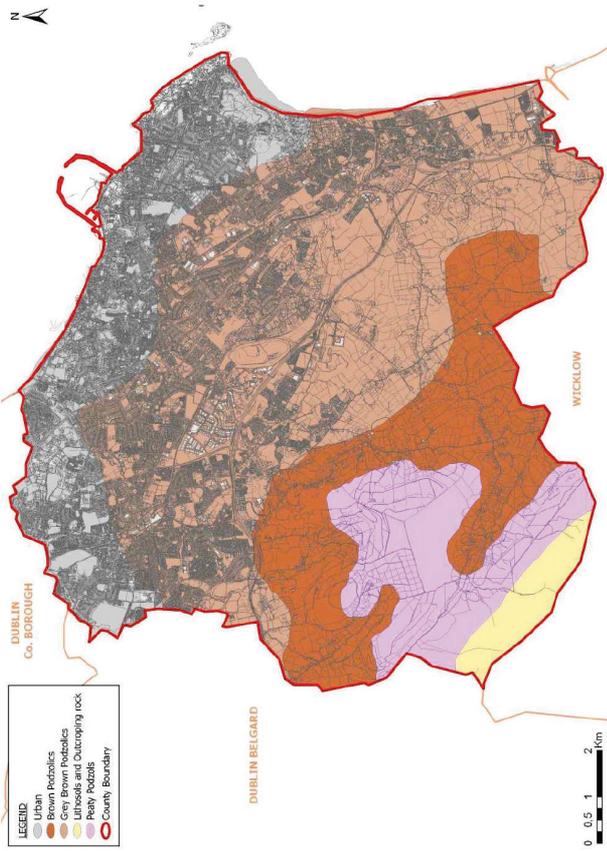
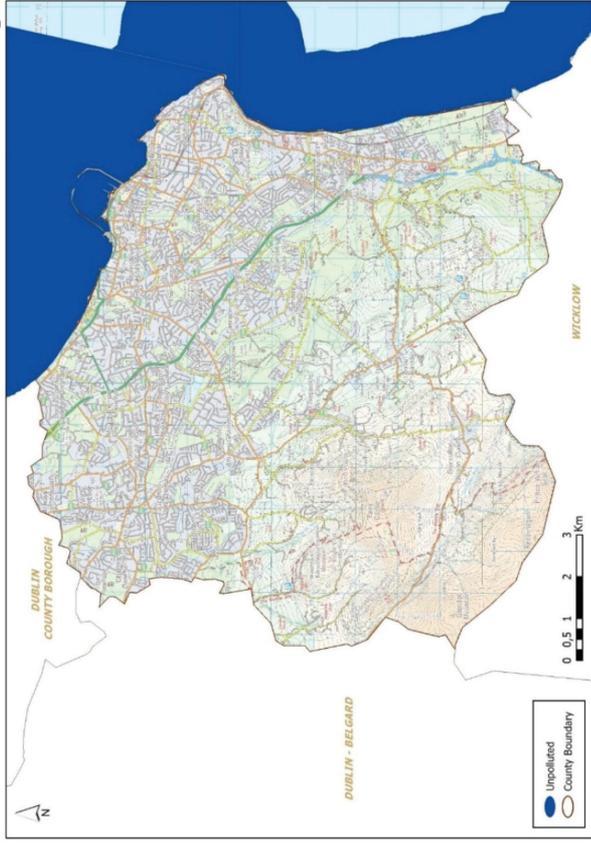
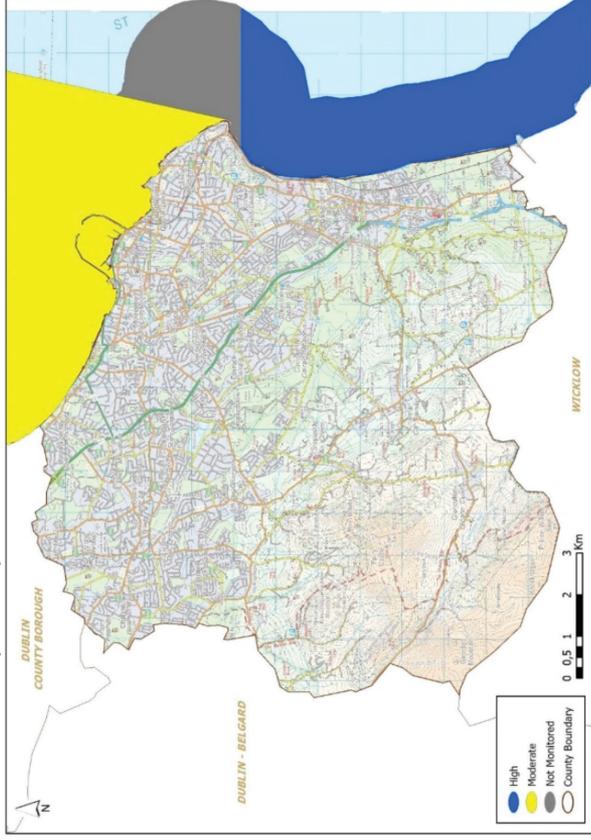


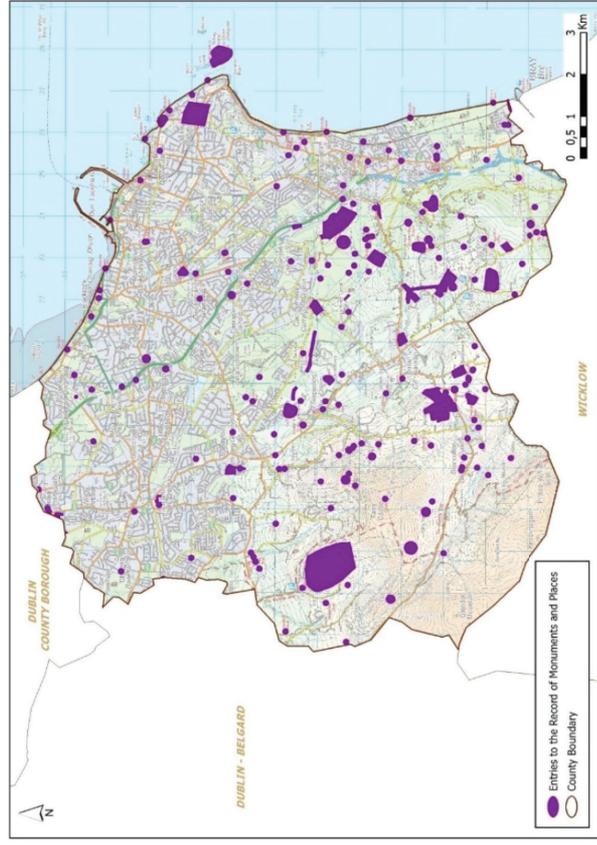
Figure 2.2 Selection of Environmental Sensitivities (Set 2 of 3)
CAAS for Dún Laoghaire Rathdown County Council



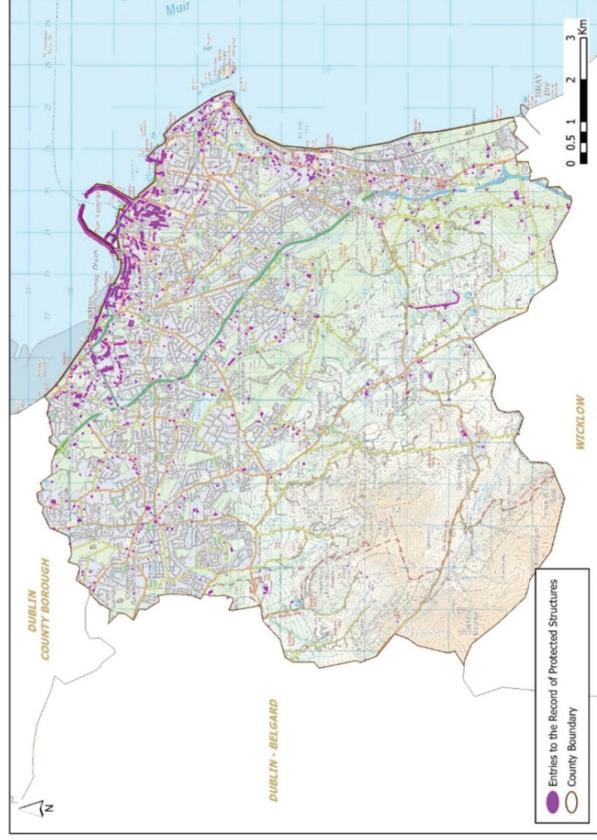
Coastal Water Quality



Coastal Water Status



Archaeological Heritage



Architectural Heritage

Figure 2.3 Selection of Environmental Sensitivities (Set 3 of 3)

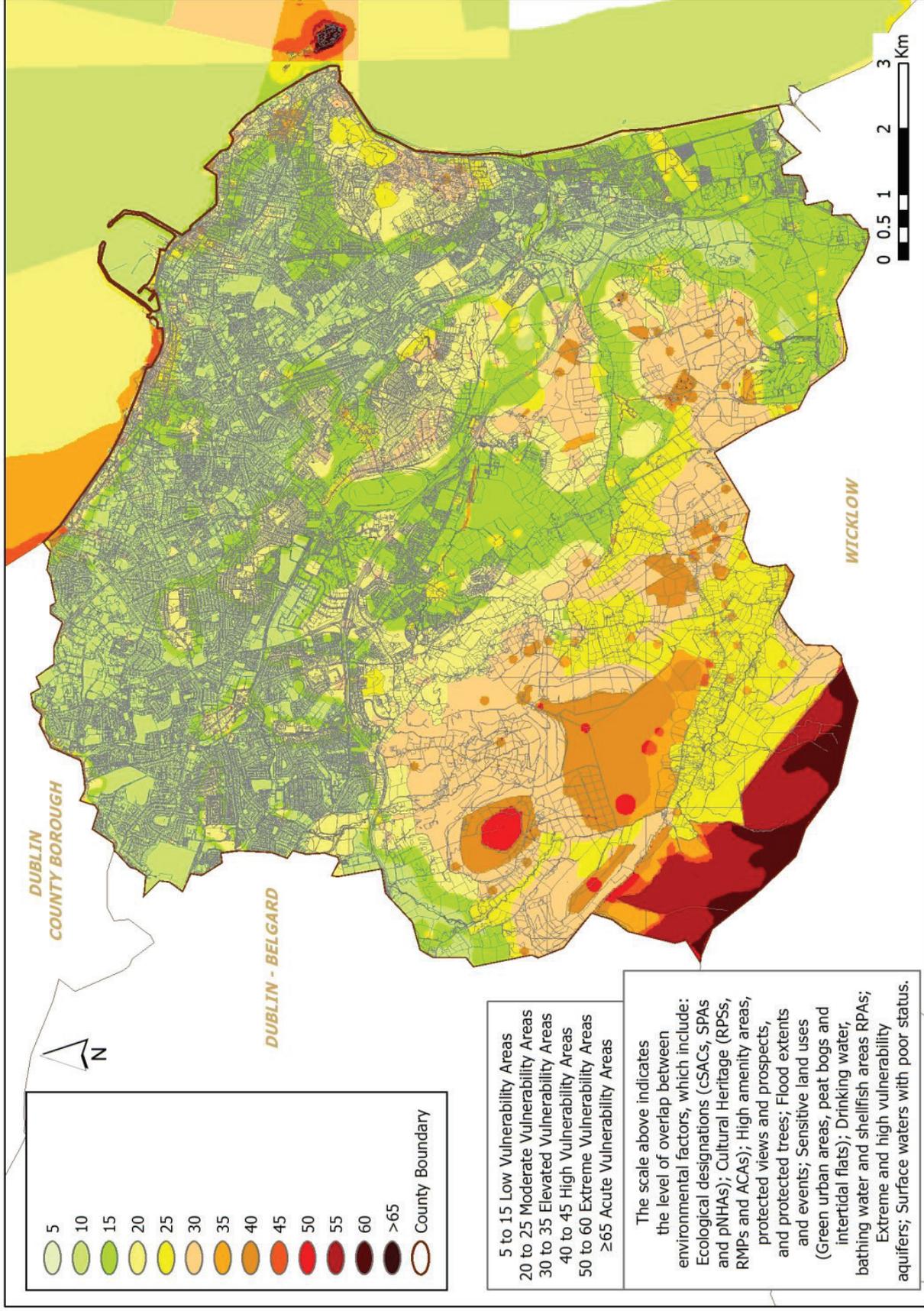


Figure 2.4 Overlay of Environmental Sensitivities

Source: CAAS (2015)

Table 2.1 Mitigation Measures

Potentially Significant Effect, if unmitigated	Environmental considerations that have integrated into the Plan
Loss of biodiversity with regard to Natura 2000 Sites and Annexed habitats and species & Loss of biodiversity with regard to designated sites including Wildlife Sites and listed species	Policy LHB19: Protection of Natural Heritage and the Environment* Policy LHB20: Habitats Directive* Policy LHB22: Designated Sites* Policy LHB27: Geological Sites Development Management 8.2.2 (v) Appropriate Assessment Development Management 8.2.9.4 Appropriate Assessment Development Management 8.2.7.1 Biodiversity Policy LHB16: National Park* Appropriate Assessment & Coastal Cycling Infrastructure Objective Policy EI1: Water Supply & Appropriate Assessment Policy EI2: Wastewater Treatment & Appropriate Assessment* Policy EI3: Surface Water Drainage & Appropriate Assessment* Policy EI4: Groundwater Protection & Appropriate Assessment
Loss of biodiversity with regard to ecological connectivity, stepping stones and non-designated biodiversity	Policy LHB23: Non-Designated Areas of Biodiversity Importance* Policy LHB 24: County-Wide Ecological Network* Policy LHB25 Rivers and Waterways* Policy LHB26: Hedgerows* Policy LHB29: Invasive Species
Spatially concentrated deterioration in human health	Policy CC10: Radon Gas Policy EI25: Major Accidents Policy EI20: Air and Noise Pollution Also see measures related to soil, water quality, flooding, waste water treatment and drinking water supply and quality.
Damage to the hydrogeological and ecological function of the soil resource	Development Management 8.2.9.7 New Developments–Environmental Impacts Also see measures related to water quality and waste water treatment.
Adverse impacts upon the status and quality of water bodies, including bathing waters	Policy EI22: Water Pollution Policy EI23: Rathmichael Ground and Surface Water Protection Policy EI3: Surface Water Drainage & Appropriate Assessment* Policy EI4: Groundwater Protection & Appropriate Assessment Policy EI6: Integrated Water Management Plans* Policy EI7: Water Quality Management Plans Policy EI8: Sustainable Drainage Systems* Policy EI10: Storm Overflows of Sewage to Watercourses* Policy LHB10: Beaches Also see measures related to water quality and waste water treatment.
Increase in the risk of flooding	Policy CC14: Catchment Flood Risk Assessment and Management (CFRAM)*. Policy CC15: Flood Risk Management*. Policy CC16: Cross-Boundary Flood Management Policy CC17: Coastal Defence*. Policy EI8: Sustainable Drainage Systems* Policy EI9: Stormwater Impact Assessments* Policy LHB23 Rivers and Waterways*
Failure to provide adequate and appropriate waste water treatment & Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean	Policy EI5: Water Supply and Wastewater* Policy EI11: Water Services Investment Programme* Development Management 8.2.9.3 Environmental Impact Assessment
Failure to contribute towards sustainable transport and associated impacts (including emissions)	See Sustainable Communities Strategy in Section 2 of the Plan. Also: Policy CC1: National Climate Change Adaptation Framework.* Policy CC2: Development of National Climate Change Policy and Legislation.* Policy CC3: Development of National Energy Policy and Legislation.* Policy CC4: Sustainable Energy Action Plan* Policy CC5: Limiting Emissions of Greenhouse Gases.*
Increases in waste levels	Policy EI12: Waste Management Strategy* Policy EI13: Waste Plans Policy EI14: Private Waste Companies Policy EI15: Waste Prevention and Reduction*

Potentially Significant Effect, if unmitigated	Environmental considerations that have integrated into the Plan
	Policy EI16: Waste Re-use and Re-cycling* Policy EI17: Refuse Disposal* Policy EI18: Hazardous Waste Policy EI19: Rehabilitation of the Former Ballyogan Landfill
Effects on entries to the Record of Monuments and Places and other archaeological heritage	Policy AH1: Protection of Archaeological Heritage Policy AH2: Protection of Archaeological Material in Situ Policy AH3: Protection of Historic Towns Policy AH4: Carrickmines Castle Site Policy AH5: Historic Burial Grounds Policy AH6: Underwater Archaeology
Effects on entries to the Records of Protected Structures, Architectural Conservation Areas and other architectural heritage	Policy AR1: Record of Protected Structures Policy AR2: Protected Structures Applications and Documentation Policy AR3: Protected Structures and Building Regulations Policy AR4: National Inventory of Architectural Heritage (NIAH) Policy AR5: Buildings of Heritage Interest Policy AR6: Protection of Buildings in Council Ownership Policy AR7: Energy Efficiency of Protected Structures Policy AR8: Nineteenth and Twentieth Century Buildings, Estates and Features Policy AR9: Protection of Historic Street Furniture Policy AR10: Protection of Coastline Heritage Policy AR11: Industrial Heritage Policy AR12: Architectural Conservation Areas Policy AR13: Demolition within an ACA Policy AR14: Shopfronts within an ACA Policy AR15: Public Realm and Public Utility works within an ACA Policy AR16: Candidate Architectural Conservation Areas (cACA) Policy AR17: Development within a cACA
Occurrence of adverse visual impacts	Policy LHB2: Preservation of Landscape Character Areas* Policy LHB3: Seascape Policy LHB4: High Amenity Zones* Policy LHB5: Historic Landscape Character Areas Policy LHB6: Views and Prospects Policy LHB7: Coastal Zone Management and Dublin Bay* Policy EI21: Light Pollution

Section 3 Environmental Report and Submissions & Observations

3.1 Introduction

This section details how both the Environmental Report and submissions and observations made to the planning authority on the Environmental Report and SEA process have been taken into account during the preparation of the Plan.

3.2 SEA Scoping Submissions

3.2.1 Introduction

As environmental authorities identified under the Planning and Development (SEA) Regulations, as amended, the following authorities were sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to the Council: Environmental Protection Agency, Department of Communications, Energy and Natural Resources, Department of Agriculture, Fisheries and Food, Department of the Environment, Community and Local Government, Department of Arts, Heritage and the Gaeltacht, Dublin City Council, South Dublin County Council and Wicklow County Council.

Submissions were made by the Environmental Protection Agency, the Department of Arts, Heritage and the Gaeltacht and the Department of Communications, Energy and Natural Resources (Geological Survey of Ireland) during the SEA Scoping/ Plan-preparation process. These submissions influenced the scope of the assessments as detailed in the final SEA Scoping Report.

The submission from the Environmental Protection Agency included the following information that informed the scope of the SEA:

- Scoping Process Guidance – reference to an online set of guidance on the SEA Scoping Process and an SEA Pack;
- Specific comments were provided on: the need to be consistent with the population targets set out in the

Regional Planning Guidelines for the Greater Dublin Area; draft EPA guidance on the assessment of alternatives; potential cumulative effects on the environment, as a result of any proposed development in the Plan; relevant aspects of the Dun Laoghaire Harbour Master Plan, adopted in October 2011; the need for adequate and appropriate critical infrastructure to be in place prior to permission being granted for development; maintaining the 'Blue Flag' status of the bathing waters at Seapoint and Killiney beaches; the protection of surface and groundwater quality; the promotion and incorporation of energy and water conservation measures; and the identification and proposals for the control of invasive species;

- Updated SEA Regulations / Circular and the need to take these into account, and
- Consultation with environmental authorities.

The submission from the Department of Communications, Energy and Natural Resources was made through the Geological Survey of Ireland. This submission provided information/suggestions on topics including the following:

- Geological Datasets
- Geological Heritage
- Data Updates

The submission from the Department of Arts, Heritage the Gaeltacht provided information/suggestions on topics including Appropriate Assessment, SEA and the protection of ecology.

All the above submissions influenced the scope of the SEA.

3.3 Submissions on the Environmental Report

Furthermore, submissions were made on the Draft Plan and SEA Environmental Report while

they were on public display and these resulted in updates being made to the SEA documents.

These submissions included those made by the Environmental Protection Agency, the Department of Arts, Heritage and the Gaeltacht, the Department of Environment, Community and Local Government and the Geological Survey of Ireland. Updates made to the SEA Environmental Report (ER) on foot of these submissions included the following:

- The addition of text associated with the Greater Dublin Area Cycle Network Plan 2013 under the SEA ER Section 2.5;
- The integration of text into Section 10.4 of the SEA ER as part of the monitoring/review process;
- The updating of wording in Section 8 of the SEA ER to reflect the correct wording for SLO 131;
- The correction of the numbering of the policies and objectives contained in Section 8.7.5 of the SEA ER;
- The renumbering of relevant Climate Change, Energy Efficiency and Flooding Policies including Policy CC16 'Costal Defence' in Section 8.7.6 of the SEA ER; and
- The replacement of the information on sites of geological interest in Section 4.5 of the SEA Environmental Report with that provided by the GSI in their submission.

3.4 Environmental Report

Dún Laoghaire-Rathdown County Council prepared the Draft Dún Laoghaire-Rathdown County Development Plan in accordance with Sections 11 and 12 of the Planning and Development Act 2000 (as amended).

SEA was undertaken on the Draft Plan in order to comply with the SEA Directive and transposing Regulations – the SEA Environmental Report contains the findings of this assessment. Appropriate Assessment³ (AA) was also undertaken on the Draft Plan in order to comply with the Habitats Directive and transposing Regulations – the AA Natura Impact Report contains the findings of this assessment. A Strategic Flood Risk Assessment (SFRA) was

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SEA and AA were undertaken on the Proposed Material Alterations and the findings of these assessments accompanied the Proposed Material Alterations on public display.

At a council meeting on the 17th February 2016, a number of the Proposed Material Alterations were adopted as part of the final Plan (some with further modifications) and a number of Proposed Material Alterations were not adopted.

After the adoption of the Plan, the Environmental Report that was originally placed on public display alongside the Draft Plan was updated in order to take account of both recommendations contained in submissions made during the process and changes to the Draft Plan that were made on foot of submissions. This SEA Statement was also prepared.

Members of the planning authority have taken into account the findings of all relevant SEA output during their consideration of the Draft Plan and before its adoption.

³ Appropriate Assessment is an impact assessment process concerning Natura 2000 Sites.

Section 4 Alternatives and the Plan

4.1 Introduction

One of the critical roles of the SEA was to facilitate an evaluation of the likely environmental consequences of a range of alternatives for the Plan. Dún Laoghaire Rathdown County Council in preparing the County Development Plan developed three alternative scenarios which are realistic and capable of implementation.

4.2 Description of Alternatives

Three different alternative scenarios for the overall development plan approach were considered during the preparation of the Plan. The scenarios were identified early in the Plan-preparation/SEA process and developed further with various iterations passing to and from the Planning and SEA teams.

The alternatives provide the basis for the comparative evaluation of the likely environmental effects of each plan, which in turn serves the purpose of identifying which features of plans and policies are likely to be sensitive or robust over the widest range of circumstances. For the purpose of this assessment, no particular alternative is preferred over the other, indeed the chosen strategy combines elements from each alternative considered.

Scenario A: Restructuring the Current Housing Pattern

Scenario A includes some 'densification' by restructuring the utilisation of current housing stock as well as the provision of new higher density units on extensive and smaller 'pocket' greenfield sites. This aims to make the current housing stock use land and services more efficiently by increasing the occupancy of units. The approach seeks to influence and manage population densities in existing units through incentives to increase household occupancy in the County therefore reducing the need for housing growth. According to the 2011 census, 23% of the current housing stock is occupied by one inhabitant; often these units have the capacity to facilitate a greater number of inhabitants. The Housing Agency forecast that by 2018 in the Dublin Region that 57% of all households are likely to be for one and two person households.

Scenario A would facilitate opportunities to rehouse the population within the planned higher density areas of the County [such as Cherrywood] as well as by using incentives e.g. such as encouraging small apartment buildings within or near mature residential enclaves, or more suitable types of 'empty-nester' developments, thus freeing up other existing underutilised housing stock with the capacity for higher population density. The policy would aim to achieve one quarter of new housing through incentives to facilitate densification of existing areas combined with achieving the remainder in greenfield areas such as Cherrywood.

The scenario would focus on urban hubs within the County and along existing or planned public transport corridors. Priorities would be placed on protecting the residential amenity and character of established residential areas by providing opportunities to rehouse the current population in the same community. This would ensure a sustainable mix of population and employment and increase the critical mass of activity required to sustain an integrated public transport network for the County. The method also facilitates a more sustainable approach to the current housing pattern by using the existing housing stock and associated existing social and physical services more efficiently.

Scenario B: Demographic Alternative - Phased Zoning

Scenario B seeks to focus development on demographic growth within the County over the lifetime of the Plan. Using this approach, additional lands would be prioritised and zoned on a phased basis over the lifetime of the Development Plan using demographic alternatives based on high, medium and low

growth. The development would also take into account factors including demand, economic growth and availability of funding and priorities for infrastructure and service provision.

There is an emerging pattern where the population are increasingly choosing to live within the M50 in areas like Dún Laoghaire-Rathdown that have a high amenity and recreational value. However, the development of additional lands increases the risk to amenities and environmental sensitivities. By employing the method of phased zoning, Dún Laoghaire-Rathdown County Council will be able to incrementally facilitate different levels of demographic growth while ensuring the protection of environmental sensitivities - including green corridors and areas of high amenity and recreational value.

The scenario would ensure that areas currently zoned and serviced by foul water and water supply schemes are prioritised and developed/redeveloped initially - including Cherrywood which is designated as a 'Strategic Development Zone' and smaller sites throughout the County that are presently available and serviced with infrastructure, followed by zoned areas south of the County that are waiting for funding to be made available for provision of foul drainage or water supply.

By selecting zones on a phased basis for development/redevelopment to accommodate growth as it occurs, this scenario allows for a greater degree of coordination of development through a plan-led approach in sync with the relevant planning strategies. This scenario needs to be viewed as requiring alternative scenarios of phasing/sequencing to take account of the reality that implementation will be determined by the priorities and budgets of external factors such as Irish Water.

Scenario C: Market-Led Growth

Alternative Scenario C facilitates an evaluation of the consequences of allowing the location and nature of development to respond to likely market demand or land availability with applications being evaluated on a case by case basis – especially where developments are proposed on green belt/sports areas or rural areas.

For evaluation purposes, it assumes that the areas proposed for development would occur on lands at the edge of currently developed areas – which have poor public transport links, and little or no current infrastructure capacity – such a water supply or foul drainage.

A pattern of opportunistic, but potential non-conforming, applications – of this type – are an historically persistent feature of development during periods of economic recovery or expansion and, as such, constitute a realistic alternative that needs to be assessed. This is particularly relevant during a period of rapidly changing demand – such as is currently emerging – where developments for specialist residential accommodation – such as units for single persons, student housing and housing for 'down-sizing, empty-nesters' may give rise to un-met needs that have not been adequately anticipated by current housing policies.

This scenario needs to be given equal evaluation to determine whether – notwithstanding potential non-conformity with national and regional planning policies – it could produce options that are environmentally advantageous.

4.3 Evaluation of Alternative Scenarios

The table overleaf summarises the evaluation of environmental effects of the alternative scenarios that is provided in the SEA Environmental Report.

The provisions of the alternatives are evaluated using compatibility criteria in order to determine how they would be likely to affect the status of the Strategic Environmental Objectives (SEOs).

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the Plan can be tested. If complied with in full, SEOs would result in an environmentally neutral impact from implementation of the Plan. The SEOs are set out under a range of topics and are used as standards against which the provisions of the Plan can be evaluated in

order to help identify areas in which potential adverse impacts may occur. SEOs are distinct from the objectives of the Plan and are developed from international and national policies which generally govern environmental protection objectives. SEOs used in the assessment are as follows:

- *SEO B1: To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species*
- *SEO B2: To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones (designated or not) - are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species*
- *SEO B3: To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of listed species*
- *SEO PHH1: To protect populations and human health from exposure to incompatible landuses*
- *SEO S1: To avoid damage to the hydrogeological and ecological function of the soil resource*
- *SEO W1: To maintain and improve, where possible, the quality and status of surface waters*
- *SEO W2: To prevent pollution and contamination of ground water*
- *SEO W3: To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)*
- *SEO M1: To serve new development with adequate and appropriate waste water treatment*
- *SEO M2: To serve new development with adequate drinking water that is both wholesome and clean*
- *SEO M3: To reduce waste volumes, minimise waste to landfill and increase recycling and reuse*
- *SEO C1: To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport*
- *SEO CH1: To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context*
- *SEO CH2: To protect architectural heritage including entries to the Record of Protected Structures and Architectural Conservation Areas and their context*
- *SEO L1: To minimise significant adverse visual impacts within and adjacent to the Plan area - especially having regard to the Plan Policies LHB2 to 6 which provide for the protection and management of Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects.*

The SEOs and the alternatives are arrayed against each other to identify which interactions - if any - would cause effects on specific components of the environment. Where the appraisal identifies a conflict with the status of an SEO the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance 'to ensure compliance with the Habitats Directive with regard to the protection of Natura 2000 Sites and Annexed habitats and species'.

The interactions identified are reflective of likely significant environmental effects ;

- Interactions that would be likely to improve the status of a particular SEO would be likely to result in a significant positive effect on the environmental component to which the SEO relates.
- Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated would be likely to result in potential significant negative effects however these effects could be mitigated (for the chosen alternative these effects will be mitigated by measures which have been integrated into the Plan).

Table 4.1 Evaluation of Alternative Scenarios against SEOs

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated
<p>Scenario A:</p> <p>Restructuring the Current Housing Pattern</p>	<p>By planning higher density areas, providing incentives to facilitate densification of existing areas and providing development along existing or planned public transport corridors, Scenario A would:</p> <ul style="list-style-type: none"> • Avoid the need for unnecessary greenfield development in certain locations thereby contributing towards the protection of many environmental components SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1 • Help to maximise the uptake in smarter, more sustainable modes of transport and minimise transport related emissions. SEOs C1 PHH1 • Enable development to be served by existing water services and drainage infrastructure, subject to capacity being provided. SEOs M1 M2 W1 W2 W3 B1 B2 B3 S1 PHH1 		<p>By providing for infill within existing developed areas, this scenario would potentially result in a localised intensification of effects upon the protection of cultural heritage, protection of biodiversity and flood risk (cumulative loss of storage) in urban areas. SEOs CH1 CH2 B1 B2 B3 W3</p> <p>Potential adverse environmental effects arising would be present during the implementation of this scenario however it would be possible to mitigate them and residual adverse effects would be likely to be non-significant.</p> <p>SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>
<p>Scenario B:</p> <p>Demographic Alternative - Phased Zoning</p>	<p>By providing for phasing, Scenario B would:</p> <ul style="list-style-type: none"> • Delay the piecemeal replacement of non-artificial surfaces with artificial surfaces in areas which are not prioritised for development thereby delaying potential effects and contributing towards the protection of many environmental components SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1 • Help to maximise the uptake in smarter, more sustainable modes of transport and minimise transport related emissions by concentrating in development in specific, considered locations already served by public transport SEOs C1 PHH1 • Enable development to be served by existing water services and drainage infrastructure, subject to capacity being provided SEOs M1 M2 W1 W2 W3 B1 B2 B3 S1 PHH1 		<p>The phasing of zoning provided for by the Plan would facilitate the development of the Plan area and therefore would potentially conflict with a number of environmental components. It would be possible to mitigate potential adverse effects arising and residual adverse effects would be likely to be non-significant. SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>
<p>Scenario C:</p> <p>Market-Led Growth</p>	<p>Under this scenario, infilling of existing developed areas would be significantly less likely to occur. Consequently, in urban areas, there would be potential for beneficial effects to occur with regard to the protection of cultural heritage, biodiversity and flood risk in urban areas. SEOs CH1 CH2 B1 B2 B3 W3</p>	<p>Because the areas proposed for development would occur on lands at the edge of currently developed areas - which have poor public transport links, have little or no current infrastructure capacity, such a water supply or foul drainage, and have low levels of development or are previously undeveloped, it would be difficult to mitigate potential adverse effects. It is likely that implementation of a Plan which evolves from this scenario would result in significant residual adverse effects on various environmental component SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>	

4.4 The Selected Alternative Scenario for the Plan

The alternative scenario for the County Development Plan which has emerged from the planning/SEA process is a mixture of Scenarios A and B (see individual evaluations provided above). The evaluation of the combination of Scenarios A and B against the SEOs is provided on Table 4.2 below.

Elements of Scenario A which have been integrated into the Plan include:

- planned higher density areas
- incentives to facilitate densification of existing areas
- focus on urban hubs
- development along existing or planned public transport corridors
- protecting the residential amenity and character
- a sustainable mix of population and employment

Elements of Scenario B which have been integrated into the Plan include:

- taking into account factors including demand, economic growth and availability of funding
- ensuring the protection of environmental sensitivities
- ensuring that areas currently zoned and serviced by foul water and water supply schemes are prioritised

Table 4.2 Evaluation of Selected Alternative Scenario against SEOs

	Likely to Improve status of SEOs	Potential Conflict with status of SEOs- likely to be mitigated
The Selected Alternative Scenario	<p>By planning higher density areas, providing incentives to facilitate densification of existing areas and providing development along existing or planned public transport corridors in a manner which is generally phased, the Plan would:</p> <ul style="list-style-type: none"> • Avoid the need for unnecessary greenfield development in certain locations thereby contributing towards the protection of many environmental components SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 CH1 CH2 L1 • Help to maximise the uptake in smarter, more sustainable modes of transport and minimise transport related emissions. SEOs C1 PHH1 • Enable development to be served by existing water services and drainage infrastructure, subject to capacity being provided. SEOs M1 M2 W1 W2 W3 B1 B2 B3 S1 PHH1 	<p>By providing for infill within existing developed areas, this scenario would potentially result in a localised intensification of effects upon the protection of cultural heritage, protection of biodiversity and flood risk (cumulative loss of storage) in urban areas. SEOs CH1 CH2 B1 B2 B3 W3</p> <p>Potential adverse environmental effects arising would be present during the implementation of this scenario however it would be possible to mitigate them and residual adverse effects would be likely to be non-significant. SEOs B1 B2 B3 PHH1 S1 W1 W2 W3 M1 M2 M3 C1 CH1 CH2 L1</p>

4.5 Reasons for choosing the Draft Plan in light of the other alternatives dealt with

The alternative scenario for the County Development Plan which has emerged from the planning/SEA process is a mixture of Scenarios A and B (see Section 4.4 above).

The Plan was developed by the Planning Team, placed on public display as the Draft Plan and eventually adopted by the Elected Members having regard to both:

1. The environmental effects which are summarised in this section; and
2. Planning - including social and economic - effects which also considered by the Council.

By complying with appropriate mitigation measures - including those which have been integrated into the Plan - potential adverse environmental effects which could arise as a result of implementing this scenario would be likely to be avoided, reduced or offset. Section 5 of this report summarises how the Plan was informed by environmental considerations.

Section 5 Monitoring Measures

5.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures which will be used in order to monitor the likely significant effects of implementing the Plan.

Monitoring can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

5.2 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives which are detailed in the SEA Environmental Report and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) which were identified with regard to the relevant strategic actions.

Table 5.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated.

The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

5.3 Sources

Measurements for indicators generally come from existing monitoring sources. Existing monitoring sources include those maintained by the Council and the relevant authorities e.g. the Environmental Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office.

Internal monitoring of the environmental effects of grants of permission in the Council will provide monitoring of various indicators

and targets on a grant of permission by grant of permission⁴ basis. Where significant adverse effects - including positive, negative, cumulative and indirect - have the potential to occur upon, for example, entries to the RMP, entries to the RPS or ecological networks as a result of the undertaking of individual projects or multiple individual projects such instances should be identified and recorded and should feed into the monitoring evaluation.

5.4 Reporting and Responsibility

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan will be prepared in advance of the beginning of the review of the Plan. This report should address the indicators set out below.

The Council is responsible for the ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports and, if necessary, the carrying out of corrective action.

Dún Laoghaire-Rathdown County Council are responsible for the implementation of the SEA Monitoring Programme including

- Linking SEA monitoring output with the mid-term review of the Development Plan;
- Monitoring specific indicators and identifying any significant effects, including cumulative effects;
- Reviewing the effectiveness of monitoring/mitigation measures during the lifetime of the Plan; and
- Identifying any cumulative effects.

⁴ The likely significant effects of development proposals on environmental sensitivities are further determined during the development management process. By documenting this determination (e.g. whether a proposed development will impact upon a Protected Structure or whether a proposed development can be adequately served with water services) while granting permissions, or at a later date, the requirement to monitor the effects of implementing the Plan can be achieved.

5.5 Thresholds

Thresholds at which corrective action will be considered include:

- The occurrence of flood events;
- Court cases taken by the Department of Arts, Heritage and the Gaeltacht regarding impacts upon archaeological heritage including entries to the RMP;
- Complaints received from statutory consultees regarding avoidable environmental impacts resulting from development which is granted permission under the Plan;
- Boil notices on drinking water; and
- Fish kills.

Table 5.1 Selected Indicators, Targets and Monitoring Sources

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Biodiversity, Flora and Fauna	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive	B1: Maintenance of favourable conservation status for all habitats and species protected under National and International legislation to be unaffected by implementation of the Plan ⁵	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Department of Arts, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). Department of Arts, Heritage and the Gaeltacht's National Monitoring Report for the Birds Directive under Article 12 (every 3 years). Consultations with the NPWS (at monitoring evaluation - see Section 5.4).
	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan	B2: No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for by the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). CORINE mapping resurvey (every c. 5 years). Review of Council Ecological Network Mapping
	B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan	B3i: Avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultations with the NPWS (at monitoring evaluation - see Section 5.4).
Population and Human Health	B3ii: Number of significant impacts on the protection of listed species	B3ii: No significant impacts on the protection of listed species	
	PHH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan, as identified by the Health Service Executive and Environmental Protection Agency	PHH1: No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan	<ul style="list-style-type: none"> Consultations with EPA and Health Service Executive (at monitoring evaluation - see Section 5.4).
Soil	S1: Soil extent and hydraulic connectivity	S1: To minimise reductions in soil extent and hydraulic connectivity	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).

⁵ Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:
(a) no alternative solution available;
(b) imperative reasons of overriding public interest for the plan to proceed; and
(c) adequate compensatory measures in place.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Water	<p>W1i: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)</p> <p>W1ii: Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)</p> <p>W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p> <p>W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk</p>	<p>W1i: Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status'⁶</p> <p>W1ii: To achieve - as a minimum - Mandatory values and, where possible, to achieve Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)</p> <p>W2: Not to affect the ability of groundwaters to comply with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p> <p>W3: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with <i>The Planning System and Flood Risk Management Guidelines for Planning Authorities</i></p>	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual). EPA <i>The Quality of Bathing Water in Ireland</i> reports. Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual). Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).
Material Assets	<p>M1: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan</p> <p>M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan</p> <p>M3i: Total collected and brought household waste</p> <p>M3ii: Packaging recovered (t) by self-complying packagers</p> <p>M3iii: Percentage of population travelling to work, school or college by public transport or non-mechanical means</p>	<p>M1: All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan</p> <p>M2: No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan</p> <p>M3i: Minimise increases in and, where possible, reduce household waste generation</p> <p>M3ii: Maximise increases in packaging recovered (t) by self-complying packagers</p> <p>M3iii: An increase in the percentage of the population travelling to work, school or college by public transport or non-mechanical means</p>	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). EPA The Provision and Quality of Drinking Water in Ireland reports (multi-annual). EPA Remedial Action List (every quarter). EPA National Waste Reports EPA Ireland's Environment Reports CSO Population Data (every c. 5 years).
Air and Climatic Factors			

⁶ Good status as defined by the WFD equates to approximately the following in the current national schemes of classification as set out by the EPA:

- Q4 in the biological classification of *rivers*; and
- Unpolluted status in the Assessment of Trophic Status of Estuaries and Bays in Ireland (ATSEBI).

CAAS for Dún Laoghaire Rathdown County Council

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source (Frequency)
Cultural Heritage	<p>CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) - protected from significant adverse effects arising from new development granted permission under the Plan</p> <p>CH2: Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan</p>	<p>CH1: Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and their context of the above within the surrounding landscape where relevant) from significant adverse effects arising from new development granted permission under the Plan</p> <p>CH2: Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan</p>	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 5.4).
Landscape	<p>L1: Implementation of Plan Policies LHB2 to LHB6 which provide for the protection and management of Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects</p>	<p>L1: To implement Plan Policies LHB2 to LHB6 which provide for the protection and management of Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects</p>	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 5.4).

