SEA Environmental Report
Appendix II – Non-Technical Summary

FOR THE

Draft
Old Connaught Local Area Plan
2025

for: Dún Laoghaire-Rathdown County Council

by: CAAS Ltd.

February 2025

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Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Old Connaught Draft Local Area Plan (LAP) 2025. The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. The Environmental Report has been prepared as part of a Strategic Environmental Assessment (SEA) process for the Plan.

What is SEA?

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed 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, social and other considerations.

Why is SEA needed? The Benefits

SEA is the Council's and the public's guide to what are generally the best areas for development in the Plan area.

SEA enables the planning authority to direct development towards robust parts of the Plan area that are planned to be well-serviced and connected – thereby facilitating the general avoidance of incompatible development in the most sensitive, least well-serviced and least well-connected areas, in the Plan area and beyond.

SEA provides greater certainty to the public and to developers. Plans are more likely to be adopted without delays or challenges and planning applications are more likely to be granted permission. Environmental mitigation is more likely to cost less.

An overlay of individual environmental sensitivities (those summarised under Section 3 of this report) for the Plan area is shown at Figure 1.1. The mapping shows that environmental sensitivities are not evenly distributed throughout the Plan area. Most of the Plan area is identified as having low to moderate levels of sensitivity.

The most sensitive areas in the Plan area include:

The most sensitive areas within and in close proximity to the Plan area include:

- Various locations and areas within the existing built-up footprint of Old Connaught, on account of cultural heritage designations, including entries to the Record of Monuments and Places, Entries to the Record of Protected Structures;
- Rivers, streams and adjacent areas, on account of water status, ecological sensitivities and elevated levels of flood risk; and
- Ballyman Glen, to the south of the Plan area, on account of ecological sensitivities, landscape/visual sensitivities, geological sensitivities and groundwater vulnerability.

The Plan directs incompatible development away from the most sensitive areas in the Plan area and focuses on directing compact, sustainable development within and adjacent to Old Connaught's central and core areas. Development of these robust parts of the Plan area that are planned to be well-serviced and well-connected will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation.

Compact development can be accompanied by placemaking initiatives to enable the Plan area to become a more desirable place to live, work and visit.

Compatible sustainable development in sensitive areas is also provided for, subject to various requirements relating to environmental protection and management being met.

How does the SEA work?

All of the main environmental issues in the area were assembled and considered by the team who prepared the Plan. This helped them to devise a Plan that contributes towards the protection and management of environmental sensitivities. It also helped to identify wherever potential conflicts between the Plan and the environment exist and enabled these conflicts to be mitigated.

The SEA was scoped in consultation with designated environmental authorities.

What is included in the Environmental Report that accompanies the Plan?

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the Plan;
- An assessment of the provisions of the Plan; and,
- Mitigation measures, which will avoid/reduce the environmental effects of implementing the Plan and will contribute towards compliance with important environmental protection legislation.

Difficulties Encountered during the SEA process

No significant difficulties have been encountered during the undertaking of the assessment to date.

What happens at the end of the process?

An SEA Statement is prepared which summarises, inter alia, how environmental considerations have been integrated into the Plan.

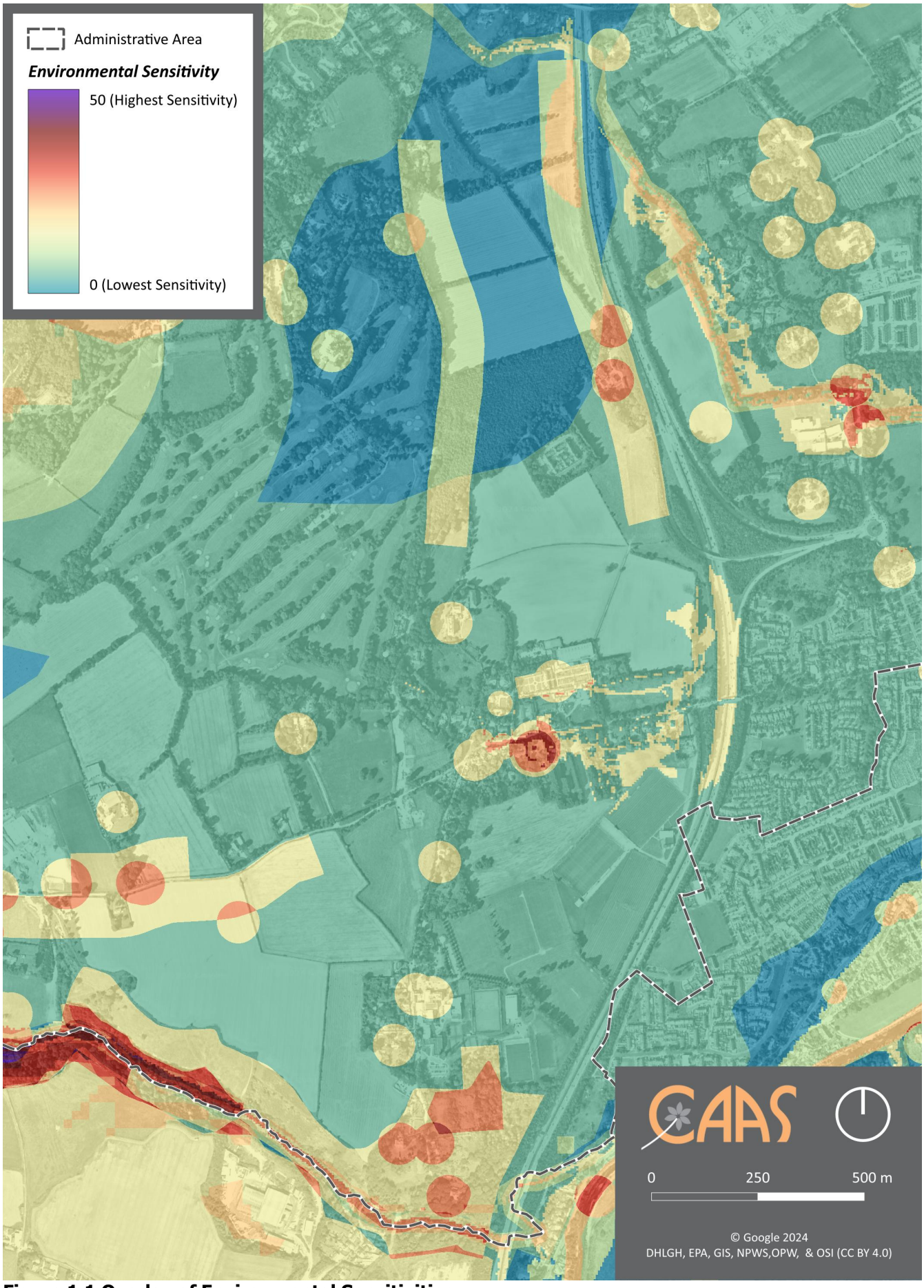

Figure 1.1 Overlay of Environmental Sensitivities

Section 2 The Draft Plan

2.1 Introduction and Content

The Draft Local Area Plan sets out a spatial framework for the future development of lands surrounding and including the existing settlement of Old Connaught. The Dún Laoghaire-Rathdown County Development Plan 2022-2028, the statutory land-use document for the whole County, contains a Specific Local Objective to prepare a LAP for the Old Connaught area. The Council has prepared the Old Connaught Draft Plan, in accordance with that objective and the requirements of the Planning and Development Act 2000, as amended.

2.2 Draft Plan Format

The Draft Plan is set out in twelve chapters as follows:

1. Introduction and Local Area Context
2. Strategic Planning Framework
3. Climate Action
4. Spatial Strategy and Site Development Frameworks
5. Sustainable Urban Village
6. Transport and Movement
7. Green Infrastructure and Biodiversity
8. Open Space, Parks and Recreation
9. Heritage and Conservation
10. Infrastructure, Utilities and Flood Risk
11. Phasing and Implementation
12. Monitoring and Evaluation

2.3 Draft Plan Vision and Strategic Objectives

The overarching vision for Old Connaught is to support the growth of the area as a sustainable urban village with a strong sense of place and integrating both the existing and planned new communities. It is to incrementally grow the area to attract a variety of residents and families, providing opportunities to avail of good access to neighbourhood facilities, transport options, social infrastructure and recreational and amenity assets. This vision is underpinned by the following strategic objectives which are designed to provide a level of focus and direction to the policies and objectives within the Draft Plan:

- Sustainable Urban Village – To deliver a sustainable urban village at Old Connaught and provide a range of facilities and services so that the existing and new residents can access most of their day-to-day living needs within the area including housing, schools, childcare, local shops, community facilities, amenity and recreational facilities.
- Character and Heritage – To protect and enhance the existing character and heritage of Old Connaught and to integrate and manage new development in a manner which respects the areas unique historical and natural setting, whilst acknowledging the development of new communities.
- Sustainable Transport and Movement – To manage existing and future transport demand at Old Connaught in a sustainable manner by developing an integrated transport network with a focus on active travel, permeability and connectivity, public transport facilities and a coherent vehicular movement network.
- Sustainable Neighbourhoods and Quality Housing – To create and maintain successful urban neighbourhoods with distinct character and identity which fosters a sense of community and active citizenship, framed in a quality-built environment which provides a choice of quality new housing options.
- Healthy Placemaking and Liveability – To underpin the spatial design of Old Connaught with a coherent and connected network of strategic public open spaces to promote activity, health, wellbeing, social interaction and community engagement, in order to support the existing and planned new communities.
- Climate and Ecosystems – To progress the development of Old Connaught as a low carbon and climate resilient community and provide a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

2.4 Strategic work undertaken by the Council to ensure evidence-based planning

In preparing the Draft Plan, information relating to various sectors, from different Departments within the Councils and from different bodies and organisations, was gathered and analysed, contributing towards the development of evidence-led Plan provisions. This work included preparing the following studies and assessments: an Infrastructure Capacity Assessment Study; an Area Based Transport Assessment; a Community Infrastructure Audit; a Strategic Environmental Assessment, the findings of which are provided in this Environmental Report; an Appropriate Assessment; and a Strategic Flood Risk Assessment.

2.5 Relationship with other relevant Plans and Programmes

The provisions set out in the current Dún Laoghaire-Rathdown County Development Plan 2022-2028, or any subsequent variation or review, shall apply as appropriate to development within the Plan area. Furthermore, the provisions of the Dún Laoghaire-Rathdown County Development Plan 2022-2028 cited as mitigatory measures in the SEA Environmental Report shall be complied with throughout the implementation of the LAP.

The Draft Plan sits within a hierarchy of statutory documents setting out public policy for, among other things, land use planning, infrastructure, sustainable development, tourism, environmental protection and environmental management. The Plan must comply with relevant higher-level strategic actions and will, in turn, guide lower-level strategic actions. These documents have been subject to their own environmental assessment processes, as relevant.

The National Planning Framework[1] sets out Ireland's planning policy direction for the years 2018-2040. The National Planning Framework is to be implemented through Regional Spatial and Economic Strategies and lower tier Development Plans and Local Area Plans. The Regional Spatial and Economic Strategy for the Eastern and Midland Region sets out objectives for land use planning, tourism, infrastructure, sustainable development, environmental protection and environmental management that have been subject to environmental assessment and must, as relevant and appropriate, be implemented through the Dún Laoghaire-Rathdown County Development Plan, that sets out the overarching development strategy for the County, and the Local Area Plan.

In order to be realised, projects included in the Local Area Plan (in a similar way to other projects from any other sector) will have to comply, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form the statutory decision-making and consent-granting framework.

[1] At the time of writing this report, a process to provide a First Revision to the National Planning Framework is underway.

Section 3 The Environmental Baseline

3.1 Introduction

The summary of the environmental baseline of the Plan area is described in this section. This baseline together with the Strategic Environmental Objectives, which are identified in Section 3.11, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Draft Plan and in order to determine appropriate monitoring measures.

3.2 Likely Evolution of the Environment in the Absence of the Draft Plan

In the absence of a new Local Area Plan, the framework for development across the Plan area would be provided by the County Development Plan and other related documents. There would be no Local Area Plan to provide additional detail beyond that provided already through the existing planning framework as how to achieve sustainable development and environmental protection and management in the Plan area.

As a result, there would be both:

- A decreased likelihood in the extent, magnitude and frequency of the positive environmental effects identified by this assessment occurring; and;
- An increased likelihood in the extent, magnitude and frequency of the adverse environmental effects identified by this assessment occurring.

3.3 Biodiversity and Flora and Fauna

Key ecological sensitivities within and surrounding the Plan area include:

- **Designated European sites within, adjacent or surrounding the Plan area:**
  - Ballyman Glen Special Area of Conservation[2] (situated partially within the south-west of the Plan area). Sensitivities of this site include petrifying springs with tufa formation[3] and alkaline fens.
- **Non-statutorily proposed sites within, adjacent or surrounding the Plan area:**
  - Ballyman Glen proposed Natural Heritage Area (situated partially within the south-west of the Plan area).
- **Locally important, non-designated habitats within and surrounding the Plan area**, including **various woodlands and mature trees[4]**, parks, **gardens[5]**, **hedgerows[6]**, wetlands, semi-natural grasslands, urban green spaces, rivers, streams, old buildings/stone walls and lands used for agriculture within and surrounding the Plan area, providing habitats for flora and fauna and facilitating linkages and corridors to the surrounding countryside for the wildlife. Potential species present may include birds, bats, stoat, pine martin, badger, otter and deer.[7]
- **Aquatic and riverine ecology** associated with rivers and streams and their tributaries and riparian buffer zones. The most significant river habitat in the Old Connaught area is the County Brook Stream, located in the Ballyman Glen in the south of the Draft Plan area. The waters of this river are alkaline (high pH) and nutrient rich. The Crinken Stream flows from the upland area of Carrickgollogan through the Rathmichael area and traverses the northern extents of the Plan area. The Old Connaught tributary is a watercourse which runs to the rear of existing residential properties in the centre of the Draft Plan area.

[2] Draft Old Connaught LAP 2025: The Glen is orientated in an east-west direction with a stream running through the centre and is located at the southern extent of the Plan area, traversing the administrative boundary between Dún Laoghaire-Rathdown and Wicklow. The Glen contains a small strip of alkaline fen which is associated with petrifying spring/seepage areas that have given rise to thick deposits of marl. The fen vegetation at this site is well developed, with an unusually large number of sedge species present. The presence of alkaline fen and of petrifying spring/seepage areas is also particularly notable, as these habitats are listed, the latter with priority status, on Annex I of the E.U. Habitats Directive. The site is also particularly notable for its range of orchids.

[3] These formations vary from: immature recently formed tuffa as the result of recent earthworks exposing shallow perched groundwater tables and spring/seepage along new embankments; to mature, high quality tuffa springs with active groundwater flow and calcareous carbonate precipitation with associated plant communities; to lower quality tuffa spring formations located along small drainage channels (with associated plant communities less dominant).

[4] Draft Old Connaught LAP 2025: A variety of woodlands and individual trees throughout the Draft Plan area are designated for preservation and protection under the Dún Laoghaire-Rathdown County Development Plan 2022-2028. These are identified by symbols on the County Development Plan Land Use Zoning Maps with the objective – *"to protect and preserve trees and woodlands".* The location of these trees and woodlands across the Old Connaught area are identified in the Draft Plan.

[5] Draft Old Connaught LAP 2025: The size and maturity of many of the residential gardens in the Old Connaught area contribute positively to the landscape and biodiversity of the area and facilitate movement of birdlife between the built and more rural environments. There are many high value trees particularly within residential gardens which make a positive contribution to the biodiversity and treescape of the Old Connaught area.

[6] Draft Old Connaught LAP 2025: Hedgerows are important habitats across the Old Connaught Draft Plan area. There are extensive hedgerows along the boundaries of open spaces/fields, which have ecological value and provide ecological corridors. Hedgerows are protected under the County Development Plan Policy GIB25, which states that: *"It is a Policy Objective to retain and protect hedgerows in the County from development, which would impact adversely upon them…"*

[7] As set out in the Dún Laoghaire-Rathdown County Development Plan 2022-2028, a precautionary approach should be taken to all proposals in environmentally sensitive areas and/or to sites that may be in use by, or contain, protected species.

Special Areas of Conservation[8] (SACs) and Special Protection Areas[9] (SPAs) within 15 km of the Plan area are mapped at Figure 3.1.

Land cover is the observed physical cover, as seen from the ground or through remote sensing, including for example natural or planted vegetation, water and human constructions which cover the earth's surface. The CORINE 2018[10] mapping (shown on Figure 3.2) identifies the land cover of the Plan area as non-irrigated arable land, pastures and areas of complex cultivation patterns with adjacent areas of sport and leisure facilities, broad-leaved forest and road and rail networks and associated land. The surrounding lands are identified as urban and green urban areas, industrial or commercial units and transitional woodland-shrub. One category from the CORINE mapping that may indicate areas with the potential for Annex I habitats is situated partially within and adjacent to the Plan area; broad leaved forest.

Existing Problems
Ireland's Article 17 report on the Status of EU Protected Habitats and Species in Ireland (DCHG, 2019) identifies various Irish, EU-protected habitats and species to be of unfavourable status and many to be still declining, although it also identifies that a range of positive actions are underway. Ireland's Article 12 Birds Directive Reports and the 6th National Report under the Convention of Biological Diversity identify similar issues.

The Plan includes measures to contribute towards the protection of biodiversity and flora and fauna and associated ecosystem services.

Previous changes in land uses arising from human development have resulted in a loss of biodiversity and flora and fauna; however, legislative objectives governing biodiversity and fauna were not identified as being conflicted with. The Plan includes measures to contribute towards the protection of biodiversity and flora and fauna and associated ecosystem services.

3.4 Population and Human Health

The Census 2022 Small Area data provides a population figure for the Old Connaught and wider environs area as 683 persons.[11]

As identified in the Draft Plan, the focus on Old Connaught as a future growth area has been highlighted in the Eastern and Midlands Region Spatial and Economic Strategy (RSES). The RSES indicates that 'Key Towns' have potential to accommodate commensurate levels of population and employment growth. The three Metropolitan 'Key Towns' in the region are Bray, Maynooth and Swords. In this context, it is noted that Old Connaught, which falls within the administrative boundary of Dún Laoghaire-Rathdown, is included in the growth targets for the Key Town of Bray. The Core Strategy contained in the current County Development Plan anticipates the zoned residential lands in the LAP delivering on a phased basis and over a period of time, circa. 2,005 residential units. The Dún Laoghaire-Rathdown County Development Plan further identifies lands referred to as a 'Strategic Land Reserve', which are located at Greenbelt zoned lands in the north of the LAP area and which have a potential residential yield of c. 1,050 homes. While the Strategic Land Reserve lands are not currently zoned for residential development, regard will be had to this reserve in the Old Connaught Local Area Plan.

[8] SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000. The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010. The Regulations have been prepared to address several judgments of the Court of Justice of the European Union (CJEU) against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.

[9] SPAs have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) - referred to as the Birds Directive - due to their conservation value for birds of importance in the EU.

[10] The CORINE (Co-ordinated Information on the Environment) land cover data series was devised as a means of compiling geo-spatial environmental information in a standardised and comparable manner. CORINE has become a key data source for informing environmental and planning policy on a national and European level. The main land cover type in Ireland is agricultural land including forestry, which accounts for two-thirds of the national landmass. Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth of the country. While forested areas cover about one-tenth of the country. Despite rapid development in the past two decades, Ireland's landscape is predominantly rural and agricultural.

[11] Draft Old Connaught LAP 2025: Census small area data is not available for the exact geographic area of the Old Connaught LAP. The Census Small Areas selected for analysis most closely co-inside with the Old Connaught LAP area but extend beyond its boundary. The data therefore reflects general trends in the Old Connaught and wider environs area rather than solely reflecting the current population within the LAP boundary.

The population provided for in the Plan will interact with various environmental components. Potential interactions include:

- Recreational and development pressure on habitats and landscapes;
- Contribution towards increase in demand for waste water treatment at the municipal level;
- Contribution towards increase in demand for water supply and associated potential impact of water abstraction;
- Potential interactions in flood-sensitive areas; and
- Potential effects on water quality.

Human health has the potential to be impacted upon by environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Hazards or nuisances to human health can arise as a result of exposure to these vectors arising from incompatible adjacent land uses for example. These factors have been considered with regard to the description of: the baseline of each environmental component; and the identification and evaluation of the likely significant environmental effects of implementing the Plan.

Existing Problems
The number of homes within the Plan area with radon levels above the reference level is within the normal range experienced in other locations across the country.

Parts of the Plan area are vulnerable to adverse effects from changes in the occurrence of severe rainfall events and associated flooding from surface water. Flooding in certain circumstances could pose a risk to human health.

3.5 Soil

Main soil types[12] surrounding the built-up areas[13] of Old Connaught are: brown earths (well-drained mineral soils, associated with high levels of natural fertility); luvisol soils (generally fertile, widely used for agriculture and associated with significant accumulation of clay); and alluvial soils (associated with alluvial clay, silt or sand river deposits).

Geological Survey Ireland coordinate the Irish Geological Heritage Programme, whereby an objective has been set to identify and select sites of geological interest within each county across the country. County Geological Sites (CGSs) do not receive statutory protection like Natural Heritage Areas but receive an effective protection from their inclusion in the planning system. The audit of CGSs in Dún Laoghaire-Rathdown was completed in 2014, which identified 12 CGSs. There are no County Geological Sites occurring within the Plan area, however there is one designated County Geological Site situated adjacent to the southern boundary of the Plan area, the Enniskerry Delta CGS (Site Code: WW020)[14].

The term "landslide" describes a wide variety of processes that result in the downward and outward movement of materials such as rock, debris, earth, mud and peat under the force of gravity. Issues such as existing ground conditions, slope stability and storage of excavated material have the potential to influence susceptibility to landslides/bog bursts. The potential impacts of landslides include loss of human life/injury, flooding, pollution of watercourses and impacts upon aquatic biodiversity. There has been no previous landslide events recorded within the Plan area.[15] The GSI have identified[16] the Plan area as having mainly low and moderately low levels of landslide susceptibility throughout the Plan area.

In the absence of mitigation, contaminated materials have the potential to adversely impact upon human health, water quality and habitats and species. As is the case with other developed areas across the country, there is potential for contamination at sites within the Plan area, especially where land uses occurred in the past, in the absence of environmental protection legislation.

[12] All soil types belong to a Sub-Group and so in turn to one of the 11 soil Great Groups. Great Groups and Sub-Groups are a hierarchical arrangement of soils used for taxonomical classification (http://gis.teagasc.ie/soils/soilguide.php).
[13] The built-up areas are mainly made up of urban soils. Urban soils are soils, which have been disturbed, transported or manipulated by human activity in the urban environment and are often overlain by a non-agricultural, man-made surface layer that has been produced by mixing, filling or by contamination of land surfaces in urban and suburban areas.
[14] The Enniskerry Delta CGS includes a large accumulation of sands and gravels which has been quarried extensively historically, just outside Enniskerry town. (https://gsi.geodata.gov.ie/downloads/Geoheritage/Reports/WW020_Enniskerry_Delta.pdf)
[15] There are two events recorded to the south and south-east of the Plan are: Hazelwood Crescent Landfill (c. 2016) and River Dargle Bray (c. 1998).
[16] https://www.gsi.ie/en-ie/programmes-and-projects/geohazards/projects/Pages/Landslide-Susceptibility-Mapping.aspx

3.6 Water

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving *good status*. All public bodies are required to coordinate their policies and operations so as to maintain the *good status* of water bodies that are currently unpolluted and improve polluted water bodies to *good status.*

Surface water at and around Old Connaught is channelled by the River Dargle and its tributaries flowing from west to east through the north and south of the Plan area and towards the Irish Sea.

The most significant river habitat in the Old Connaught area is the County Brook Stream, located in the Ballyman Glen in the south of the Draft Plan area. The Crinken Stream flows from the upland area of Carrickgollogan through the Rathmichael area and traverses the northern extents of the Plan area. The Old Connaught tributary is a watercourse which runs to the rear of existing residential properties in the centre of the Draft Plan area. A bifurcation running along Old Connaught Avenue was constructed to ease flows along the original stream. The bifurcation rejoins the tributary just before the crossing of the M11.[17]

The current WFD (2016-2021) status[18] of the rivers and streams draining the Plan area is *good*, identified by the EPA as 'Dargle_030' and 'Dargle_040'.

The surface water bodies draining the Plan area are currently identified in the combined 2016-2021 data as not being at risk of not meeting the WFD's objectives due to damage caused by significant pressures. Figure 3.3 illustrates the WFD surface water status within and surrounding the Plan area.

The WFD status (2016-2021) of groundwater underlying the Plan area is currently identified as being of *good status*, meeting the objectives of the WFD.

A Strategic Flood Risk Assessment (SFRA) document accompanies the SEA Environmental Report and the Draft Plan. Requirements in relation to SFRA are provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014.

Flood risk management and drainage provisions are already in force through the Dún Laoghaire-Rathdown County Development Plan 2022-2028 and related provisions have been integrated into the Draft Plan.

The most significant source of flood risk within the Plan area is from fluvial sources (from rivers and streams). There are other sources of flooding present, including from pluvial (rainwater) and from surface drainage systems sources.

Most of the Plan area is identified by the SFRA as being of low flood risk, with some relatively minor areas of moderate and high flood risk.

Existing Problems

There is elevated levels of flood risk from fluvial sources at various locations within the Plan area. 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.

[17] Draft Old Connaught LAP 2025
[18] As per EPA's WFD Status 2016-2021 classification (https://gis.epa.ie/EPAMaps/).

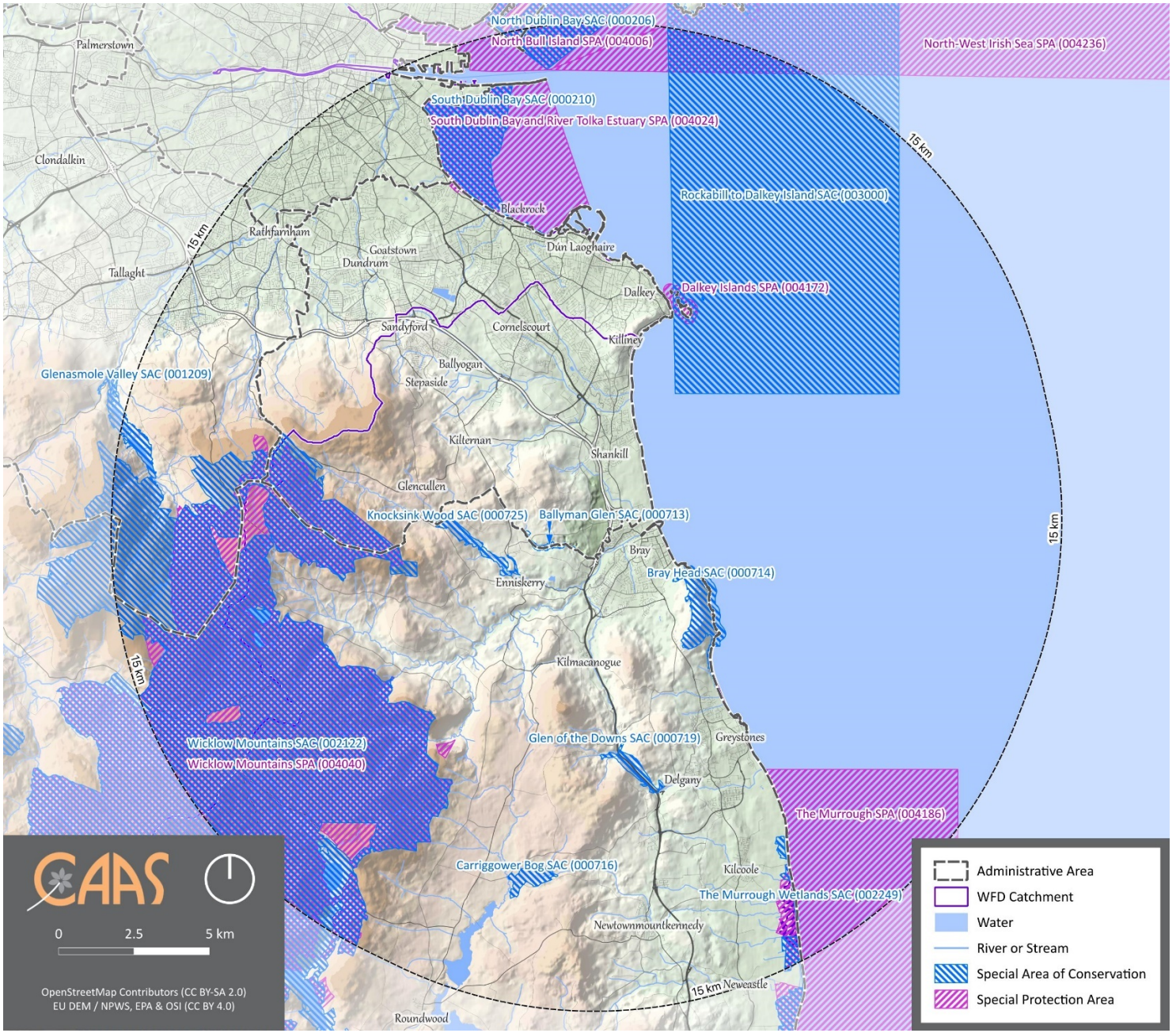

Figure 3.1 European Sites within and within 15 km buffer of the Plan area

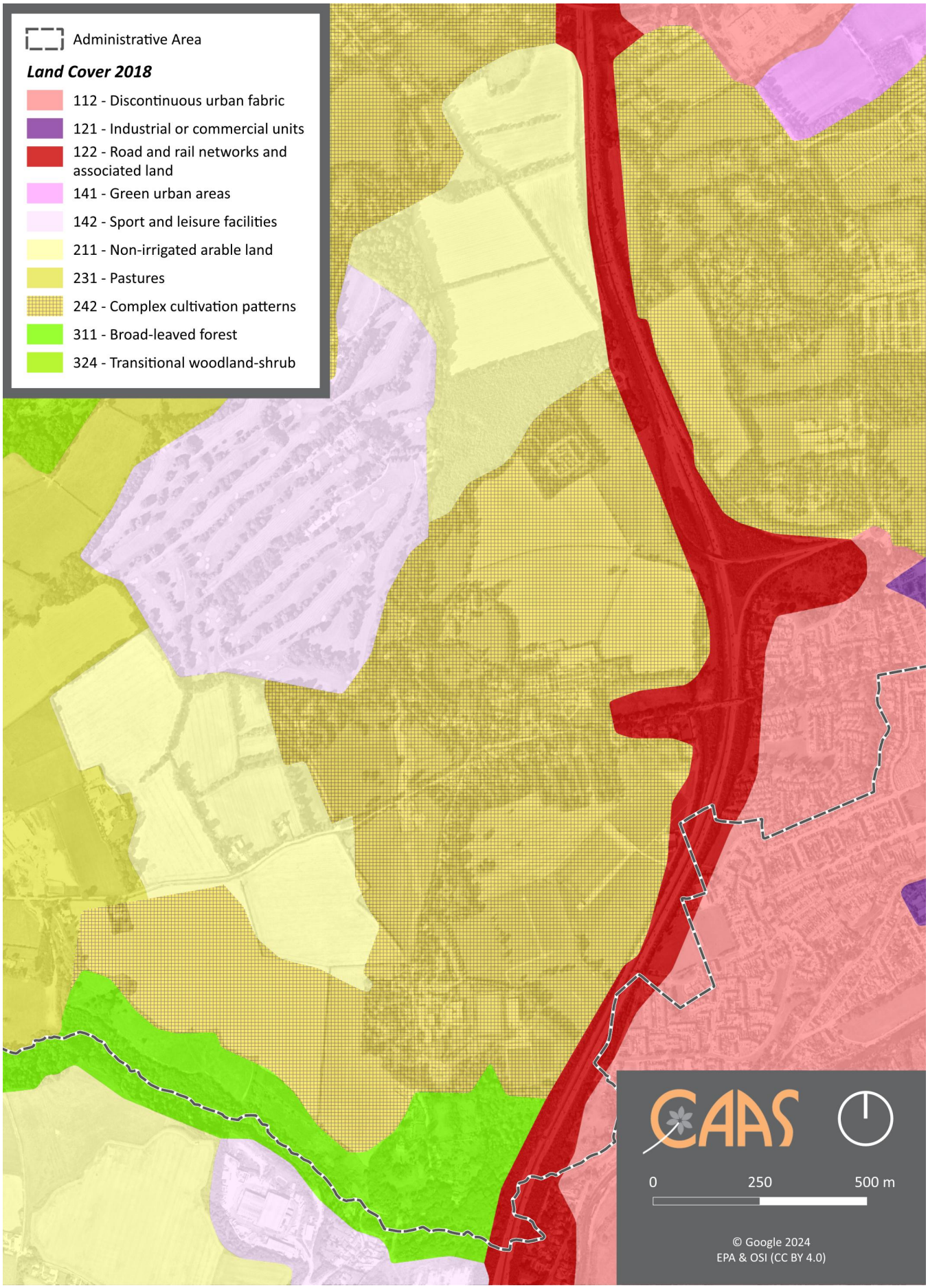

Figure 3.2 CORINE Land Cover Mapping 2018

Figure 3.3 Surface Water Status (2016-2021)

3.7 Air and Climatic Factors

Total emissions of greenhouse gases by humans come from various sectors including transport, agriculture, energy industries, manufacturing combustion, industrial processes, residential developments, commercial services developments, waste management processes and fluorinated gases equipment (such as refrigeration and fire protection systems).

In 2023, Ireland's greenhouse gas emissions are estimated to be 55.01 million tonnes carbon dioxide equivalent (Mt CO_2 eq), which is 6.8% lower (or 4.00 Mt CO_2 eq) than emissions in 2022 (59.00 Mt CO_2 eq) and follows a 2.0% decrease in emissions reported for 2022. Emissions are 1.2% below the historical 1990 baseline for the first time in 33 years. In 2023, emissions in the stationary EU Emissions Trading System emissions (covering emissions from sectors including Agriculture, Transport, Energy, Industries, Residential, Manufacturing Combustion and Industrial Processes) decreased by 17%. When land use, land-use change and forestry is included, total national emissions decreased by 3.8%. Emissions under the Effort Sharing Regulation (covering emissions from the electricity and heat generation, industrial manufacturing and aviation sectors) decreased by 3.4%. Decreased emissions in 2023 compared to 2022 were observed in the largest sectors except for transport which showed an increase of 0.3%.

Climate mitigation describes the action to reduce the likelihood of climate change occurring or reduce the impact if it does occur. This can include reducing the causes of climate change (e.g. emissions of greenhouse gases) as well as reducing future risks associated with climate change. The National Climate Action Plan 2024 is the second statutory update to the plan since the Climate Action and Low Carbon Development (Amendment) Act 2021 was signed into law, committing Ireland to 2030 and 2050 targets for reducing greenhouse gas emissions. It builds on Climate Action Plan 2023, outlining how Ireland will accelerate the actions required to respond to the climate crisis, putting climate solutions at the centre of Ireland's social and economic development.

Climate adaptation is a change in natural or human systems in response to the impacts of climate change. These changes moderate harm or exploit beneficial opportunities and can be in response to actual or expected impacts. The National Adaptation Framework (2024) aims to create a unified approach involving both government and society to adapt to climate change. It outlines how various sectors and local authorities can implement adaptation measures to minimise Ireland's vulnerability to climate change's adverse effects while taking advantage of any beneficial impacts. The Framework emphasises the importance of integrating adaptation strategies into all levels of policy making, infrastructure development, and local planning.

The Dún Laoghaire-Rathdown Climate Action Plan 2024-2029 sets out how the local authority can promote a range of mitigation, adaptation and other climate action measures, to help deliver on the national climate obligations and the Government's overall National Climate Objective, which seeks to pursue and achieve, by no later than the end of 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.

The Plan sets out to achieve, by no later than the end of 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral County. Aligned to the Government's National Climate Objective (as set out in the National Climate Action Plan 2024), the new Plan outlines mitigation and adaptation climate action measures across the following six thematic areas - Energy and Buildings, Transport, Flood Resilience, Nature Based Solutions, Circular Economy and Resource Management and Citizen Engagement.

The EPA's (2024) *Air Quality in Ireland 2023 Report* identifies that:

- Ireland's latest monitoring shows we are in compliance with current EU standards.
- Ireland is not on track to achieve its ambition, set out in the National Clean Air Strategy, to meet the health-based WHO air quality guideline limits in 2026.
- Main pollutants of concern are fine particulate matter ($PM_{2.5}$) from solid fuel combustion and nitrogen dioxide (NO_2) from vehicle emissions/traffic.
- Air pollution can be a major environmental risk to people's health, with approximately 1,600 premature deaths annually in Ireland due to poor air quality.

The report further identifies the critical role of local authorities in the enforcement and implementation of existing plans and investment in infrastructure to encourage cleaner and healthier air quality choices, including:

- Local authorities must provide more resources to implement the new solid fuel regulations and full implementation of air quality plans.
- Local authorities must prioritise resource allocation of resources to advance enforcement.
- Investment in clean public transport infrastructure across the country must be maintained and increased.
- More safe footpaths and cycle lanes must be created to continue to increase active travel as a viable and safe alternative to car use and associated NO_2 emissions.

Existing Problems
Significant progress is being made in the reduction of Ireland's greenhouse gas emissions. The EPA's 2024 publication Ireland's Greenhouse Gas Emission Projections 2023-2040 identifies that Ireland's emissions, under the Emissions in the 'Planned Additional Measures' scenario, which includes most 2024 Climate Action Plan measures, are projected to be 29% lower in 2030 (compared with 2018). However, this would not meet the 51% emissions reduction target (by 2030 compared to 2018) based on these projections.

In the Climate Change Advisory Council's *Annual Review 2024,* the findings of an assessment of the degree to which progress is being made solely in the implementation of adaptation policy and increasing resilience for the period April 2023 to March 2024 is provided. The Review details that four sectors (Transport, Flood Risk Management, Built and Archaeological Heritage and Local Government) demonstrated good overall progress, six showed moderate progress (Agriculture, Forestry and Seafood, National Adaptation Framework, Communications Networks, Water Quality and Water Services Infrastructure, Health and Electricity and Gas Networks) and one (Biodiversity) showed no progress and supplied insufficient evidence. This was a slight improvement compared with the results in 2023.

Air quality and noise can present challenges, especially in urban areas, as detailed under the relevant sub-sections above. With regard to air quality, air pollution from transport is dominated by NO_x emissions. Of these, NO_2 is particularly impactful from a health perspective. The Draft Plan will help to facilitate reductions in emissions and a transition from dependence on fossil fuel combustion powered transport.

3.8 Material Assets

Other material assets, in addition to those referred to below, covered by the SEA include archaeological and architectural heritage (see Section 3.9) natural resources of economic value, such as water and air (see Sections 3.6 and 3.7).

Infrastructure Capacity Assessment Study

The Draft Plan is informed by an Infrastructure Capacity Assessment Study (ICAS). The purpose of the ICAS was to analyse the existing infrastructural deficiencies in the Old Connaught area and to identify the proposed high level strategic enabling infrastructure required to facilitate plan-led development.

The range of strategic enabling infrastructure elements considered in the ICAS included transport; green infrastructure and biodiversity, heritage and conservation, open space, parks and recreation, water and wastewater, drainage, social infrastructure - community and education facilities, and utilities - power supply and telecommunications.

In terms of utilities infrastructure, the project stakeholder board which supported the preparation of the ICAS included representatives from many of the main bodies associated with the provision and/or delivery of utilities infrastructure including inter alia: Uisce Éireann, ESB Networks and EirGrid.

Green Infrastructure
Parks and open space promote health and well-being, provide recreational facilities and range of habitats for various species. Green infrastructure is also a crucial component in building resilient communities capable of adapting to the consequences of climate change with trees, woodlands and wetlands providing carbon capture and slowing water flows while improving air quality

Transport
An Area Based Transport Assessment (ABTA) was undertaken to inform the preparation of this Draft Plan, as an integral part of the overall ICAS. The key purpose of the ABTA is to guide the future transport and

mobility needs of the Old Connaught area, taking into account the transport demand arising from existing and projected development.

Minerals and Aggregates
The GSI have a suite of data sources available that would be useful in planning and assessing individual projects with regard to the environmental topic(s) of soil and/or material assets. These include:

- Aggregate Potential Mapping;
- Bedrock mapping;
- Quaternary and Physiographic mapping; and
- National Aquifer and Recharge mapping.

The Enniskerry Delta County Geological Site, adjacent to the southern boundary of the Plan area, includes a large accumulation of sands and gravels which has been quarried extensively historically, just outside Enniskerry town.

Waste Water
The Old Connaught Plan area is currently not serviced with strategic wastewater infrastructure, and at present, existing residents own and maintain their own septic tanks. As identified through the ICAS, the preferred strategy for the Draft Plan area is to develop a new gravity wastewater network to facilitate new development and the future connection of existing dwellings. A pumping station and trenchless rising main crossing of the M11, in the vicinity of Old Connaught Avenue, are required to connect the Draft Plan area to the existing wastewater network. Preliminary discussions with Uisce Éireann have determined that a wastewater crossing of the M11 is feasible, subject to detailed design and technical agreement between the relevant parties, including Transport Infrastructure Ireland. All wastewater will eventually flow towards the Shanganagh Wastewater Treatment Plant which has surplus capacity to cater for the foul drainage requirements of the area.

Water Supply
Old Connaught is located within the Greater Dublin Area Water Resource Zone[19] and, as identified by Uisce Éireann, it has a potential spare capacity available to meet targeted population growth by 2033, although an improvement in level of service is required.[20]

Discussions with Uisce Éireann indicate that the water supply network is generally adequate, and the existing network can be expanded in order to serve the future development of the area. While additional local network infrastructure will be required, it is not anticipated that any additional significant water infrastructure will be required to enable development in the area.

Waste Management
The National Waste Management Plan for a Circular Economy (Regional Waste Management Planning Offices, 2024) sets out a framework for the prevention and management of waste in Ireland for the period 2024 to 2030. The Plan seeks to influence sustainable consumption and prevent the generation of waste, improve the capture of materials to optimise circularity and enable compliance with policy and legislation.

Existing Problems
The provisions of the Plan will contribute towards protection of the environment with regard to impacts arising from material assets. The provision of infrastructure and supporting services for development, particularly water and wastewater services, is critical.

3.9 Cultural Heritage

Archaeological Heritage
The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped. A recorded monument is a monument included in the list and marked on the map which comprises the RMP set out county by county under Section 12 of the National Monuments (Amendment) Act, 1994 by the

[19] A Water Resource Zone (WRZ) is an independent water supply system serving a region, city, town or village and is governed by topography or the extent of the water distribution network in an area. A WRZ may include multiple Water Treatment Plants and/or sources.
[20] Capacity constraints exist and additional analysis of pre-connection enquiries and connection applications will be undertaken as required by UÉ on an individual basis considering their specific load requirements. Improvement proposals will include, but are not limited to leakage reduction and/or capital investment. These proposals will be required to maintain/improve levels of service as demand increases. These proposals will be developed and prioritised through the National Water Resources Plan and investment planning process. Source: https://www.water.ie/connections/developer-services/capacity-registers/water-supply-capacity-register/dublin (Published in December 2024).

Archaeological Survey of Ireland. The definition includes Zones of Notification within which requirements for notifications of proposed works apply.

There are three known Recorded Monuments located within the Draft Plan area: a medieval church (RMP No. 026-066001) and surrounding graveyard (RMP No. 026-066002) both situated on the southern side of Old Connaught Avenue and a ring ditch (RMP No. 026-065) situated on agricultural lands south of Ballyman Road in the west of the Plan area. There are a number of other sites outside the Draft Plan boundary, such as the cluster of sites at Ballyman Church to the west of the Draft Plan area.[21]

Architectural Heritage
Protected structures are defined in the Planning and Development Act 2000 as amended as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view.

There are 16 entries in the RPS within the Draft Plan area, as set out in Appendix 4 of Dún Laoghaire-Rathdown County Development Plan 2022-2028, as listed below:

- RPS No. 1885 - Thornhill (Saint Gerard's School)
- RPS No. 1976 - Thornhill
- RPS No. 1882 - Graigueconna
- RPS No. 1881 - Old Bawn
- RPS No. 1875 - Old Connaught House
- RPS No. 1880 – Graveyard
- RPS No. 1886 – Vallambrosa
- RPS No. 1883 – Knocklinn
- RPS No. 1985 – Knocklinn Gate Lodge
- RPS No. 1879 - Jubilee Hall
- RPS No. 1876 – Cuilin House
- RPS No. 2075 – Cuilin Gateway
- RPS No. 1876 – Palermo
- RPS No. 1964 – Glenfield
- RPS No. 1977 - The Ochra Gate Lodge
- RPS No. 1982 – The Ochra House

The Victorian Walled Gardens to the north of Old Connaught Avenue date back to the 1780's and comprise a focal point for community activity and engagement with local heritage and landscape.

Existing Problems
The context of archaeological and architectural heritage has changed over time however no existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.

3.10 Landscape

The Draft Plan area is bounded to the east by the M11 motorway; to the west by Ferndale Road and 'GB' – Green Belt zoned lands which incorporate primarily agricultural, recreational and educational land uses; to the north by Crinken Lane and Rathmichael; and to the south by the steep-sided County Brook river valley (Ballyman Glen) and the administrative boundary between the Counties of Dún Laoghaire and Wicklow.

The area of Old Connaught consists predominantly of intensive agricultural lands which are dissected and punctuated with mature treelines, hedgerows and woodland areas, all of which have a high local value in terms of biodiversity. The existing landscape within the Draft Plan area is distinctly rural in form and character with an open landscape and agricultural activities and a rural type of road system. The landscape in the Old Connaught area is strongly influenced by the undulating form of underlying granite. The area is in a transition zone between the uplands to the west and the lowlands to the east. This gives the area a distinct physical character connected to the local environment. The topography of Old Connaught slopes generally downwards from west to east, with relatively steep levels along the Ballyman and Ferndale Roads. The lands closer in proximity to the M11 are relatively flat. The majority of the flat and gently sloping lands consist of undulating farmland, laid out in large pasture fields, and delineated by low hedges and trees. The open upland habitats to the west of Old Connaught merge with small scale fields of low

[21] Draft Old Connaught LAP 2025

intensity agriculture, to provide suitable habitats for a range of flora and fauna. The area has a number of woodland areas and hedgerows which are a strong element of the landscape and have a habitat value.[22]

The Dún Laoghaire-Rathdown County Development Plan 2022-2028 includes Policy Objective GIB6: Views and prospects – "…to preserve, protect and encourage the enjoyment of views and prospects of value." Locations within the Plan area with the Development Plan objective "to preserve views" include views north and south along part of Ballyman Road, views from Love Lane off Thornhill Road, views eastwards from Ferndale Road and views westwards from the M11. The area also contains important prospects i.e. prominent landscapes or areas of special amenity value, or special interest which are widely visible from the surrounding area. Prospects, identified in the Dún Laoghaire-Rathdown County Development Plan 2022-2028 for protection, which are relevant to the Plan area, are Carrickgollogan from Bray Road (Shankill to Bray area) and Carrickgollogan from Ballyman Road.

Existing Problems
New developments have resulted in changes to the visual appearance of lands within the Plan area however legislative objectives governing landscape and visual appearance were not identified as being conflicted with.

3.11 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies that generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives that have been transposed into Irish law and which are required to be implemented. The SEOs are set out under a range of topics (see Table 3.1) and are used as standards against which the provisions of the Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if – in the case of adverse effects – unmitigated.

Table 3.1 Strategic Environmental Objectives

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Biodiversity, Flora and Fauna	**BFF**	No net contribution to biodiversity losses or deterioration	• To preserve, protect, maintain and, where appropriate, enhance the terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species • Ensure no adverse effects on the integrity of any European site, with regard to its qualifying interests, associated conservation status, structure and function • Safeguard national, regional and local designated sites and supporting features which function as stepping stones for migration, dispersal and genetic exchange of wild species • Enhance biodiversity in line with the National Biodiversity Strategy and its targets • To protect, maintain and conserve natural capital
Population and Human Health	**PHH**	Improve quality of life for all ages and abilities based on high-quality, serviced, well connected and sustainable residential, working, educational and recreational environments	• Promote economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management • Ensure that existing population and planned growth is matched with the required public infrastructure and the required services • Safeguard citizens from environment-related pressures and risks to health and well-being
Soil (and Land)	**S**	Ensure the long-term sustainable management of land	• Protect soils against pollution, and prevent degradation of the soil resource • Promote the sustainable use of infill and brownfield sites over the use of greenfield • Safeguard areas of prime agricultural land and designated geological sites
Water	**W**	Protection, improvement and sustainable management of the water resource	• Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive • Ensure water resources are sustainably managed to deliver proposed regional and County growth targets in the context of existing and projected water supply and wastewater capacity constraints ensuring the protection of receiving environments • Avoid inappropriate zoning and development in areas at risk of flooding and areas that are vulnerable to current and future erosion • Integrate sustainable water management solutions (such as SuDS, porous surfacing and green roofs) into development proposals

[22] Draft Old Connaught LAP 2025

Environmental Component	SEO Code	Guiding Principle	Strategic Environmental Objectives
Material Assets	**MA**	Sustainable and efficient use of natural resources	• Optimise existing infrastructure and provide new infrastructure to match population distribution proposals - this includes transport infrastructure • Ensure access to affordable, reliable, sustainable and modern energy for all which encourages a broad energy generation mix to ensure security of supply – wind, solar, hydro, biomass, energy from waste and traditional fossil fuels • Promote the circular economy, reduce waste, and increase energy efficiencies • Ensure there is adequate sewerage and drainage infrastructure in place to support new development • Reduce the energy demand from the transport sector and support moves to electrification of road and rail transport modes • Encourage the transition to a zero-carbon economy by facilitating the development of a grid infrastructure to support renewables and international connectivity. Reduce the average energy consumption per capita including promoting energy efficient buildings, retrofitting, smart- buildings, cities and grids
Air	**A**	Support clean air policies that reduce the impact of air pollution on the environment and public health	• To avoid, prevent or reduce harmful effects on human health and the environment as a whole resulting from emissions to air from all sectors with particular reference to emissions from transport, residential heating, industry and agriculture • Maintain and promote continuing improvement in air quality through the reduction of emissions and promotion of renewable energy and energy efficiency • Promote continuing improvement in air quality • Reduction of emissions of sulphur dioxide, nitrogen oxides, volatile organic compounds, ammonia and fine particulate matter which are responsible for acidification, eutrophication and ground-level ozone pollution • Meet Air Quality Directive standards for the protection of human health — Air Quality Directive • Significantly decrease noise pollution and move closer to WHO recommended levels
Climatic Factors	**C**	Achieving transition to a competitive, low carbon, climate-resilient economy that is cognisant of environmental impacts	• To minimise emissions of greenhouse gasses • Integrate sustainable design solutions into infrastructure (e.g. energy efficient buildings; green infrastructure) • Contribute towards the reduction of greenhouse gas emissions in line with national targets • Promote development resilient to the effects of climate change • Promote the use of renewable energy, energy efficient development and increased use of public transport
Cultural Heritage	**CH**	Safeguard cultural heritage features and their settings through responsible design and positioning of development	Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	**L**	Protect and enhance the landscape character	To implement the Plan's framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention

Section 4 Alternatives

4.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment. Summaries of the alternatives for the Plan and their assessment are provided below.

4.2 Limitations in Available Alternatives

The preparation of a Local Area Plan for Old Connaught is a provision of the existing, already in force, Dún Laoghaire-Rathdown County Development Plan 2022-2028 which specifies various types of objectives which must be provided for by the Plan. The County Development Plan was prepared and adopted in accordance with the Planning and Development Act 2000 (as amended).

The alternatives available for the Plan are limited by the provisions of higher-level planning objectives, including those of the National Planning Framework (NPF), the Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Region, the County Development Plan and various Ministerial Guidelines. These higher tier policy documents and guidelines set out various requirements for the content of the Local Area Plan.

4.3 Alternatives Description and Assessment Summary

4.3.1 Local Area Plan Boundary Alternatives

Alternatives under this heading relate to consideration of the appropriate boundary to be brought forward for the Draft Local Area Plan. An indicative boundary for the Old Connaught Local Area Plan is set out in the County Development Plan 2022-2028. As part of work undertaken in preparation of the Draft LAP, an alternative to this boundary emerged that would include lands to the north of the Plan area. Alternatives considered relating to the Plan boundary comprise:

- **Local Area Plan Boundary - Alternative 1**: The first LAP boundary alternative is the implementation of the indicative boundary for the Old Connaught Local Area Plan as set out in the County Development Plan 2022-2028.
- **Local Area Plan Boundary - Alternative 2**: The second alternative comprises a revised boundary for the Local Area Plan which extends the indicative boundary to the north.

Under **Local Area Plan Boundary - Alternative 1** would not extend the indicative LAP boundary to the north to link with the southern part of Rathmichael at Crinken Lane. This would mean less integration of proposed Infrastructure Capacity Assessment Study's (ICAS's) Area Based Transport Assessment (ABTA) transport infrastructure into the south of the Rathmichael area. As a result, certain strategic transport infrastructure would not be incorporated into the Local Area Plan. Implementation of the indicative boundary for the Local Area Plan set out in the County Development Plan would provide less planning clarity and coherence for the delivery of potential long term transport infrastructure to support the planned growth of both Old Connaught and Rathmichael. This alternative would not benefit the integration of transport and land use planning to the same degree as "Local Area Plan Boundary - Alternative 2", with realisation of the sustainable urban village vision for Old Connaught, and associated benefits with respect to sustainable mobility, compact development, emissions and energy use, less likely to be achieved.

Under **Local Area Plan Boundary - Alternative 2** would link with the southern part of Rathmichael at Crinken Lane. This would better provide for the integration of proposed Infrastructure Capacity Assessment Study's (ICAS's) Area Based Transport Assessment (ABTA) transport infrastructure into the south of the Rathmichael area. As a result, certain strategic transport infrastructure could be incorporated under a single Local Area Plan. An extended Local Area Plan boundary would ensure greater planning clarity for the delivery of potential long term transport infrastructure to support the planned growth of both Old

Connaught and Rathmichael. This alternative would benefit the integration of transport and land use planning to a greater degree than would be the case under "Local Area Plan Boundary - Alternative 2", with realisation of the sustainable urban village vision for Old Connaught, and associated benefits with respect to sustainable mobility, compact development, emissions and energy use, more likely to be achieved.

Selected Local Area Plan Boundary for the Plan: Alternative 2

4.3.2 Ecosystem Services Approach Alternatives

The importance of fulfilling natural capital[23] and ecosystem[24] service obligations has increasingly emerged in recent years. An Ecosystems Services Approach would provide a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. An Ecosystems Services Approach would include the integration of ecological considerations at a local level across the Plan area.

- **Ecosystem Services Approach - Alternative 1**: A Plan that follows an Ecosystems Services Approach to a greater degree.
- **Ecosystem Services Approach - Alternative 2**: A Plan that that does not follow, or follows to a lesser degree, an Ecosystems Services Approach.

Ecosystem Services Approach - Alternative 1 would integrate a strategy throughout the Plan for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Principles that would be integrated throughout the Plan, in a coordinated and comprehensive manner, would include:

- Consideration of natural systems - by using knowledge of interactions in nature and how ecosystems function;
- Taking into account of the services that ecosystems provide - including those that underpin social and economic well-being, such as flood and climate regulation or recreation, culture and quality of life; and
- Involving people - those who benefit from the ecosystem services and those managing them need to be involved in decisions that affect them.

This would mean that there would be:

- An increased likelihood in the extent, magnitude and frequency of positive effects occurring with regard to natural capital and ecosystem service issues, such as the management of air quality, noise pollution, light pollution, pollination, flood risk, water bodies and river basins and natural resources supporting energy production and recreation; and
- A decreased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services.

Ecosystem Services Approach Alternative 2 would not integrate a strategy throughout the Plan for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

An amount of natural capital and ecosystem service issues would be integrated into individual Plan policies and objectives and into decision making at lower tiers of development management. However, this approach would be less coordinated and comprehensive than would be the case under an Alternative 1.

This would mean that there would be:

- A decreased likelihood in the extent, magnitude and frequency of positive effects occurring with regard to natural capital and ecosystem service issues; and
- An increased likelihood in the extent, magnitude and frequency of adverse effects on natural capital and ecosystem services.

Selected Ecosystem Services Approach Alternative for the Plan: Alternative 1

[23] Renewable and non-renewable resources (e.g. plants, animals, air, water, soils, minerals).
[24] Ecosystems are multifunctional communities of living organisms interacting with each other and their environment. Ecosystems provide a series of services for human well-being (ecosystem services) either directly or indirectly contributing towards human wellbeing.

4.3.3 Sustainable Urban Village – Services and Facilities - Alternatives

The sustainable urban village concept is based on the premise that people should be able to access most of their living requirements within easy reach, preferably within walking distance of their homes. It involves the provision of primary schools, childcare, local shops and community and recreational facilities in conjunction with housing.

- **Sustainable Urban Village – Services and Facilities - Alternative 1**: Plan the build out of Old Connaught based on the concept of the sustainable urban village. Plan for a range of facilities and services to support so that people are able to access most of their day-to-day living requirements within the area including schools, childcare, local shops, community facilities, amenity and recreational facilities, whilst still acknowledging that not all services and facilities can be catered and would require travel to higher order centres.
- **Sustainable Urban Village - Services and Facilities – Alternative 2**: Plan for a minimal range of services and facilities in the local area and rely on people having to travel outside of the area to avail of day-to-day living requirements including schools, childcare, local shops, community facilities, amenity and recreational facilities.

Under **Sustainable Urban Village – Services and Facilities - Alternative 1** people would be able to access most of their living requirements within easy reach, within walking distance of their homes. Alternative 1 would contribute to the transition of the Plan area to a more low-carbon, climate resilient and healthy urban environment, with reduced car dependency and an increase in active travel, with associated positive benefits for the health and wellbeing of local communities. This approach would be more likely to improve the potential for meeting important objectives relating to emissions and energy use. Potentially adverse impacts on environmental components including ecology and water as a result of developing services and facilities would need to be adequately mitigated at project level – at locations within the Plan area.

Under **Sustainable Urban Village - Services and Facilities – Alternative 2** capacity would need to be found in existing or new facilities outside of Old Connaught. Alternative 2 would hinder the transition of the Plan area to a more low-carbon, climate resilient and healthy urban environment, with increased car dependency and stymied active travel and associated positive benefits for the health and wellbeing of local communities. This approach would reduce the potential for meeting important objectives relating to emissions and energy use. Potentially adverse impacts on environmental components including ecology and water as a result of developing services and facilities would need to be adequately mitigated at project level – in areas outside of the Plan area.

Selected Sustainable Urban Village – Services and Facilities Alternative for the Plan: Alternative 1

4.3.4 Approach to Site Development Frameworks Alternatives

The land use zoning objectives for the Plan area are set out in the County Development Plan 2022-2028. The LAP lands extend in total to circa. 219 hectares comprising 68 hectares of land zoned Objective 'A1', *"To provide for new residential communities and Sustainable Neighbourhood Infrastructure in accordance with approved local area plans"*, 134 hectares of land zoned Objective 'GB', *"To protect and enhance the open nature of lands between urban areas"*, 12 hectares of land zoned Objective 'F', *"To preserve and provide for open space with ancillary active recreational amenities"* and 0.44 hectares of land zoned Objective 'SNI', *"To protect, improve and encourage the provision of sustainable neighbourhood infrastructure"*. In addition, lands to the north and south of Allies River Road are identified in the CDP as a 'Strategic Land Reserve'. The Strategic Land Reserve lands are zoned Objective 'GB' and not currently zoned for residential development.

The alternatives under this heading relate to the incorporation of Site Development Frameworks that would provide guidance for future planning applications across the LAP area.

- **Approach to Site Development Frameworks - Alternative 1**: Do not include Site Development Frameworks that would provide location specific guidance for future planning applications across the LAP lands. Development would be market-led and would seek to comply with relevant planning provisions in the absence of additional guidance.

- **Approach to Site Development Frameworks - Alternative 2**: Include Site Development Frameworks that would provide location specific guidance for future planning applications across the LAP area, that would be specific enough to secure certain objectives (land use / density / active travel etc.) while flexible enough to allow for a range of acceptable design solutions (detailed design / materials / form).
- **Approach to Site Development Frameworks - Alternative 3**: Include Site Development Frameworks that would outline overly prescriptive criteria which would not allow for flexibility in final design for future planning applications across entirety of LAP lands.

A Local Area Plan for Old Connaught, would help to facilitate development in an area that has capacity for development and can be better serviced and better connected than other lands elsewhere in the County and beyond, thereby contributing towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development would be accompanied by placemaking initiatives to enable Old Connaught to become a more desirable place to live – so it can sustainably accommodate new residents and maintain and improve services to existing and future communities.

Not including Site Development Frameworks that would provide location specific guidance for future planning applications at Key Development Sites (**Approach to Site Development Frameworks - Alternative 1**) would reduce the likelihood of sustainable development. Development would be market-led and would seek to comply with relevant planning provisions in the absence of additional guidance. The sustainable development of the Plan area would be less likely than under Alternative 2.

By including Site Development Frameworks that would provide location specific guidance for future planning applications across the LAP area, that would be specific enough to secure certain objectives (land use / density / active travel etc.) while flexible enough to allow for a range of acceptable design solutions (detailed design / materials / form), **Approach to Site Development Frameworks - Alternative 2** would increase the likelihood of sustainable development.

Including Site Development Frameworks that would outline overly prescriptive criteria which would not allow for flexibility in final design for future planning applications across entirety of LAP lands (**Approach to Site Development Frameworks - Alternative 3**) would increase the potential to hinder compliance with rigid criteria in the longer term, in a context of evolving market needs and planning requirements.

Selected Approach to Site Development Frameworks Alternative for the Plan: Alternative 2

4.3.5 Residential Density - Alternatives

Density is defined as the intensity of development on any given area of land. It can have a significant influence on the quality of a development and successful placemaking. Alternatives identified in relation to residential density include:

- **Residential Density - Alternative 1**: Application of a market-led approach where residential density is assessed at planning application stage having regard to relevant planning provisions in the absence of additional area-specific guidance.

- **Residential Density - Alternative 2**: Application of a single standard density across the whole Plan area to calculate the potential residential yield relating to land zoned for residential purposes for the Core Strategy.

- **Residential Density - Alternative 3**: Application of a coherent plan-led approach to the assessment of residential density and identify different densities at different locations throughout the LAP area, as appropriate, having regard to the environmental considerations of the Plan area (e.g. cultural heritage / topography), the planned development of the area (proximity to planned public transport and services), policy provision of the County Development Plan and the Compact Settlement Guidelines.

Under **Residential Density - Alternative 1** individual proposals for development would be assessed against the existing provisions from the County Development Plan, including the taking into account of environmental considerations of the Plan area (e.g. cultural heritage / topography), the planned development of the area (proximity to planned public transport and services) and the Compact Settlement

Guidelines. There would be reduced coherence in comparison to Alternative 3, for example, and an absence of village specific density guidance and requirements for Old Connaught. High quality development and successful placemaking would be more dependent on the market and more challenging to achieve.

The Application of a single standard density across the whole Plan area in order to calculate the potential residential yield relating to land zoned for residential purposes for the Core Strategy (**Residential Density - Alternative 2**) could lead to the potential over or undersupply of land for primarily residential purposes. The application of a singular low net residential density could fundamentally undermine the efficient use of land, compact growth and the transition towards a low carbon and more climate resilient society. This would have the potential to push new development towards more environmentally sensitive lands outside of the Plan area that are less well-serviced and less well-connected, resulting in unnecessary potentially significant adverse effects on all environmental components. The application of a singular high net residential density could result in a potential mis-alignment between the supply of zoned land to meet the projected demand for new housing. This could result in a misalignment between new development and essential services provision with associated potential for adverse effects on environmental components. Residential development occurring would likely to be of a lower quality and successful placemaking would be more challenging to achieve.

Residential Density - Density Alternative 3 would provide for the application of a coherent plan-led approach to the assessment of residential density and identification of different densities at different locations throughout the LAP area, as appropriate, having regard to the environmental considerations of the Plan area (e.g. cultural heritage / topography), the planned development of the area (proximity to planned public transport and services), policy provision of the County Development Plan and the Compact Settlement Guidelines. This alternative would contribute towards environmental protection and management to the greatest degree, with a higher quality of development and successful placemaking more likely to be achieved. Higher densities would be provided where sustainable transport mode opportunities are planned and lower densities would be provided where constraints are presented by, for example, cultural heritage designations or topography. This approach would contribute towards the efficient use of land, compact growth and the transition towards a low carbon and more climate resilient society. Alternative 3 would help to ensure compact, sustainable development within and adjacent to the existing built-up footprint and would conflict with the protection and management of environmental components the least. Alignment between new development and essential services provision would be most likely under Alternative 3.

Selected Residential Density Alternative for the Plan: Alternative 3

4.3.6 Built Heritage - Alternatives

Old Connaught is rich in heritage that contributes positively to the identity and unique sense of place in the area. Heritage includes both built heritage and archaeological heritage. The conservation and preservation of this heritage is important for the County in terms of protecting the existing heritage and ensuring that new development respects the historic grain of the built environment and archaeology that currently exists. These alternatives consider the degree to which built heritage and conservation are provided for at a local level in Old Connaught.

- **Built Heritage - Alternative 1**: A Plan that adds detailed, local-level provisions to the existing planning framework relating to the conservation of built heritage and archaeological heritage.

- **Built Heritage - Alternative 2**: A Plan that does not add detailed, local-level provisions to the existing planning framework relating to the conservation of built heritage and archaeological heritage, relying solely on existing provisions, including those set out in the County Development Plan.

A Plan that adds detailed, local-level provisions to the existing planning framework relating to the conservation of built heritage and archaeological heritage (**Built Heritage Alternative 1**) would further contribute the protection of existing heritage that is already contributed towards by the existing planning framework. By integrating heritage considerations into the Plan, Alternative 1 would be most likely to ensure that new development respects the historic grain of the built environment and archaeology that currently exists.

A Plan that does not add detailed, local-level provisions to the existing planning framework relating to the conservation of built heritage and archaeological heritage, relying solely on existing provisions, including those included as part of the County Development Plan (**Built Heritage Alternative 2**) would not further contribute the protection of existing heritage that is already contributed towards by the existing planning framework. By not integrating built and archaeological heritage considerations into the Plan, Alternative 2 would be least likely to ensure that new development respects the historic grain of the built environment and archaeology that currently exists.

Selected Built Heritage Alternative for the Plan: Alternative 1

4.3.7 Area Based Transport Assessment Alternatives

- **Area Based Transport Assessment - Alternative 1**: Inform the Plan with an Area Based Transport Assessment, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes.
- **Area Based Transport Assessment - Alternative 2**: Do not inform the Plan with an Area Based Transport Assessment, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes, relying solely on existing provisions, including those included as part of the County Development Plan. The Development Plan policy objectives are also focused on the ASI - Avoid Improve and Shift approach, but specific interventions such as those proposed in the LAP are not set out.

Informing the Plan with an Area Based Transport Assessment, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes (Area Based Transport Assessment 1), would provide a more coordinated and more orderly provision of transport infrastructure and services, with delivery of projects, and associated benefit with respect to sustainable mobility and compact development, more likely. This approach would be more likely to improve the potential for meeting important objectives relating to emissions and energy use. Potentially adverse impacts on environmental components including ecology and water would need to
be adequately mitigated at project level.

Area Based Transport Assessment Alternative 1 would:

- Support greater alignment between and integration of land use planning and transport planning;
- Ensure the assessment of transport demand and its associated impact informs the scale of development proposals, including location, density, required transport infrastructure etc.;
- Facilitate a greater shift towards a more sustainable, healthy, and low carbon-built environment;
- Prioritise of active travel measures and considerations in the formulation of development proposals, including the consideration of suitable land for development;
- Promote and encourage a modal shift from the private car to walking and cycling, particularly for short to medium distance trips;
- Prioritise walking, cycling and public transport accessibility;
- Result in improvements in the built environment for the safety and security of those walking and cycling; and
- Potentially reduce traffic congestion at peak traffic times, improving road network reliability.

Alternative 1 would be more likely to result in more connected and accessible built environments, with associated positive benefits for the health and wellbeing of local communities. Alternative 1 would contribute to the transition of the Plan area to a more low-carbon, climate resilient and healthy urban environment, with reduced car dependency and an increase in sustainable travel such as walking and cycling.

Not informing the Plan with an Area Based Transport Assessment, which focuses on delivering travel solutions that support moving people from the private car to more sustainable modes (Area Based Transport Assessment Alternative 2), would provide a less coordinated and less orderly provision of transport infrastructure and services, with delivery of projects, and associated benefit with respect to sustainable mobility and compact development, less likely. This approach would be less likely to improve the potential for meeting important objectives relating to emissions and energy use. Potentially adverse impacts arising from more coherently planned transport developments on environmental components, including ecology and water, could be mitigated at both Plan and project level.

Area Based Transport Assessment Alternative 2 would:

- Increase the potential for land use planning and developments aspects of the Plan to be considered in isolation of transport planning considerations;
- Mean that the assessment of existing traffic, transport, and movement conditions within the Plan area would not be taken into account in the formulation of policies and objectives;
- Undermine ability to plan for efficient movement of people and services within the Plan area;
- Limit the ability and scope to plan for required transport interventions in the Plan area;
- Not inform site specific transport assessment for development proposals with a Local Transport Plan; and
- Reduce support for modal shift from private car travel to active travel, including walking and cycling.

There would be greater potential for the existing pattern of car dependency to continue and increase under Alternative 2. Alternative 2 would undermine policies and objectives supporting climate action and the transition to a more low-carbon urban environment. There would be potential for negative impacts on the health and wellbeing of local communities due to absence of measures for targeted active travel infrastructure.

Selected Area Based Transport Assessment Alternative for the Plan: Alternative 1

4.3.8 Infrastructure Capacity Assessment Study Alternatives

The lands at Old Connaught are identified as tier 2 zoned lands – lands that are not considered sufficiently serviced to support new development. An Infrastructure Capacity Assessment Study (ICAS) identifies the strategic enabling infrastructure to facilitate the plan-led development of Old Connaught. The range of strategic enabling infrastructure elements considered in the ICAS include transport; green infrastructure and biodiversity, heritage and conservation, open space, parks and recreation, water and wastewater, drainage, social infrastructure - community and education facilities, and utilities - power supply and telecommunications.

- **Infrastructure Capacity Assessment Study - Alternative 1**: Inform the Plan with an Infrastructure Capacity Assessment Study, which identifies the proposed high-level strategic enabling infrastructure required to facilitate plan-led development of Old Connaught and includes a phasing programme so that key elements of strategic infrastructure are delivered in tandem with development.
- **Infrastructure Capacity Assessment Study - Alternative 2**: Do not inform the Plan with an Infrastructure Capacity Assessment Study and rely solely on existing provisions, including those included as part of the County Development Plan, assessing strategic enabling infrastructure requirements at the planning application stage.

Infrastructure Capacity Assessment Study - Alternative 1 would benefit the efficient provision of infrastructure (including transport, green infrastructure and biodiversity, heritage and conservation, open space, parks and recreation, water and wastewater, drainage, social infrastructure and utilities) and the protection and management of the environment (including water, human health, ecology and air/climate) the most and would provide the highest levels of certainty and coherence to both decision makers and stakeholders, including residents and potential developers. Applications for developments would be more likely to be successful, and residual adverse effects would be least likely. This approach would also contribute towards compliance with the objectives of the National Planning Framework, the RSES and the County Development Plan.

Infrastructure Capacity Assessment Study - Alternative 2 would benefit the efficient provision of infrastructure (including transport, green infrastructure and biodiversity, heritage and conservation, open space, parks and recreation, water and wastewater, drainage, social infrastructure and utilities) and the protection and management of the environment (including water, human health, ecology and air/climate) the least and would provide reduced levels of certainty and coherence to both decision makers and stakeholders, including residents and potential developers. Applications for developments would be less likely to be successful, and residual adverse effects would be more likely. This approach would hinder the achievement of policies and objectives contained in the National Planning Framework, the RSES and the County Development Plan.

Selected Infrastructure Capacity Assessment Study Alternative for the Plan: Alternative 1

4.3.9 Strategic Infrastructure Alternatives

In integrating provisions relating to strategic infrastructure into the Plan, the following alternatives were considered:

- **Strategic Infrastructure - Alternative 1**: Provide new strategic infrastructure with all additional environmental mitigation left to be defined until project level.
- **Strategic Infrastructure - Alternative 2**: Provide new strategic infrastructure, subject to environmental constraints, including those related to habitats and potential impacts such as disturbance from lighting – including minimising river crossings, avoiding sensitive habitats, not increasing barriers to flood waters and sustainable design and construction techniques.

Under **Strategic Infrastructure Alternative 1**, new strategic infrastructure would be considered subject to environmental constraints, including those related to habitats and potential impacts (e.g. disturbance from lighting). This would include minimising river crossings, avoiding sensitive habitats, not increasing barriers to flood waters and sustainable design and construction techniques. By focusing on mitigation at both plan and project levels, Alternative 1 would offer the most certainty for environmental protection and management and would be more likely to result in important individual projects (relating to sustainable mobility and emissions/energy objectives) receiving permission.

Under **Strategic Infrastructure Alternative 2**, all additional environmental mitigation would be left to be defined in the future, at project level. This would offer the least certainty for environmental protection and management and would be more likely to result in important individual projects (relating to sustainable mobility and emissions objectives) not been given permission.

Selected Strategic Infrastructure Alternative for the Plan: Alternative 1

4.3.10 ICAS/ABTA Transport Package Alternatives[25]

The Infrastructure Capacity Assessment Study's (ICAS's) Area Based Transport Assessment (ABTA) methodology involved an initial options development process, for which transport options were developed. These 'Long List' transport options and high-level land use scenarios were screened to form a short list of options which were packaged into scenarios that seek to address the transportation requirements of the LAP areas. These transportation packages were then assessed using a Multi-Criteria Assessment process to establish the merits and drawbacks of each scenario and to identify a preferred transport strategy.

The transport packages are elaborated upon further in the ICAS/ABTA documentation and are summarised as follows:

- **Transport Package 1**: This option focuses on the provision of new connections to surrounding areas for different modes. Three additional active travel only connections are proposed, one north of the M11 junction 6 connecting Old Connaught to Woodbrook and the proposed DART station, one to the south of Old Connaught Avenue and one to the south-east of the LAP area, connecting to Fassaroe.
- **Transport Package 2**: This package removes the proposed new north-south road along the eastern edge of the LAP area, instead relying on the upgrading of Ferndale Road and Old Connaught Avenue. This package maintains the proposed public transport/active travel priority zone in the centre of Old Connaught Village, along with the proposed active travel bridges across the M11 and proposed busway to Fassaroe.
- **Transport Package 3**: This package proposes the elimination of through traffic along Old Connaught Avenue, likely in the form of bus gates positioned adjacent to the junction of Ferndale Road and Thornhill Road, as well as along the M11 bridge. This would create a public transport and active travel priority route along the length of Old Connaught Avenue. Vehicular traffic would instead be shifted to the periphery of Old Connaught, through a new link created to the north of M11 Junction 5.
- **Transport Package 4**: As with Package 3, this package proposes the elimination of through-traffic along Old Connaught Avenue, likely in the form of a bus gate along the M11 bridge. In this package, no new road connection would be constructed, and vehicular traffic would be diverted

[25] Informed by the information from the Infrastructure Capacity Assessment Study for Old Connaught and Rathmichael Reports (Dún Laoghaire-Rathdown County Council, 2024)

either to Crinken Lane in the north, or south to Fassaroe, where the previously proposed busway would instead also take general vehicular traffic.

- **Transport Package 5**: This package proposes to utilise Old Connaught Avenue as the primary circulation route for general traffic, as opposed to the use of circulation routes around the periphery of Old Connaught Village. This would require upgrading of Old Connaught Avenue along its length, along with the provision of a new active travel bridge alongside the existing bridge over the M11.

The Transport Package Alternatives were ranked against Key Performance Indicators (KPIs) on a five-point coloured scale. Table 4.1 describes the KPI criteria used, along with the rationale for each scoring colour for each criterion. Table 4.2 provides a summary of the Multi Criteria Assessment (MCA) of ICAS/ABTA Transport Package Alternatives against Transport KPI Criteria.

Most of the packages generally score well in terms of the Transport KPIs. Packages 3 and 4 score particularly well in terms of pedestrian and cycle network connectivity, largely as a result of the proposed active travel and public transport only link proposed along Old Connaught Avenue, providing for the most direct connection between Old Connaught and Bray. Package 4 scores better in terms of the expected mode split favouring sustainable modes, this is due to the lack of direct vehicular road provision across the M11, which is expected to favour sustainable modes to a greater degree than other options still allow for a direct vehicular link. Package 4 however, scores worse in terms of the network accommodating the expected demand, due to a lack of direct road connection between Old Connaught and Bray. Package 1 generally performs well across the transport criteria, with no negative categorisation given to any of the criteria, although no dark green given either. Package 2 similarly is given no red classifications but is given fewer green scores than package 1.

In terms of environmental criteria, due to the proposed construction of a new bridge across the Ballyman Glen in close proximity to the SAC, each of the options are marked as having a potential significant impact on biodiversity. Package 5 scores particularly poorly on protection and enhancement of archaeology and cultural heritage due to the required road upgrades along Old Connaught Avenue.

From these results, Package 3 is seen as the preferred scenario, with package 4 being the next preferred option, followed by Package 1. Package 3 is combined with the preferred package for Rathmichael and adjustments will be made to further integrate the proposed measures into the overall LAP area strategy, accounting for the spatial requirements of other infrastructural and housing proposals in the areas.

Table 4.1 KPI Criteria and Scoring Rationale for ICAS/ABTA Transport Package Alternatives

		Scoring Colour				
	Criteria					
Transport	**Availability of an attractive and safe pedestrian network linked to internal and external opportunities**	No services within 10-minute walking distance	Few services within 10-minute walking distance	Some services within 10-minute walking distance	Many services within 10-minute walking distance	All necessary services within 10-minute walking distance
	Availability of a safe cycle route network linked to internal and external opportunities	No services within 10-minute cycling distance	Few services within 10-minute cycling distance	Some services within 10-minute cycling distance	Many services within 10-minute cycling distance	All necessary services within 10-minute cycling distance
	High level of permeability and reduction of walking and cycling distance and time	Cycling and walking catchments very restricted	Cycling and walking catchments restricted	Cycling and walking catchments somewhat restricted	Cycling and walking catchments less restricted	Cycling and walking catchments unrestricted
	LAP areas linked to adjacent centres and key transport interchanges through Public Transport	LAP areas not connected to any adjacent centres/key public transport interchanges	LAP areas each connected to only one adjacent centres/key public transport interchanges	LAP areas each connected to 2 adjacent centres/key public transport interchanges	LAP areas each connected to 3 adjacent centres/key public transport interchanges	LAP areas directly connected to all adjacent centres/key public transport interchanges
	Public transport stops within 10-minute walking distance	<50% of residential area within 10-minute walking distance of a public transport stop	50-60% of residential area within 10-minute walking distance of a public transport stop	60-70% of residential area within 10-minute walking distance of a public transport stop	70-80% of residential area within 10-minute walking distance of a public transport stop	>80% of residential area within 10-minute walking distance of a public transport stop
	Mode split which favours sustainable modes over car usage when compared to the existing situation	Expected increase in car mode share	No expected change in car mode share	Minor expected decrease in car mode shift (<10%)	Moderate expected decrease in car mode shift (10-30%)	Major expected decrease in car mode shift (>30%)
	Proposed road network accommodates expected demand for sustainable transport modes	Demand greatly outweighs capacity	Demand somewhat outweighs capacity	Demand and Capacity are equal	Capacity somewhat outweighs demand	Capacity greatly outweighs demand
Environmental	**Protection and enhancement of biodiversity**	Significant negative impact on biodiversity expected	Slight-moderate negative impact on biodiversity expected	No impact on biodiversity expected	Slight-Moderate positive impact on biodiversity expected	Significant positive impact on biodiversity expected
	Protection of water quality and water resources (e.g. aquifers, groundwater, streams and rivers)	Significant negative impact on water quality/water resources expected	Slight-moderate negative impact on water quality/water resources expected	No impact on water quality/water resources expected	Slight-Moderate positive impact on water quality/water resources expected	Significant positive impact on water quality/water resources expected
	Improvement of air quality and reduction in noise pollution	Significant negative air/noise impact expected	Slight-moderate air/noise impact expected	No significant air/noise impact expected	Slight-Moderate positive impact on air/noise environment	Significant positive impact on air/noise environment
	Reduction in Emissions	Significant increase in emissions expected	Slight-moderate increase in emissions expected	No significant emissions impact expected	Slight-Moderate decrease in emissions expected	Significant decrease in emissions expected
	Protection and enhancement of archaeology and cultural heritage	Significant negative impact on archaeology, architectural or cultural heritage expected	Slight-moderate negative impact on archaeology, architectural heritage or cultural heritage expected	No impact on archaeology, architectural or cultural heritage expected	Slight-Moderate positive impact on archaeology, architectural or cultural heritage expected	Significant positive impact on archaeology, architectural or cultural heritage expected

Table 4.2 Summary of MCA of Transport Package Alternatives against KPI Criteria

	KPIs	Package 1	Package 2	Package 3	Package 4	Package 5
Transport	Availability of an attractive and safe pedestrian network linked to internal and external opportunities					
	Journey time and distance reduction for sustainable modes of transport					
	Availability of a safe cycle route network linked to internal and external opportunities					
	High level of permeability and reduction of walking and cycling distance and time					
	LAP areas linked to adjacent centres and key transport interchanges through Public Transport					
	Public transport stops within 10-minute walking distance					
	Mode split which favours sustainable modes over car usage when compared to the existing situation					
	Impact on National Road Network					
	Proposed road network accommodates expected demand					
Environmental	Protection and enhancement of biodiversity					
	Protection of environmentally sensitive areas (e.g. aquifers, groundwater, streams and rivers)					
	Improvement of air quality and reduction in noise pollution					
	Protection and enhancement of archaeology and cultural heritage					
	Impact on Emissions					

4.4 Selected Alternative for the Plan

Selected alternatives for the Plan from each of the types of alternatives that emerged from the planning/SEA process are indicated above.

These alternatives have been chosen for the Draft Plan having regard to both:

1. The environmental effects that are identified by the SEA and are summarised above; and
2. Planning – including social and economic – effects that also are considered.

Section 5 Summary of Effects arising from Plan

Table 5.1 summarises the overall environmental effects arising from Draft Plan provisions. The Plan would contribute towards the proper planning and sustainable development of the Plan area and the wider County and the effects are consistent with those identified by the SEA for the Dún Laoghaire-Rathdown County Development Plan 2022-2028. The effects encompass all in-combination/cumulative effects arising from implementation of the Plan. The potentially significant adverse environmental effects (if unmitigated) arising from implementation of the Plan are detailed as are residual effects, taking into account mitigation integrated into both the Draft Plan and the Dún Laoghaire-Rathdown County Development Plan – see Section 6.

Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Environmental impacts which occur will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Strategic Environmental Objective (SEO) codes are taken from Table 3.1.

Stage 2 Appropriate Assessment (AA) is being undertaken alongside the preparation of the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The AA assesses the effects of the Plan on European Sites designated for certain habitats and species. The emerging conclusion of the AA is that the Plan is not foreseen to give rise to any adverse effects on designated European sites, alone or in combination with other plans or projects[26].

A Strategic Flood Risk Assessment (SFRA) has been undertaken as part of the preparation of the Local Area Plan. Requirements in relation to SFRA are provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. The SFRA has informed both the land use zoning and the written provisions of the Local Area Plan.

[26] Except as provided for in Article 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/programme/project to proceed; and
(c) adequate compensatory measures in place.

Table 5.1 Overall Findings –Effects arising from the Plan

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Eastern and Midland RSES, the Dún Laoghaire-Rathdown County Development Plan and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Biodiversity and Flora and Fauna	• Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to Old Connaught's central and core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. • Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats. • Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of natural capital including the environmental vectors of air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna.	Arising from both construction and operation of development and associated infrastructure: • Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.	• Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces. • Losses or damage to ecology (these would be in compliance with relevant legislation).	**BFF**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Eastern and Midland RSES, the Dún Laoghaire-Rathdown County Development Plan and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Population and Human Health	• Alignment with a range of employment locations thereby minimising the divergence between the places people live and work. • Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to Old Connaught's central and core areas) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the Plan area and beyond • Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to Old Connaught's central and core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. • Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, such as air and water.	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.	• Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under "Soil", "Water" and "Air and Climatic Factors" below.	**PHH**
Soil	• Contribution towards the protection of soils and designated sites of geological heritage by facilitating development of lands (including those within and adjacent to Old Connaught's central and core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. • Contribution towards the protection of the environment from contamination.	• Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank erosion.	• Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces. • Riverbank erosion will continue to occur naturally over time and is likely to be enhanced by climate change.	**S**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Eastern and Midland RSES, the Dún Laoghaire-Rathdown County Development Plan and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Water	• Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to Old Connaught's central and core areas) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the Plan area and beyond. • Contributions towards the protection of water resources including the status of surface and groundwaters and water-based designations. • Contribution towards flood risk management and appropriate drainage.	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects associated with flood events.	• Any increased loadings as a result of development to comply with the River Basin Management Plan. • Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan.	**W**
Material Assets	• Contribution towards appropriate provision of infrastructure and services to existing population and planned growth by facilitating compact development of lands (including those within and adjacent to Old Connaught's central and core areas) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the Plan area and beyond. • Contribution towards compliance with national and regional water services and waste management policies. • Contribution towards increase in renewable energy use by facilitating renewable energy and electricity transmission infrastructure developments. • Contribution towards limits in increases in energy demand from the transport sector by facilitating sustainable compact growth. • Contribution towards reductions in average energy consumption per capita including promoting sustainable compact growth, sustainable mobility, sustainable design and energy efficiency.	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels. • Potential impacts upon public assets and infrastructure.	• Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. • Residual wastes to be disposed of in line with higher-level waste management policies. • Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework.	**MA**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP, the Eastern and Midland RSES, the Dún Laoghaire-Rathdown County Development Plan and adjacent Development Plans and lower-tier land use plans.			SEO Codes
	Significant Positive Effect, likely to occur	**Potentially Significant Adverse Environmental Effects, if unmitigated**	**Likely Residual Adverse Non-Significant Effects**	
Air and Climatic Factors	• Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to Old Connaught's central and core areas) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-serviced lands elsewhere in the Plan area and beyond. • In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, and associated contribution towards maintaining and improving air quality and managing noise levels, including through measures relating to: o Sustainable compact growth; o Sustainable mobility, including walking, cycling and public transport; o Drainage, flood risk management and resilience; o Sustainable design, energy efficiency and green infrastructure.	• Potential conflict between development under the Plan and aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport emissions, including those from cars, and air quality[27]. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors[28]. • Potential conflicts with climate adaptation measures including those relating to flood risk management.	• An extent of travel related greenhouse gas and other emissions to air. This has been mitigated by provisions which have been integrated into the Plan, including those relating to sustainable compact growth and sustainable mobility. • Interactions between noise emissions and sensitive receptors. Various provisions have been integrated into the Plan to ensure that noise levels at sensitive receptors will be minimised.	**AC**
Cultural Heritage	• Contributes towards protection of cultural heritage elsewhere by facilitating development within the Plan area. • Contributes towards protection of cultural heritage within the Plan area by facilitating regeneration.	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.	• Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.	**CH**
Landscape	• Contributes towards protection of wider landscape and landscape designations by facilitating development within the Plan area.	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.	• Landscapes will change overtime as a result of natural changes in vegetation cover combined with new developments that will occur in compliance with the Plan's landscape protection measures.	**L**

[27] Although road transport interventions would be likely to result in an overall reduction in traffic flows and associated interactions with air, noise and human heath, there would be potential for displacement of traffic to lead to localised increases traffic flows and associated localised potential impacts in terms of increased population exposure to air pollutants and/or elevated noise levels, both within the Plan area and beyond.

[28] Although road transport interventions would be likely to result in an overall reduction in traffic flows and associated interactions with air, noise and human heath, there would be potential for displacement of traffic to lead to localised increases traffic flows and associated localised potential impacts in terms of increased population exposure to air pollutants and/or elevated noise levels, both within the Plan area and beyond.

Section 6 Mitigation and Monitoring Measures

6.1 Mitigation

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. Various environmental sensitivities and issues have been communicated to the Council through the SEA, Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes. By integrating related recommendations into the Draft Plan, the Council has ensured that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset.

Mitigation was achieved through:

- Strategic work undertaken by the Council to ensure evidence-based planning [29];
- Considering alternatives for the Plan[30];
- The integration of individual SEA, AA and SFRA provisions into the text of the Local Area Plan; and
- The integration of individual provisions into the text of the existing, already in force, County Development Plan.

6.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. Monitoring is based around indicators that allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified at Table 3.1 and used in the evaluation. Monitoring indicators, targets, sources and remedial action is provided at Table 6.1 overleaf.

[29] In preparing the Draft Plan, information relating to various sectors, from different Departments within the Councils and from different bodies and organisations, was gathered and analysed, contributing towards the development of evidence-led Plan provisions. This work included preparing the following studies and assessments: an Infrastructure Capacity Assessment Study; an Area Based Transport Assessment; a Community Infrastructure Audit; a Strategic Environmental Assessment, the findings of which are provided in this Environmental Report; an Appropriate Assessment; and a Strategic Flood Risk Assessment.

[30] Although strategic alternatives in relation to the content of the Plan were significantly limited for the Plan (see Section 4), as part of the Plan preparation/SEA process alternatives for the Plan were considered. These alternatives were assessed by the SEA process and the findings of this assessment informed the selection of alternatives for the Plan, facilitating an informed choice with respect to the type of Plan that was prepared and placed on public display.

Table 6.1 Indicators, Targets, Sources and Remedial Action

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[31]
Biodiversity, Flora and Fauna	**BFF**	• Condition of European sites	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions and to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Confirmation of compliance with Plan provisions relating to the protection of European Sites and sustaining resources	• DHLGH report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years) [32] • DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 6 years) [33] • Internal review of local land use plans • Internal review of development management / grants of permission	• Where condition of European sites is found to be deteriorating this will be investigated with the Regional Assembly and the DHLGH to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance.
		• Number of spatial plans that have included ecosystem services content, mapping and policy to protect ecosystem services when their relevant plans are either revised or drafted	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions and to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species	• Internal review of local land use plans	• Review internal systems
		• SEAs and AAs as relevant for new Council policies, plans, programmes etc.	• Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc.	• Internal review of new Council policies, plans, programmes etc. under the County Development Plan	• Review internal systems
		• Status of water bodies	• Included under Water below	• Included under Water below	• Included under Water below
		• Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see County Development Plan Chapter 8 "Green Infrastructure and Biodiversity" and Local Area Plan Chapter 7 "Green Infrastructure and Biodiversity"	• For planning permission to be only granted when applications demonstrate that they comply with all Plan measures providing for the protection of biodiversity and flora and fauna – see County Development Plan Chapter 8 "Green Infrastructure and Biodiversity" and Local Area Plan Chapter 7 "Green Infrastructure and Biodiversity"	• Internal review of development management / grants of permission	• Review internal systems

[31] Where remedial action is required, consultations with government agencies (e.g. DECC, DT, EPA, HSE, NPWS, Regional Assembly, Uisce Éireann) may be undertaken in order to confirm causes of any identified changes in the environment and in order to develop appropriate responses.

[32] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on European sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

[33] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on European sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[31]
Population and Human Health	PHH	• Implementation of Plan measures relating to the promotion of economic growth as provided for by County Development Plan Chapter 6 "Enterprise and Employment Strategy"	• Progress in successfully implementing Plan measures relating to the promotion of economic growth as provided for by County Development Plan Chapter 6 "Enterprise and Employment Strategy"	• Internal review of progress on implementing Plan objectives	• Review internal systems • Consultations with DECC
		• Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan	• No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan	• Review of published information from the Health Service Executive and EPA • Internal consultations with the Council's Environment Department	• Consultations with the Health Service Executive and EPA
		• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures • Progress in successfully implementing Plan measures relating to active travel	• CSO data • Internal review of progress on implementing Plan objectives	• Where proportion of population shows increase in private car use above previous CSO figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
		• Number of spatial plans that include specific green infrastructure mapping	• Require all local level land use plans to include specific green infrastructure mapping	• Internal review of local land use plans	• Review internal systems
Soil (and Land)	S	• Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets)	• Maintain built surface cover nationally to below the EU average of 4% as per the NPF • In accordance with National Policy Objectives 2a of the National Planning Framework, achieve the 50% target for all new homes within and adjacent to the existing built-up footprint of Dún Laoghaire-Rathdown • To map brownfield and infill land parcels	• EPA Geoportal • Compilation of greenfield and brownfield development for the DHLGH • Internal review of development management / grants of permission	• Where the proportion of growth on infill and brownfield sites is not keeping pace with the targets set in the NPF and the RSES, the Council will liaise with the Regional Assembly to establish reasons and coordinate actions to address constraints to doing so.
		• Instances where contaminated material generated from brownfield and infill must be disposed of	• Dispose of contaminated material in compliance with EPA guidance and waste management requirements	• Internal review of development management / grants of permission where contaminated material must be disposed of	• Consultations with the EPA and Development Management
		• Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission	• Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission	• Internal review of development management / grants of permission	• Review internal systems

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[31]
Water	**W**	• Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD	• Subject to exemptions provided for by Article 4 of the Water Framework Directive, not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' • Implementation of the objectives of the River Basin Management Plan	• EPA Monitoring Programme for WFD compliance [34]	• Where water bodies are failing to meet at least good status this will be investigated with the DHLGH Water Section, the EPA Catchment Unit, the Regional Assembly and, as relevant, Uisce Éireann to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance. • Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Uisce Éireann to achieve the necessary capacity.
		• Number of incompatible developments permitted within flood risk areas	• Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	• Internal review of development management / grants of permission	• Where planning applications are being permitted on flood zones, the Council will ensure that such grants are in compliance with the Flood Risk Management Guidelines and include appropriate flood risk mitigation and management measures.
Material Assets	**MA**	• Programmed delivery of Uisce Éireann infrastructure for all key growth towns in line with Uisce Éireann Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	• All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan • Where septic tanks are proposed, for planning permission to be only granted when applications demonstrate that the outfall from the septic tank will not – in-combination with other septic tanks – contribute towards any surface or ground water body not meeting the objective of good status under the Water Framework Directive • Facilitate, as appropriate, Uisce Éireann in developing water and wastewater infrastructure • See also targets relating to greenfield and brownfield development of land under Soil and broadband under Population and Human Health	• Internal review of development management / grants of permission	• Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Uisce Éireann to achieve the necessary capacity.
		• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures • Progress in successfully implementing Plan measures relating to active travel	• CSO data • Internal review of progress on implementing Plan objectives	• Where proportion of population shows increase in private car use above previous CSO figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.

[34] Including monitoring of water quality and nitrogen deposition due to bioenergy and agricultural projects where available

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[31]
Air	A	• Proportion of journeys made by private fossil fuel-based car compared to previous levels • NO_2 (Nitrogen Dioxide), PM10 (particulate matter with diameter of 10 microns or less) and O_3 (Ozone) as part of Ambient Air Quality Monitoring	• Decrease in proportion of journeys made by car compared to previous levels • Improvement in Air Quality trends, particularly in relation to transport related emissions • Progress in successfully implementing Plan measures relating to sustainable mobility and travel	• CSO data • EPA Air Quality Monitoring • Internal review of progress on implementing Plan objectives	• Where proportion of population shows increase in private car use above previous CSO figures, Council will coordinate with the Regional Assembly, DHLGH, DECC and NTA to develop a tailored response. See also entry under Population and human health above
Climatic Factors	C	• Implementation of Plan measures relating to climate reduction targets	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets	• Internal review of development management / grants of permission	• Review internal systems
		• A competitive, low-carbon, climate-resilient and environmentally sustainable economy	• Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050	• Confirmation of progress in implementing of Dún Laoghaire-Rathdown County Council's Climate Action Plan 2024-2029 • EPA Greenhouse Gas Emissions reporting • Internal review of implementation of Plan provisions relating to renewable energy in transport, including facilitating the development of electricity charging and transmission infrastructure	• Where targets are not achieved, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
		• Share of renewable energy in transport	• Contribute towards the National Energy and Climate Plan 2021-2030 sectoral target for transport (RES-T) of 14%, by 2030 (this may be increased following a provisional European agreement on 30 March 2023 for a binding overall RES target of at least 42.5% by 2030)		
		• Greenhouse gas emissions	• Contribute towards the target of aggregate reduction in carbon dioxide (CO_2) emissions of at least 51% (compared to 1990 levels) by 2030 (helping to set Ireland on a path to reach net-zero emissions by 2050)		
		• Energy consumption, the uptake of renewable options and solid fuels for residential heating	• To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating		
		• Proportion of journeys made by private fossil fuel-based car compared to previous levels	• Decrease in the proportion of journeys made by residents of the settlement using private fossil fuel-based car compared to previous levels • Progress in successfully implementing Plan measures relating to sustainable mobility and travel	• CSO data • Internal review of progress on implementing Plan objectives	• Where trends toward carbon reduction are not recorded, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
		• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures • Progress in successfully implementing Plan measures relating to active travel	• CSO data • Internal review of progress on implementing Plan objectives	• Where proportion of population shows increase in private car use above previous CSO figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[31]
Cultural Heritage	CH	• Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan	• Protect entries to the Record of Monuments and Places, and the context of these entries within the surrounding landscape where relevant, from adverse effects resulting from development which is granted permission under the Plan	• Internal review of development management / grants of permission	• Where monitoring reveals visitor or development pressure is causing negative effects on designated archaeological or architectural heritage, the Council will work with Regional Assembly, Fáilte Ireland and the National Monuments Service and other stakeholders, as relevant, to address pressures through additional mitigation.
		• 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	• 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	• Internal review of development management / grants of permission	
Landscape	L	• Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan	• No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape and amenity designations included in Land Use Plans, resulting from development which is granted permission under the Plan	• Internal review of development management / grants of permission	• Where monitoring reveals developments permitted which result in avoidable adverse visual impacts on the landscape, the Council will re-examine Plan provisions and the effectiveness of their implementation