

**Strategic
Environmental
Assessment
Non-Technical Summary**

SEA ENVIRONMENTAL REPORT

APPENDIX II – NON-TECHNICAL SUMMARY

FOR THE

DRAFT DUNDRUM LOCAL AREA PLAN 2023-2029

for: Dún Laoghaire-Rathdown County Council

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Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Draft Dundrum Local Area Plan 2023-2029 (hereafter referred to as 'the Plan'). 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 planning authority's and the public's guide to what are generally the best areas for development in the town.

SEA enables the planning authority to direct development towards robust, well-serviced and connected areas— thereby facilitating the general avoidance of incompatible development in the most sensitive, least well-serviced and least well-connected areas.

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.

The Plan directs incompatible development away from the most sensitive areas of Dundrum. Development of generally more robust, well-serviced and well-connected areas of the Dundrum area will contribute towards environmental protection and sustainable development, including climate mitigation and adaptation.

Compact development can be accompanied by placemaking initiatives to enable Dundrum to become a more desirable place to live – so that it maintains populations and services.

Compatible sustainable development in Dundrum's more environmentally 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.

Section 2 The Draft Plan

2.1 Introduction

Dún Laoghaire-Rathdown County Council has prepared a new Draft Local Area Plan (LAP) for Dundrum under the Planning and Development Act 2000 (as amended). The Plan sets out an overall strategy for the proper planning and sustainable development over the years 2023-2029.

LAPs are required to be consistent with the Policy and Objectives of the County Development Plan and its Core Strategy, as well as the National Planning Framework and Regional Spatial Economic Strategies.

The LAP should be read in conjunction with the Dún Laoghaire-Rathdown County Development Plan 2022-2028, which sets out the overarching development strategy for the administrative area of Dún Laoghaire-Rathdown County Council. Where conflicting policies and objectives arise between the LAP and the CDP in relation to SEA and AA matters the CDP shall take precedence.

2.2 Summary of the Plan

The LAP sets out an overall strategy for the proper planning and sustainable development of Dundrum in the context of Project Ireland 2040, the National Planning Framework, the Regional Spatial and Economic Strategy for the Eastern and Midland Region and the County Development Plan. It is informed by Ministerial Guidelines issued pursuant to Section 28 of the Act together with EU requirements regarding SEA and AA.

The draft LAP looks at both existing and future Dundrum and aims to set out a framework to guide future development and make sure that there are enough schools, open spaces, childcare and community facilities, shops and employment to serve the needs of the community.

As a Major Town Centre Dundrum plays a very important role in the County and whilst the draft LAP covers a relatively small area, Dundrum as a town, while serving the local need, also has a much wider draw in terms of the shops, educational facilities, and civic, cultural and community facilities that currently exist and that will exist in the future.

An analysis of population has indicated that the population of the plan area could double over the next 20 years from circa 6,000 to circa 11,500 persons. The majority of new homes will be in apartment or duplex type units with the minority in more traditional style houses.

At the heart of the Plan is the “ten minute neighbourhood” concept whereby a person should be able to walk, cycle or use high quality public transport to access the various amenities listed above within ten minutes of their home. The Luas and planned bus routes mean that Dundrum has the potential to reach a much wider area. An Area Based Transport Assessment (ABTA) has fed into the local area plan policy formulation.

The draft LAP is set out in nine chapters, setting out various Plan provisions, as follows:

1. Introduction, Context and Analysis (including Vision)
2. Urban Framework and Site Development Frameworks
3. People and Homes
4. Transport and Movement
5. Climate Change - Adaptation and Mitigation
6. Multifunctional Towns and Neighbourhood Centres
7. Employment
8. Heritage and Conservation
9. Implementation and Monitoring

The vision for Dundrum is of a vibrant, inclusive and attractive town which is connected to and supports surrounding neighbourhoods and functions as a place people can enjoy, to live in, work in and visit.

2.3 Strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development

In advance of the placing of the Draft Plan on public display, Dún Laoghaire-Rathdown County Council undertook various works in order to inform the preparation of the Plan. This included a detailed population analysis and preparation of an Area Based Transport Analysis, which has informed the draft Plan.

The findings of this strategic work have been integrated into the Plan and will contribute towards both environmental protection and management and sustainable development.

The undertaking of this SEA process was part of this strategic work and contributed towards the integration of environmental considerations into individual Plan provisions.

2.4 Relationship with other relevant Plans and Programmes

It is acknowledged that many of the major issues affecting Dundrum's development are contingent on national policy and government funding.

The 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 may, in turn, guide lower-level strategic actions. These documents include plans and programmes such as those referred to throughout this summary. These documents have been subject to their own environmental assessment processes, as relevant.

The National Planning Framework (NPF) sets out Ireland's planning policy direction up to 2040. The NPF is to be implemented through Regional Spatial and Economic Strategies (RSESs) and lower tier Development Plans and Local Area Plans. The RSES 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 be implemented through the Dún Laoghaire-Rathdown County Development Plan 2022-2028, which 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.

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 town.

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:

- **Ecologically designated sites less than 5 km from the Plan area, including:** FitzSimon's Wood proposed Natural Heritage Area, c. 2 km to the south of the Plan area; South Dublin Bay and River Tolka Estuary Special Protection Area, c. 2.8 km to the north-east of the Plan area; and South Dublin Bay Special Area of Conservation, c. 2.8 km to the north-east of the plan area;
- **Locally important habitats**, including various woodlands, parks, gardens, hedgerows 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; and
- **Aquatic and riverine ecology** associated with the streams and rivers draining the Plan area, including the River Dundrum Slang, which flows into the River Dodder at Milltown, and associated riparian buffer zones. The Dodder and several of its tributaries are exceptional in supporting Atlantic salmon and sea trout in addition to resident brown trout populations, eels and other fish species. Stretches of the Dodder support protected species including otter and bats.

There are no SACs or SPAs designated within the Plan area, however there are a total of 16 European sites (ten SACs and six SPAs) within 15 km of the Plan boundary (as listed below and shown on Figure 3.1):

- South Dublin Bay and River Tolka Estuary SPA (Site Code: 004024)¹;
- South Dublin Bay SAC (Site Code 000210)²;
- Wicklow Mountains SAC (Site Code: 002122)³;
- Wicklow Mountains SPA (Site Code: 004040)⁴;
- North Bull Island SPA (Site Code: 004006)⁵;
- North Dublin Bay SAC (Site Code: 000206)⁶;
- Knocksink Wood SAC (Site Code: 000725)⁷;
- Glenasmole Valley SAC (Site Code: 001209)⁸;
- Dalkey Islands SPA (Site Code: 004172)⁹;

¹ Sensitive features comprise: grey plover; knot oystercatcher; ringed plover; roseate tern; dunlin; black-headed gull; wetland and waterbirds; redshank; light-bellied brent goose; bar-tailed godwit common tern; sanderling; and arctic tern.

² Sensitive features comprise: salicornia and other annuals colonising mud and sand; mudflats and sandflats not covered by seawater at low tide; annual vegetation of drift lines; and embryonic shifting dunes.

³ Sensitive features comprise: otter; Alpine and Boreal heaths; Northern Atlantic wet heaths; siliceous rocky slopes with chasmophytic vegetation; oligotrophic waters containing very few minerals of sandy plains; species-rich nardus grasslands, on siliceous substrates in mountain areas - and submountain areas in continental Europe; European dry heaths; calcareous rocky slopes with chasmophytic vegetation; siliceous scree of the montane to snow levels; natural dystrophic lakes and ponds; calaminarian grasslands; blanket bogs; and old sessile oak woods with Ilex and Blechnum in the British.

⁴ Sensitive features comprise: merlin and peregrine falcon.

⁵ Sensitive features comprise: dunlin; black-headed godwit; bar-tailed godwit; shelduck; pintail; curlew; sanderling; oystercatcher; wetland and waterbirds; black-headed gull; golden plover; turnstone; knot light-bellied brent goose; teal; redshank; and shoveler grey plover.

⁶ Sensitive features comprise: salicornia and other annuals colonising mud and sand; embryonic shifting dunes; Atlantic salt meadows; annual vegetation of drift lines; fixed coastal dunes with herbaceous vegetation - grey dunes; petalwort Mediterranean salt meadows; humid dune slacks; and shifting dunes along the shoreline; mudflats and sandflats not covered by seawater at low tide.

⁷ Sensitive features comprise: old sessile oak woods; alluvial forests; and petrifying springs with tufa formation.

⁸ Sensitive features comprise: petrifying springs with tufa formation; semi-natural dry grasslands and scrubland facies on calcareous substrates; and molinia meadows on calcareous, peaty or clayey-silt-laden soils.

- Rockabill to Dalkey Island SAC (Site Code: 003000)¹⁰;
- Ballyman Glen SAC (Site Code: 000713)¹¹;
- Howth Head SAC (Site Code: 000202)¹²;
- Balydoyle Bay SAC (Site Code: 000199)¹³;
- Balydoyle Bay SPA (Site Code: 004016)¹⁴;
- Bray Head SAC (Site Code: 000714)¹⁵; and
- Howth Head Coast SPA (Site Code: 004113)¹⁶.

There are no other hydrologically connected European sites within the wider region beyond 15 km buffer zone (i.e. downstream of the Plan boundary).

Ecological networks are important in connecting areas of local biodiversity with each other and with nearby designated sites so as to prevent islands of habitat from being isolated entities. They are composed of linear features, such as tree lines, hedgerows and rivers/streams, which provide corridors or stepping stones for wildlife species moving within their normal range. They are important for the migration, dispersal and genetic exchange of species of flora and fauna particularly for mammals, especially for bats and small birds and facilitate linkages both between and within designated ecological sites, the non-designated surrounding countryside and urban areas. Wildlife corridors within and surrounding the Plan area are shown on Figure 3.2.

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. Categories for pressures and threats on Ireland's habitats and species identified by the report comprise:

- Agriculture;
- Forestry;
- Extraction of resources (minerals, peat, non-renewable energy resources);
- Energy production processes and related infrastructure development;
- Development and operation of transport systems;
- Development, construction and use of residential, commercial, industrial and recreational infrastructure and areas;
- Extraction and cultivation of biological living resources (other than agriculture and forestry);
- Military action, public safety measures, and other human intrusions;
- Alien and problematic species;
- Mixed source pollution;
- Human-induced changes in water regimes;
- Natural processes (excluding catastrophes and processes induced by human activity or climate change);
- Geological events, natural catastrophes;
- Climate change; and
- Unknown pressures, no pressures and pressures from outside the Member State.

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.

Invasive non-native species are present within the Plan area, along the Slang River corridor, include Japanese knotweed and winter heliotrope. All applications for development within or near the river corridor will need to demonstrate compliance with the Dún Laoghaire-Rathdown County Development Plan 2022-2028 measures relating to invasive non-native species.

Biodiversity in the area also faces a number of challenges including fragmentation of habitats (the River Slang is part-culverted, which can fragment habitats). Proposals for development, including those that interact with or cross the Slang River, such as blueways and greenways, will be subject to AA under the Habitats Directive.

⁹ Sensitive features comprise: common tern; roseate tern; and Arctic tern.

¹⁰ Sensitive features comprise: harbour porpoise and reefs.

¹¹ Sensitive features comprise: petrifying springs with tufa formation and alkaline fens.

¹² Sensitive features comprise: European dry heaths and vegetated sea cliffs of the Atlantic and Baltic coasts.

¹³ Sensitive features comprise: salicornia and other annuals colonising mud and sand; Atlantic salt meadows; Mediterranean salt meadows; and mudflats and sandflats not covered by seawater at low tide.

¹⁴ Sensitive features comprise: ringed plover; shelduck; wetland and waterbirds; grey plover; light-bellied brent goose; bar-tailed godwit; and golden plover.

¹⁵ Sensitive features comprise: European dry heaths; and vegetated sea cliffs of the Atlantic and Baltic coasts.

¹⁶ Sensitive features comprise: kittiwake.

3.4 Population and Human Health

Census 2016 recorded a population of 5,323 persons in Dundrum. The population projections for the Plan area allocate a potential population increase of approx. 6,500 persons.¹⁷

Dundrum is identified as a Major Town Centre in the Dún Laoghaire-Rathdown County Development Plan 2022-2028. Major Town Centres provide a full range of all types of retail services from newsagents to specialist shops and boutiques, department stores, food stores of all types and a high level of mixed uses including the arts and culture to create vibrant, living places.

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. There is historic and predictive evidence of flooding within the Plan area.

3.5 Soil

The built-up areas within and surrounding Dundrum 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.

There are no designated County Geological Sites occurring within the Plan area. The closest CGS located c.3 km to the south of the Plan area is the Murphystone Quarry.

The GSI have identified¹⁸ the Plan area as having low levels of landslide susceptibility.

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 urban and semi-urban 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.

¹⁷ Draft Dundrum Local Area Plan 2023-2029

¹⁸ <https://www.gsi.ie/en-ie/programmes-and-projects/geohazards/projects/Pages/Landslide-Susceptibility-Mapping.aspx>

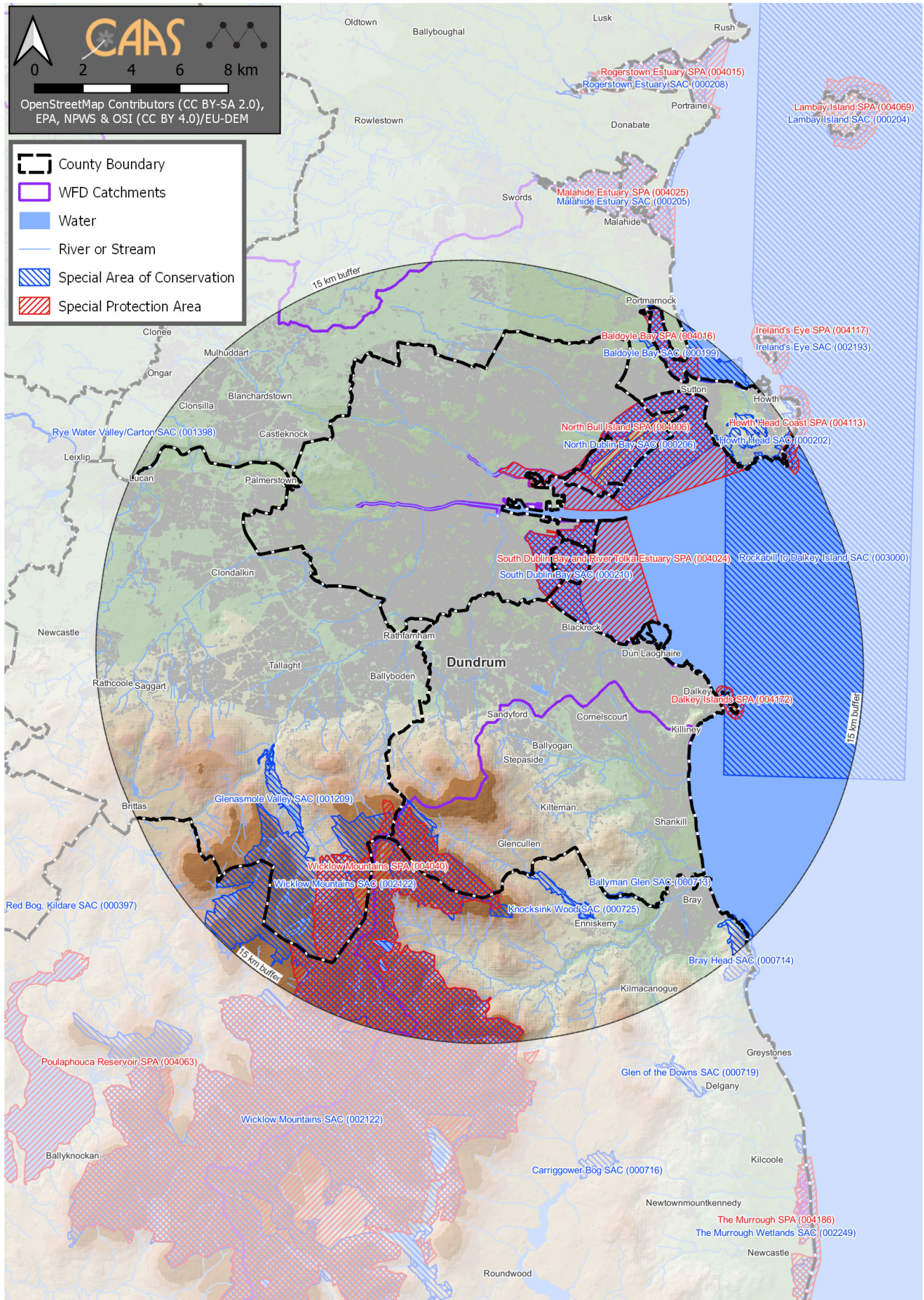


Figure 3.1 European Sites within and within 15 km buffer of the Plan area

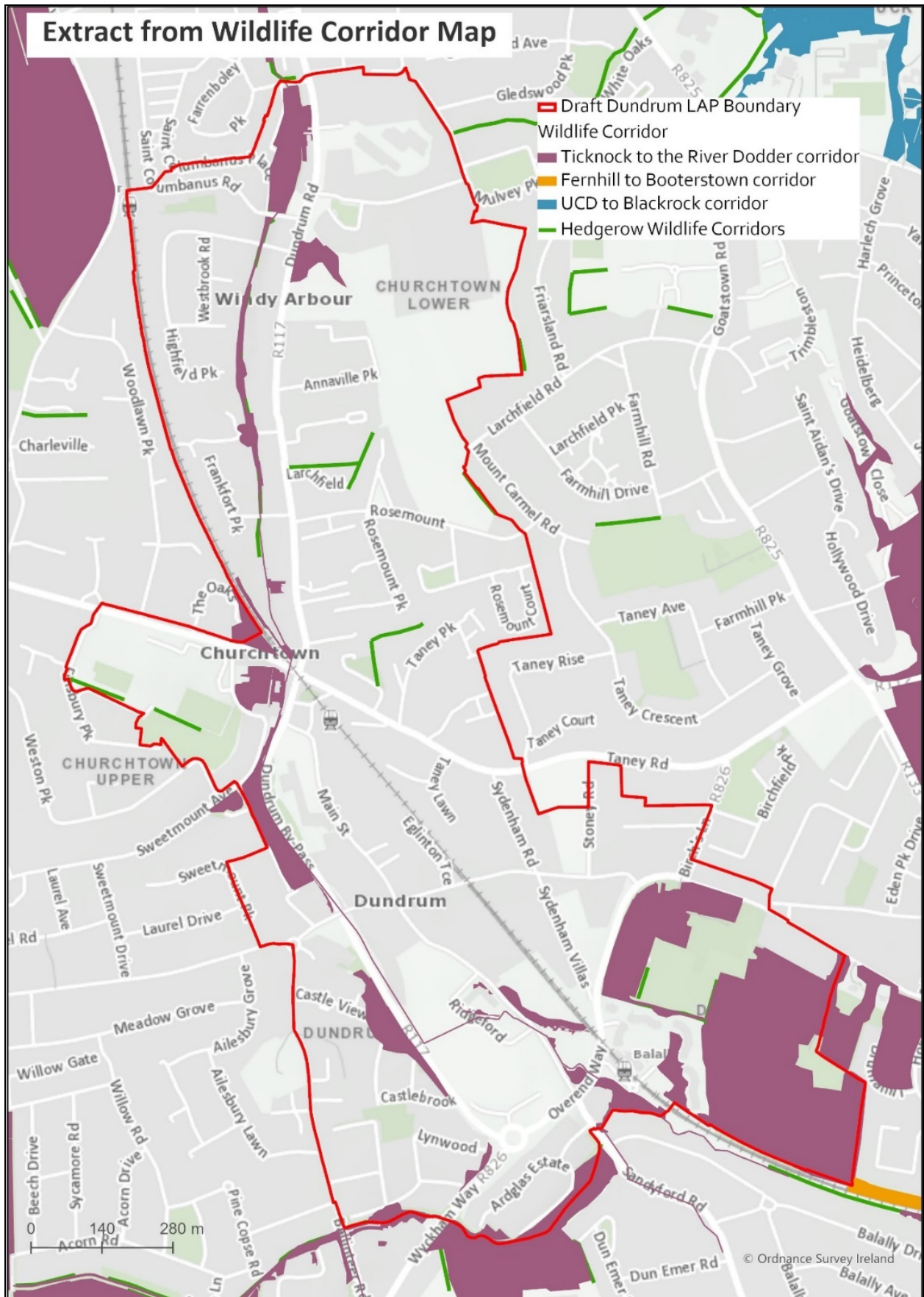


Figure 3.2 Wildlife Corridors
 (Source: Draft Dundrum Local Area Plan 2023-2029)

3.6 Water

Surface and Ground Water Status

Surface water within the Plan area drains toward the Dundrum Slang and its tributaries. The river originates at Three Rock Mountain and flows through Ticknock and Ballinteer. The main tributary of the Slang within the Plan area flows from the south. The River loops around through the Ardglass Estate and continues northward until it meets the River Dodder at Milltown.

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 which are currently unpolluted and improve polluted water bodies to *good status*.

The current WFD (2016-2021) status¹⁹ of the River Slang draining the Plan area is *moderate* (identified by the EPA as: 'Dodder_50'). Figure 3.3 illustrates the WFD surface water status within and surrounding the Plan area.

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

Surface and groundwater bodies will need to ensure no deterioration in order to comply with the objectives of the WFD. Various water bodies will need improvement to meet these objectives. The Plan includes provisions that will contribute towards maintenance and improvement in the status of waters.

Aquifer Vulnerability and Productivity

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The aquifers underlying the Plan area are as a mix of vulnerabilities:

- *High and Extreme vulnerability* and *Extreme (Rock at or near surface or karst)*, in parts of the south of the Plan area; and
- *Moderate vulnerability*, in parts of the south of the Plan area; and
- *Low vulnerability*, in parts of the north of the Plan area.

Flooding

A Strategic Flood Risk Assessment (SFRA) document accompanies this 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. In addition, land use zoning within the Plan area has been informed by the SFRA process and associated delineation of flood risk zones.

Historical flooding is documented by the Office of Public Works. The most significant source of flood risk within the Plan area is from fluvial (from rivers and streams), however there are other sources of flooding present including pluvial (from rainwater) and risk from surface drainage systems.

Predictive flood risk mapping is also available from the Office of Public Works and is included in the SFRA document that accompanies the Plan.

¹⁹ As per EPA's WFD Status 2016-2021 classification (<https://gis.epa.ie/EPAMaps/>).
CAAS for Dún Laoghaire-Rathdown County Council



Figure 3.3 Surface Water Status (2016-2021)

3.7 Air and Climatic Factors

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. 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 Climate Action Plan 2023 provides a detailed plan for taking decisive action to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and setting Ireland on a path to reach net-zero emissions by no later than 2050, as set out in the Climate Act 2021. The Plan lists the actions needed to deliver on climate targets and sets indicative ranges of emissions reductions for each sector of the economy. It will be updated periodically, to ensure alignment with legally binding economy-wide carbon budgets and sectoral ceilings.

The National Adaptation Framework Department of Communications, Climate Action and Environment, 2018), sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation. Under the Framework, several Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for. The statutory Climate Change Adaptation Plan for the Transport Sector was prepared under the Climate Action and Low Carbon Development Act (2015) and the National Adaptation Framework (2018) and published by the Department of Transport in 2019. The Plan sets out the national strategy to reduce Ireland's vulnerability to the negative effects of climate change and to avail of any positive impacts, with an objective to help develop resilience within the sector in order to safeguard transport infrastructure from future climate impacts.

The Dún Laoghaire-Rathdown County Council Climate Change Action Plan 2019-2024 features a range of actions across sectors, including agriculture, forestry, biodiversity, built and archaeological heritage, transport infrastructure, electricity and gas networks, communication networks, flood risk management, water quality, water services infrastructure and health. The Action Plan seeks to:

- Ensure a proper comprehension of the key risks and vulnerabilities of climate change;
- Bring forward the implementation of climate resilient actions in a planned and proactive manner; and
- Ensure that climate adaptation considerations are mainstreamed into all plans and policies and integrated into all operations and functions of Dún Laoghaire-Rathdown County Council.

Under the National Climate Action Plan 2023, Dún Laoghaire-Rathdown County Council is required to prepare a locally specific climate action plan for its administrative area. Once adopted, this plan will be valid for five years, and is subject to update at least every five years. The Dún Laoghaire-Rathdown County Council Climate Action Plan will be developed over the coming year and will contribute towards addressing the mitigation of greenhouse gas emissions, climate change adaptation, and strengthening the alignment between national climate policy and the delivery of local climate action. The Dún Laoghaire-Rathdown County Council Climate Action Plan must cover the following areas:

- An emphasis on a place-based approach to climate action, delivering a better understanding of greenhouse gas emissions and climate-related risks at a local level;
- Context-specific conditions and locally-tailored policy making;
- Evidence-based and integrated climate action through adaptation and mitigation measures, centred around an understanding of the role of the Council in climate action; and
- Strategic direction at local and community levels on the delivery of the national climate objective.

The EPA's (2022) *Air Quality in Ireland 2021* identifies that:

- Air quality in Ireland is generally good, however, there are localised issues.
- Ireland met all of its EU legal requirements in 2021 but it failed to meet the new WHO-based guideline levels for Health in 2021.
- Air quality monitoring results in 2021 showed that fine particulate matter (PM_{2.5}) mainly from burning solid fuel, and nitrogen dioxide (NO₂) mainly from road transport, remain the main threats to good air quality.
- It is estimated that there are approximately 1,300 premature deaths annually in Ireland due to poor air quality from fine particulate matter (PM₅).

With regards to solutions, the report identifies that:

- Ireland and Europe should move towards achieving the health-based WHO air quality guidelines.
- The planned National Clean Air Strategy for Ireland needs to be published and fully implemented.
- Local Authorities must provide more resources to increase air enforcement activities.
- National investment in clean public transport is needed across the country.

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).

Public Assets and Infrastructure

Public assets and infrastructure that have the potential to be impacted upon by the Plan, if unmitigated, include: resources such as public open spaces, parks and recreational areas; public buildings and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, waste water infrastructure etc.); and natural resources that are covered under other topics such as water and soil.

Waste Water

The Wastewater Treatment Plant (WWTP) serving Dundrum is currently listed as a priority area (such areas are those where improvements are required to resolve urgent environmental issues).²⁰

The Plan area is served by the Ringsend Wastewater Treatment Plant (WWTP) located in the north-west part of the Dublin City, which has a design capacity of 1.64 million Population Equivalent (PE).

The Ringsend WWTP (Registration No. D0034-01) is currently not compliant with the Emission Limit Values (ELVs) set in the Wastewater Discharge Licence in the most recent available Annual Environmental Report 2021 (published in March 2023). The non-compliances were due to capacity issues and ongoing works at the WWTP.²¹

Major works underway to facilitate the Ringsend WWTP to treat the increasing volumes of wastewater arriving at the plant to the required standard include: upgrade of the treatment plant; connecting the Howth (Doldrum Bay) area to Ringsend WWTP; and an action plan to address pressure on waters at risk of pollution. Irish Water is working to provide infrastructure to achieve compliance with the Urban Wastewater Treatment Directive for 2.1 million (PE) in the second half of 2023. As indicated by Irish Water, there will be spare capacity available at the plant upon completion of an upgrade project.²² When all the proposed works are complete in 2025, the Ringsend WWTP will be able to treat wastewater for up to 2.4 million (PE), while meeting the required standards.

Water Supply

Irish Water is responsible for providing and maintaining adequate public water supply infrastructure throughout the county.

Dundrum is located within the Greater Dublin Area Regional Water Resource Zone (WRZ)²³ and currently served by the Saggart – Ballymore Eustace Water Supply.²⁴ As identified by Irish Water, there is a potential capacity available to support 2031 population targets.²⁵

Under Section 58 of the Environmental Protection Agency Act 1992, the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2000. The EPA publishes their results in annual reports that are supported by Remedial Action Lists (RALs). The RAL identifies water supplies that are not in compliance with the Regulations mentioned above. The most recent EPA Remedial Action List (Q4 of 2022, published in February 2023)²⁶ does not include any water scheme that supplies the Plan area.

²⁰ <https://www.epa.ie/publications/compliance--enforcement/waste-water/priority-areas-list-current.php>

²¹ http://epawebapp.epa.ie/licences/lic_eDMS/090151b2808692cb.pdf

²² Irish Water: Settlements with Waste Water Discharge Authorisations - *Wastewater Treatment Capacity Register*. The register provides an indication of available wastewater treatment capacity based on loads received in 2021 and available treatment plan capacity now or by completion of a project by 2024 (where relevant). Available at: <https://www.water.ie/connections/developer-services/capacity-registers/wastewater-treatment-capacity-register/Dublin/> (Published in June 2022).

²³ 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.

²⁴ <https://www.dlrco.ie/en/water/supply-areas-sources>

²⁵ Irish Water: Capacity Available to meet targeted population growth to 2031 although an improvement to the Level of service (LoS) will be required. This may take the form of leakage reduction and/or capital investment to maintain/improve levels of service as the demand increases. Proposed solutions will be developed & prioritised through the National Water Resources Plan and investment planning process. <https://www.water.ie/connections/developer-services/capacity-registers/water-supply-capacity-register/dublin/>

²⁶ <https://www.epa.ie/publications/compliance--enforcement/drinking-water/annual-drinking-water-reports/epa-drinking-water-remedial-action-list-q4-of-2022.php>

Waste Management

Waste management within the Plan area is guided by the Eastern-Midlands Waste Management Plan 2015-2021. The Plan provides a framework for the prevention and management of waste in a sustainable manner in eight local authority areas, including that of Dún Laoghaire-Rathdown's County Council's. The Plan provides a framework for the prevention and management of waste in a sustainable manner in ten local authority areas, including Dún Laoghaire-Rathdown County Council.

There are three Region Waste Management Plans in Ireland and these will be replaced by a new National Waste Management Plan for a Circular Economy, which will take account of the various measures outlined in A Waste Action Plan for A Circular Economy - Ireland's National Waste Policy 2020-2025.

Transport

Dundrum is currently served by the Green Line Luas, which provides public transport to Dublin City Centre, North Dublin and South Dublin. Dundrum is also served by Dublin Bus, providing routes to Dublin Airport, Dublin City Centre and Tallaght.

Significant improvements to public transport is planned for the area including, inter alia, the Luas capacity enhancement and the BusConnects network redesign. There will also be a new bus interchange facility within Dundrum connecting services to the Green Luas Line. The existing road network around Dundrum reaches capacity during peak commuter and shopping periods leading to congestion and delay.

There are accessibility issues for pedestrians accessing Dundrum major town centre from the east and west. The Luas line causes some severance to the east. Steep gradients and the Dundrum Bypass act as a barrier to the west. There is no cycle infrastructure on key local routes accessing the town centre such as Kilmacud Road Upper, Ballinteer Road and Dundrum Road. Recent mobility and public space enhancement works have significantly improved the public realm on Main Street and the northern end of Sandyford Road, and made it a more attractive environment for walking and cycling.

A Local Transport Plan (LTP) has been integrated into the Plan to help ensure a shift towards more sustainable modes of transport.

Existing Problems

The provisions of the Plan will contribute towards protection of the environment with regard to impacts arising from material assets. The provisions of infrastructure and supporting services for development, particularly water and wastewater services, is critical as capacity limitations have been identified (these are summarised above).

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. It is available from the National Monuments Service and at archaeology.ie.

There are number of entries to the RMP within the Plan area comprising:

- Ecclesiastical enclosure located at Churchtown Road Upper, which encompasses three recorded monuments (No. DU022-016001- Ecclesiastical enclosure; No. DU022-016002- Church; and No. DU022-016003- Graveyard);²⁷
- Dundrum Castle ruins, which encompasses two recorded monuments: No. DU022-023001- Castle - tower house; and No. DU022-023002- Castle - Anglo-Norman masonry castle; and
- The Mill Pond/Mill Race, No. DU022-100001- Redundant Record, previously recorded to the west of Main Street. This site is not scheduled for inclusion in the next revision of the RMP.

Architectural Heritage

There are various Protected Structures within the Plan area²⁸, including Saint Nahi's Church (RPS No. 857), Fernbank, Carnegie Library, Dundrum Railway Station, Dundrum Courthouse, Dundrum Castle and Airfield House.

²⁷ An additional two monuments at the ecclesiastical enclosure are listed in the SMR and are due for inclusion in the next revision of the RMP: SMR No. DU022-016004- Graveslab and SMR No. DU022-016005- Graveslab.

²⁸ Draft Dundrum Local Area Plan 2023-2029

An Architectural Conservation Area (ACA) is a place, area, group of structures or townscape, which is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or contributes to the appreciation of a Protected Structure. An ACA may or may not include Protected Structures. In an ACA, protection is placed on the external appearance of such areas or structures. There are four ACAs in Dundrum: Dundrum ACA (which incorporates the Pembroke Cottages and substantial portion of the Main Street); Sydenham Road ACA; Sydenham Villas ACA; and Campfield Terrace ACA.

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

As a major town centre, Dundrum is an important urban area in the County with a town centre that developed from the historic village of Dundrum. The Plan area, as defined in the existing Dún Laoghaire-Rathdown County Development Plan 2022-2028, has been extended to include lands at Fernbank, the former Notre Dame School site and adjoining open space zoned land to the south. The Plan covers a total area of approximately 168 hectares. There are two main areas identified in the Draft Plan – the lands zoned “Major Town Centre” (MTC) at Dundrum and the former Central Mental Hospital site and surrounding area, which includes the Windy Arbour neighbourhood centre lands and Dundrum Business Park. The two areas are linked by the Dundrum Road, which contains a number of what are termed “opportunity sites”.

The Dundrum Plan area encompasses the various parklands areas, individual gardens, communal open spaces, waterways including the River Slang, greens strips and wildlife areas, which adjoin the Luas line and roads and streets, lands at St. Nahi’s cemetery, and the various species - both plant and animal - that occupy and/or pass through these areas.

Dundrum developed around a crossing point on the River Slang, with Dundrum Castle standing on the steeply sloping western side of the river. Although culverted in places, the River Slang is an important green/blue infrastructure corridor and habitat in the Dundrum area, providing multi-functional eco-system services such as land drainage, recreational amenity, clean/cool air and a wildlife corridor.

There are a range of different landscapes found in the Plan area, each with varying visual and amenity values, topography, exposure levels and each containing a variety of habitats. Each landscape type has varying capacity to absorb development related to its overall sensitivity.

The existing Dún Laoghaire-Rathdown CDP 2022-2028 identifies 14 Landscape Character Areas (to the south of Dundrum and the more established built envelope in the northern portion of Dún Laoghaire-Rathdown), Areas of High Amenity and several views and prospects within the Council’s administrative area. There are no designated Landscape Character Areas, Areas of High Amenity, views or prospects within or adjacent to the Local Area Plan area.

Dundrum’s area can be characterised as mainly urban, with one of the earliest places in Ireland with a purpose-built shopping centre known today as ‘Dundrum Town Centre’.

Existing Environmental 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 sites Safeguard designated geological sites
Water	W	Protection, improvement and sustainable management of the water resource	<ul style="list-style-type: none"> Ensure that the status of water bodies is protected, maintained and improved in line with the requirements of the Water Framework Directive and Marine Strategy 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
Material Assets	MA	Sustainable and efficient use of natural resources	<ul style="list-style-type: none"> Optimise existing infrastructure and provide new infrastructure to match population distribution proposals in the County – 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, wave solar, tidal, 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Protect places, features, buildings and landscapes of cultural, archaeological or architectural heritage
Landscape	L	Protect and enhance the landscape character	<ul style="list-style-type: none"> To implement the County Development 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 Plan is required to be prepared by the existing, already in force, Dún Laoghaire-Rathdown County Development Plan 2022-2028 and the Planning and Development Act 2000 (as amended), which specifies various types of objectives that must be provided for by the Plan.

The alternatives available for the Plan are significantly 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 and the County Plan. These documents set out various requirements for the content of the Plan including on topics such as land use zoning.

4.3 Land Use Zoning Alternatives

4.4 Plan Boundary/Area Alternatives

Under **Plan Boundary/Area Alternative 1** (covering the area set out in the Dún Laoghaire-Rathdown County Development Plan) less elements integral to achieving the sustainable '10-minute neighbourhood' concept would be available for consideration by the Local Area Plan. The '10-minute neighbourhood' concept is set out under policy objective PHP4 in the County Development Plan 2022-2028, whereby people can access their day-to-day requirements such as shops, employment, open space and schools within a ten-minute journey from their home by bike, foot or public transport.

Plan Boundary/Area Alternative 1 would not, in addition to the area set out in the Dún Laoghaire-Rathdown County Development Plan, include the Dundrum Business Park, lands at Fernbank, the former Notre Dame School site and adjoining open space zoned land to the south. This would make the articulation of the sustainable '10-minute neighbourhood' concept, and associated benefits with respect to sustainable mobility, compact development, emissions and energy use, more difficult.

Under **Plan Boundary/Area Alternative 2** more elements integral to achieving the sustainable '10-minute neighbourhood' concept would be available for consideration by the Local Area Plan.

Plan Boundary/Area Alternative 1 would, in addition to the area set out in the Dún Laoghaire-Rathdown County Development Plan, include the Dundrum Business Park, lands at Fernbank, the former Notre Dame School site and adjoining open space zoned land to the south. This would make the articulation of the sustainable '10-minute neighbourhood' concept, and associated benefits with respect to sustainable mobility, compact development, emissions and energy use, easier. The extension of the Plan boundary allows for a clearer articulation of the ten-minute neighbourhood concept as it increases the range of everyday needs that are available within the Plan lands.

[Selected Plan Boundary/Area Alternative for the Plan: Alternative 2](#)

4.5 Area Based Transport Assessment Alternatives

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 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.

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 LAP and project level.

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

4.6 Ecosystem Services Approach Alternatives

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
- 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.

As has been the case over previous plan periods, many natural capital and ecosystem service issues would be integrated into individual Plan Policy Objectives and into decision making at lower tiers of plan preparation and development management. However, this approach would be less coordinated and comprehensive than would be the case under an Ecosystems Services Approach.

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

4.7 Built Heritage Alternatives

A Plan that adds detailed, local-level provisions to the existing planning framework relating to the conservation of built 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, 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 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

4.8 Approach to Site Development Frameworks Alternatives

A Local Area Plan for Dundrum, including Key Development Sites, would help to direct incompatible development away from the most sensitive areas in the County and beyond and to focus on directing compact, sustainable development within and adjacent to the existing built-up footprint of Dundrum. Development of areas within and adjacent to the existing built-up footprint of Dundrum, which is generally more robust, better serviced and better connected than other lands elsewhere in the County and beyond, would contribute towards environmental protection and sustainable development, including climate mitigation and adaptation. Compact development would be accompanied by placemaking initiatives to enable Dundrum 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 while, at the same time, allowing for flexibility in final design, layout and uses, for future planning applications at Key Development Sites, **Alternative 2** would increase the likelihood of sustainable development.

Including Site Development Frameworks that would outline criteria (which would not allow for flexibility in final design, layout and uses) for future planning applications at Key Development Sites (**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

4.9 Densities Alternatives

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 (**Density Alternative 1**) 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.

The Application of different densities at different locations, as appropriate, (**Density Alternative 2**) would provide for the most sustainable Core Strategy, which would contribute towards environmental protection and management the most. Higher densities would be provided where sustainable transport mode opportunities are available and lower densities would be provided where constraints are presented by, for example, cultural heritage designations or the local road network. 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 2 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 2.

Selected Density Alternative for the Plan: Alternative 2

4.10 Transport Infrastructure Alternatives

Under **Transport Infrastructure Alternative 1**, new transport 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 **Transport 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 Transport Infrastructure Alternative for the Plan: Alternative 1

Section 5 Summary of Effects arising from Plan

Table 5.1 summarises the overall environmental effects arising from Draft Plan provisions. 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 2022-2028 – 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.

Appropriate Assessment (AA) Screening and Stage 2 AA are being undertaken alongside the preparation of the Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). As part of the AA Screening process, the Council determined that it could not be excluded, on the basis of objective information, that the emerging Draft Plan, individually, or in combination with other plans and projects would have a likely adverse effect on the integrity of a European Site. Therefore, Stage 2 AA is required. The emerging conclusion of the Stage 2 AA is that, following the application of mitigation, the Plan will not affect the integrity of the European Sites, alone or in combination with other plans or projects.²⁹

A Strategic Flood Risk Assessment (SFRA) document accompanies this 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 LAP.

²⁹ 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 to proceed; and
 (c) adequate compensatory measures in place.

Table 5.1 Overall Findings – Environmental Effects arising from Draft Plan Provisions

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 2018, the Eastern and Midland RSES, the Dún Laoghaire-Rathdown County Development 2022-2028 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	<ul style="list-style-type: none"> Contribution towards protection of ecology (including designated sites, ecological connectivity, habitats) by facilitating development of lands (including those within and adjacent to the Plan area's existing built-up footprint) 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-served lands elsewhere in the County 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. 	<p>Arising from both construction and operation of development and associated infrastructure:</p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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
Population and Human Health	<ul style="list-style-type: none"> Promotion of economic growth to encourage retention of working age population and funding of sustainable development and environmental protection and management. 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 the Plan area's existing built-up footprint) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County and beyond Contribution towards the protection of human health by facilitating development of lands (including those within and adjacent to the Plan area's existing built-up footprint) 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-served lands elsewhere in the County and beyond. Contributes towards protection of human health as a result of contributing towards the protection of natural capital including environmental vectors, including air and water. 	<ul style="list-style-type: none"> Potential adverse effects arising from flood events. Potential interactions if effects arising from environmental vectors. 	<ul style="list-style-type: none"> Potential interactions with residual effects on environmental vectors – please refer to residual adverse effects under "Soil", "Water" and "Air and Climatic Factors" below. 	PHH

SEA Environmental Report Appendix II: Non-Technical Summary

Environmental Component	Environmental Effects, in combination with the wider planning framework			SEO Codes
	Effects include in-combination effects that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Eastern and Midland RSES, the Dún Laoghaire-Rathdown County Development 2022-2028 Plan and adjacent Development Plans and lower-tier land use plans			
	Significant Positive Effect, likely to occur	Potentially Significant Adverse Environmental Effects, if unmitigated	Likely Residual Adverse Non-Significant Effects	
Soil	<ul style="list-style-type: none"> Contribution towards the protection of soils by facilitating development of lands (including those within and adjacent to the Plan area's existing built-up footprint) 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-served lands elsewhere in the County and beyond. 	<ul style="list-style-type: none"> Potential adverse effects on the hydrogeological and ecological function of the soil resource. Potential for riverbank erosion. 	<ul style="list-style-type: none"> 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
Water	<ul style="list-style-type: none"> Contribution towards the protection of water by facilitating development of lands (including those within and adjacent to the Plan area's existing built-up footprint) 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-served lands elsewhere in the County 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. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 the Plan area's existing built-up footprint) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County 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 energy efficient buildings, retrofitting, smart buildings, cities and grids. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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

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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 2018, the Eastern and Midland RSES, the Dún Laoghaire-Rathdown County Development 2022-2028 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	<ul style="list-style-type: none"> Contribution towards climate mitigation and adaptation by facilitating compact development of lands (including those within and adjacent to the Plan area's existing built-up footprint) that are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop less well-served lands elsewhere in the County 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: <ul style="list-style-type: none"> Sustainable compact growth; Sustainable mobility, including walking, cycling and public transport; Drainage, flood risk management and resilience; Sectors including agriculture, residential heating and infrastructure; Sustainable infrastructure design solutions including energy efficient buildings and green infrastructure. 	<ul style="list-style-type: none"> 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. Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. Potential conflicts with climate adaptation measures including those relating to flood risk management. 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Contributes towards protection of cultural heritage elsewhere in the County by facilitating development within and adjacent to the Plan area's existing built-up footprint. Contributes towards protection of cultural heritage within and adjacent to the Plan area's existing built-up footprint by facilitating brownfield development and regeneration. 	<ul style="list-style-type: none"> Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities. 	<ul style="list-style-type: none"> Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation. 	CH
Landscape	<ul style="list-style-type: none"> Contributes towards protection of wider landscape and landscape designations by facilitating development within and adjacent to the Plan area's existing built-up footprint. 	<ul style="list-style-type: none"> Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape. 	<ul style="list-style-type: none"> 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

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 all related recommendations into the Plan, the Council have 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 contribution towards environmental protection and sustainable development³⁰;
- Considering alternatives for the Plan³¹;
- The integration of environmental considerations into the Plan's Urban Framework and Site Development Frameworks³²;
- The integration of individual SEA, AA and SFRA provisions into the text of the Plan; and
- The integration of individual provisions into the text of the 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.

Given the position of the Local Area Plan in the land use planning hierarchy beneath the Dún Laoghaire-Rathdown County Development Plan 2022-2028, the measures identified in that County Development Plan SEA have been used as they are or having been slightly modified – in most instances. This consistency across the hierarchy of land use plans will improve the efficiency and effectiveness of future monitoring.

Monitoring indicators, targets, sources and remedial action is provided at Table 6.1. These measures can be considered and used as appropriate when it comes to monitoring the likely significant effects of implementing the Plan. The indicators may be updated over time, as new requirements and information emerge, for example. Reporting may be undertaken in conjunction with the monitoring reporting on other plans, such as the County Development Plan and other Local Area Plans.

³⁰ In advance of the placing of the Draft Plan on public display, Dún Laoghaire-Rathdown County Council undertook various works in order to inform the preparation of the Plan. This included a detailed population analysis and preparation of an Area Based Transport Analysis, which has informed the draft Plan.

The findings of this strategic work have been integrated into the Plan and will contribute towards both environmental protection and management and sustainable development.

The undertaking of this SEA process was part of this strategic work and contributed towards the integration of environmental considerations into individual Plan provisions.

³¹ Although strategic alternatives in relation to the content of the Plan were guided by higher level planning objectives, as part of the Plan preparation/SEA process, the Council considered a number of alternatives for the Plan. These alternatives were assessed by the SEA process and the findings of this assessment informed the selection of preferred alternatives, facilitating an informed choice with respect to the type of Plan that was prepared and placed on public display.

³² Environmental considerations, including those relating to sustainable and compact growth, sustainable mobility, sustainable infrastructure, flood risk, landscape, views and architectural heritage, were integrated into the Plan's Urban Framework and Site Development Frameworks through an interdisciplinary approach. The Plan seeks to achieve sustainable and compact growth, taking into account the various requirements set out in the higher-level NPF, Eastern and Midland RSES and Dún Laoghaire-Rathdown County Development Plan 2022-2028.

Table 6.1 Indicators, Targets, Sources and Remedial Action

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Biodiversity, Flora and Fauna	BFF	<ul style="list-style-type: none"> Condition of European sites 	<ul style="list-style-type: none"> Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species Complete the review of the Dún Laoghaire-Rathdown Biodiversity Plan 2009-2013 and implement the revised Plan 	<ul style="list-style-type: none"> Department of Housing, Local Government and Heritage report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). Department of Housing, Local Government and Heritage's National Birds Directive Monitoring Report for the under Article 12 (every 3 years) Consultations with the NPWS 	<ul style="list-style-type: none"> 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.
		<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions in their land use plans and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species Complete the review of the Dún Laoghaire-Rathdown Biodiversity Plan 2009-2013 and implement the revised Plan 	<ul style="list-style-type: none"> Internal review of local land use plans 	<ul style="list-style-type: none"> Review internal systems
		<ul style="list-style-type: none"> SEAs and AAs as relevant for new Council policies, plans, programmes etc. 	<ul style="list-style-type: none"> Screen for and undertake SEA and AA as relevant for new Council policies, plans, programmes etc. 	<ul style="list-style-type: none"> Internal monitoring of preparation of local land use plans 	<ul style="list-style-type: none"> Review internal systems
		<ul style="list-style-type: none"> Status of water quality in the County's water bodies 	<ul style="list-style-type: none"> Included under Water below 	<ul style="list-style-type: none"> Included under Water below 	<ul style="list-style-type: none"> Included under Water below
		<ul style="list-style-type: none"> Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 8 "Green Infrastructure and Biodiversity" of the County Development Plan 	<ul style="list-style-type: none"> 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 Chapter 8 "Green Infrastructure and Biodiversity" of the County Development Plan 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Review internal systems
Population and Human Health	PHH	<ul style="list-style-type: none"> Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 6 "Enterprise and Employment Strategy" of the County Development Plan 	<ul style="list-style-type: none"> For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to the promotion of economic growth as provided for by Chapter 6 "Enterprise and Employment Strategy" of the County Development Plan By 2020 all citizens will have access to speeds of 30Mbps, and that 50% of citizens will be subscribing to speeds of 100Mbps (Also relevant to Material Assets) 	<ul style="list-style-type: none"> Internal review of progress on implementing Plan objectives Consultations with Department of Environment, Climate and Communications 	<ul style="list-style-type: none"> Review internal systems Consultations with Department of Environment, Climate and Communications

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
		<ul style="list-style-type: none"> Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan 	<ul style="list-style-type: none"> No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan 	<ul style="list-style-type: none"> Consultations with the Health Service Executive and EPA 	<ul style="list-style-type: none"> Consultations with the Health Service Executive and EPA
		<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> CSO data Monitoring of the Dún Laoghaire Rathdown County Council's Climate Change Action Plan 2019-2024 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
		<ul style="list-style-type: none"> Number of spatial plans that include specific green infrastructure mapping 	<ul style="list-style-type: none"> Require all local level land use plans to include specific green infrastructure mapping 	<ul style="list-style-type: none"> Internal review of local land use plans 	<ul style="list-style-type: none"> Review internal systems
Soil (and Land)	S	<ul style="list-style-type: none"> Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets) 	<ul style="list-style-type: none"> Maintain built surface cover nationally to below the EU average of 4% as per the NPF 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 across the County. 	<ul style="list-style-type: none"> Environmental Protection Agency (EPA), Geoportal Compilation of greenfield and brownfield development for the Department of Housing, Local Government and Heritage AA/Screening for AA for each application 	<ul style="list-style-type: none"> 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.
		<ul style="list-style-type: none"> Instances where contaminated material generated from brownfield and infill must be disposed of 	<ul style="list-style-type: none"> Dispose of contaminated material in compliance with EPA guidance and waste management requirements 	<ul style="list-style-type: none"> Internal review of grants of permission where contaminated material must be disposed of 	<ul style="list-style-type: none"> Consultations with the EPA and Development Management
		<ul style="list-style-type: none"> Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission 	<ul style="list-style-type: none"> Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission 	<ul style="list-style-type: none"> Internal monitoring of grants of permission 	<ul style="list-style-type: none"> Review internal systems
Water	W	<ul style="list-style-type: none"> Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD 	<ul style="list-style-type: none"> 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 second cycle of the River Basin Management Plan by 2021 (and subsequent iterations as relevant) 	<ul style="list-style-type: none"> EPA Monitoring Programme for WFD compliance 	<ul style="list-style-type: none"> 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, Irish Water 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 marine water bodies are failing to meet good ecological status, this will be interrogated with the Marine Institute and the DHLGH to establish if the pressures are related to RSES activities. A tailored response will be developed in consultation with the Marine Institute and DHLGH in such a circumstance. Where planning applications are rejected due to insufficient capacity in the Wastewater treatment Plant (WWTP) or failure of the WWTP to meet Emission Limit Values, the Council will consider

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
					whether it is necessary to coordinate a response with the EMRA, EPA and Irish Water to achieve the necessary capacity.
		<ul style="list-style-type: none"> Number of incompatible developments permitted within flood risk areas 	<ul style="list-style-type: none"> Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Programmed delivery of Irish Water infrastructure for all key growth towns in line with Irish Water 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 	<ul style="list-style-type: none"> 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, Irish Water 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 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission Consultations with the Irish Water Department of Housing, Local Government and Heritage in conjunction with Local Authorities 	<ul style="list-style-type: none"> Where planning applications are rejected due to insufficient capacity in the Wastewater treatment Plant (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 EMRA, EPA and Irish Water to achieve the necessary capacity.
		<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> CSO data Monitoring of the Dún Laoghaire Rathdown County Council's Climate Change Action Plan 2019-2024 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.
Air	A	<ul style="list-style-type: none"> Proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels of 74% NO_x, SO_x, PM10 and PM2.5 as part of Ambient Air Quality Monitoring 	<ul style="list-style-type: none"> Decrease in proportion of journeys made by private fossil fuel-based car compared to 2016 National Travel Survey levels Improvement in Air Quality trends, particularly in relation to transport related emissions of NO_x and particulate matter 	<ul style="list-style-type: none"> CSO data Data from the National Travel Survey EPA Air Quality Monitoring Consultations with Department of Transport and Department of Environment, Climate and Communications 	<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 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

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action	
Climatic Factors ³³	C	<ul style="list-style-type: none"> Implementation of Plan measures relating to climate reduction targets as provided for by Plan provisions including those provided for and referenced in Chapter 3 "Climate Action" of the County Development Plan 	<ul style="list-style-type: none"> For review of progress on implementing Plan objectives to demonstrate successful implementation of measures climate reduction targets as provided for by Plan provisions including those provided for and referenced in Chapter 3 "Climate Action" of the County Development Plan 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> Review internal systems 	
		<ul style="list-style-type: none"> A competitive, low-carbon, climate-resilient and environmentally sustainable economy 	<ul style="list-style-type: none"> Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050 	<ul style="list-style-type: none"> Monitoring of the Dún Laoghaire Rathdown County Council's Climate Change Action Plan 2019-2024 EPA Annual National Greenhouse Gas Emissions Inventory reporting Climate Action Regional Office Consultations with Department of Environment, Climate and Communications (at monitoring evaluation) 	<ul style="list-style-type: none"> Where targets are not achieved, the Council will liaise with the Regional Assembly and the Dublin Climate Action Regional Office to establish reasons and develop solutions. 	
		<ul style="list-style-type: none"> Share of renewable energy in transport 	<ul style="list-style-type: none"> Contribute towards the target of the Renewable Energy Directive (2009/28/EC), for all Member States to reach a 10% share of renewable energy in transport by facilitating the development of electricity charging and transmission infrastructure, in compliance with the provisions of the Plan 			
		<ul style="list-style-type: none"> Carbon dioxide (CO₂) emissions across the electricity generation, built environment and transport sectors 	<ul style="list-style-type: none"> Contribute towards the target of aggregate reduction in carbon dioxide (CO₂) emissions across the electricity generation, built environment and transport sectors 			
		<ul style="list-style-type: none"> Energy consumption, the uptake of renewable options and solid fuels for residential heating 	<ul style="list-style-type: none"> To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating 			
		<ul style="list-style-type: none"> Proportion of journeys made by private fossil fuel-based car compared to 2016 levels 	<ul style="list-style-type: none"> Decrease in the proportion of journeys made by residents of the County using private fossil fuel-based car compared to 2016 levels 	<ul style="list-style-type: none"> CSO data Monitoring of the Dún Laoghaire Rathdown County Council's Climate Change Action Plan 2019-2024 		<ul style="list-style-type: none"> Where trends toward carbon reduction are not recorded, the Council will liaise with the Regional Assembly and the Dublin Climate Action Regional Office to establish reasons and develop solutions.
		<ul style="list-style-type: none"> Proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> Increase in the proportion of people reporting regular cycling / walking to school and work above 2016 CSO figures 	<ul style="list-style-type: none"> CSO data Monitoring of the Dún Laoghaire Rathdown County Council's Climate Change Action Plan 2019-2024 		<ul style="list-style-type: none"> Where proportion of population shows increase in private car use above CSO 2016 figures, the Council will coordinate with the Regional Assembly, the DHLGH, DECC and NTA to develop a tailored response.

³³ Targets under the national Climate Action Plan are reviewed and updated periodically and include those under the headings of Electricity, Built Environment, Transport, Agriculture, Forestry & Land Use and Enterprise.

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Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action
Cultural Heritage	CH	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> 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.
		<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Consultation with Department of Housing, Local Government and Heritage. 	
Landscape	L	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Internal monitoring of likely significant environmental effects of grants of permission 	<ul style="list-style-type: none"> 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

