



STRATEGIC ENVIRONMENTAL
ASSESSMENT STATEMENT

DÚN LAOGHAIRE-RATHDOWN COUNTY COUNCIL

**CLIMATE CHANGE
ACTION PLAN 2019-2024**

JULY 2019

Dún Laoghaire Rathdown County Council

Strategic Environmental Assessment
Statement Dún Laoghaire Rathdown
Climate Change Action Plan 2019-2024

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1 Introduction

Dún Laoghaire Rathdown County Council (DLRCC) approved the Dún Laoghaire Rathdown Climate Change Action Plan 2019-2024 (CCAP) at the council meeting on Monday 13th May 2019.

The main purpose of the SEA Statement is to provide information on the decision-making process, to document how environmental considerations, the views of statutory consultees and other submissions and the recommendations of the SEA Environmental Report and Natura Impact Statement, have been taken into account in the CCAP, as well as monitoring arrangements.

This SEA Statement includes the following information:

- Summary of how environmental considerations have been integrated into the CCAP (Section Two)
- Summary of how submissions received during consultation have been taken into account in the CCAP (Section Three);
- Reasons for choosing the recommended development scenario, in the light of other reasonable alternatives considered (Section Four);
- Measures that are to be undertaken to monitor the significant environmental effects of implementing the CCAP (Section Five).

2 Summary of how Environmental Considerations and the SEA Environmental Report have been integrated into Dún Laoghaire Rathdown CCAP 2019-2024.

2.1 Introduction

The purpose of this section is to present a summary of how environmental considerations and consultation have informed the plan preparation process. Legislation and guidance relating to SEA recommends that the process of plan preparation, SEA and Appropriate Assessment (AA) should be integrated and prepared in an iterative process to facilitate the ongoing assessment and evaluation of environmental considerations during plan preparation. A multi-disciplinary team worked on the SEA and AA elements of the plan. Key tasks associated with the SEA were as follows:

TABLE 1 STAGES IN SEA

Stage of SEA	Plan
Stage 1 Screening	Screening is the first stage of SEA to determine if the plan requires full SEA. The SEA Regulations state that SEA is mandatory for certain plans while screening for SEA is required for other plans that fall below the specified thresholds. Given the scale, nature and extent of the CCAP, as well as the finding of likely significant effects identified by the Screening Statement in support of Appropriate Assessment, the CCAP progressed to the next stage of SEA – Scoping.
Stage 2 Scoping	The purpose of the SEA Scoping report is to identify the scope of the SEA and ensure that relevant data and environmental topics are included in the SEA. The Scoping report was issued to the statutory environmental authorities consultees in December 2018 for comment.
Stage 3 Environmental Report	The Environmental Report tells the story of the draft CCAP and how environmental considerations have been addressed and included during the preparation process. The appropriate assessment is also discussed in the Environmental Report. This report was the main consultation document of the SEA process and was on display alongside the plan along with supporting reports. The Draft CCAP, SEA ER and Natura Impact Statement were on public display for a six week period during February - March 2019.
Stage 4 SEA Statement-current stage	This stage is the final output of the SEA process and tells the story of the SEA process. It has been prepared now the CCAP is finalised and approved.

2.2 Baseline Data, Geographical Information System and environmental sensitivity mapping.

The baseline data assists in describing the current state of the environment, facilitating the identification, evaluation and subsequent monitoring of the effects of the plan. It helps identify existing environmental problems in and around the plan area and in turn these can be quantified (for certain environmental parameters) or qualified. This highlights the environmental issues relevant to each SEA parameter and ensures that the plan implementation does not exacerbate such problems. Conversely this information can also

be used to promote good environmental practices and opportunities for environmental enhancement, thereby improving environmental quality where possible.

Baseline data was gathered for all parameters. Other data was gathered from the SEA ER of the Dún Laoghaire County Development Plan 2016-2022, baseline research undertaken by Codema, Irish Water, the EPA, Met Eireann and other sources as appropriate.

The SEA has also used a Geographical Information System (GIS) in the following ways:

- To provide baseline information on a range of environmental parameters;
- To assist in assessment of alternatives;
- To help assess in-combination or cumulative impacts, and
- To provide maps to illustrate environmental parameters in the SEA Environmental Report.

2.3 Mitigation

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

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

The iterative process of the CCAP preparation has facilitated the integration of environmental considerations into the formulation, layout and text of the plan. In addition, potential positive effects of implementing the plan have been and will be maximised and potential adverse effects have been and will be avoided, reduced or offset.

Many impacts will be more adequately identified and mitigated at CCAP action implementation, masterplan, project and EIA level. In general terms, all proposals for development will be required to have due regard to environmental considerations outlined in this Environmental Report and associated assessments. Proposals for development which are deemed contrary to the environmental objectives contained in the Dún Laoghaire Rathdown CDP 2016-2022 will not normally be permitted, and if permitted, will be developed with specific mitigation measures.

The CCAP has been prepared having regard to the policies and objectives outlined within the Dún Laoghaire Rathdown CDP 2016-2022. The environmental protection measures for the CDP 2016-2022 are included in the SEA ER. The SEA ER (Chapter Nine) has the full list of mitigation measures.

2.3.1 Mitigation Measures-

The following table presents the mitigation measures recommended for the CCAP from the SEA and Appropriate Assessment process. Subject to minor amendments, these were included in the DLRCC CCAP 2019-2024 as approved. The final recommendations and text is provided below in Table 2.

Table 2 Mitigation Measures

Action	Suggested mitigation measures	Included in CCAP
	An integrated approach to decision making in relation to these climate change actions is recommended.	Yes
3	Prepare and Implement an Integrated Coastal Zone Management Plan that addresses natural and cultural heritage and follows the Marine Spatial Planning Directive/framework	Yes
7	Develop template to capture impacts, response and costs (including ecosystem services/natural capital costs) for all major climate events	Yes
10	Update DLA urban drainage and flooding policies for current knowledge of flood risk and the latest best practice in drainage design promoting natural flood measures as a priority	Yes
	The following flood storage actions will incorporate nature based solutions and biodiversity enhancement measures where possible.(Refers to actions 11 to 18)	Yes
New measures to be consistent with neighbouring Local Authorities	Communication and awareness campaigns on flood risk management and natural flood management measures	Yes
	Nature Based Solutions	
11	Incorporate natural play space into existing parks for recreation and as SuDS	Yes

3 Summary of how consultations were taken into account.

3.1 Introduction

Throughout the preparation of the CCAP and the SEA ER, consultation was undertaken at key points in the process.

Further information is available in the following SEA Reports:

- SEA Scoping report issued December 2018
- SEA Environmental Report - issued February 2019
- SEA advice on public submissions and Chief Executive's recommendations
- SEA commentary on Chief Executive's recommendations
- SEA and AA Screening on Chief Executive's recommendations.

The following section summarises key points and how they were addressed in the SEA and the CCAP 2019-2024.

3.2 Consultation on SEA- Scoping and Environmental Report

The purpose of the SEA Scoping report is to identify the scope of the SEA and ensure that relevant data and environmental topics are included in the SEA. The SEA ER accompanied the CCAP display period that took place over a six week period in February - March 2019. The table below summarises key points raised during the SEA Scoping Stage, and the SEA ER stage.

Table 3 Environmental Consultation-Scoping Stage

Consultee	Key Issue Raise	SEA Response
Scientific Officer, SEA Section	Office of Evidence and Assessment. Environmental Protection Agency, Regional Inspectorate, Inniscarra, County Cork	
	We welcome the preparation of the Plan, which sets out a clear set of actions to be taken by DLR County Council, in collaboration with other key stakeholders, over the next five years. The inclusion of clear targets will facilitate monitoring and reporting on the Plan implementation, which should in turn help to drive delivery.	Noted
	We recognise the fundamental importance of ensuring that the National Transition Objective is underpinned by a clean, healthy and well-protected environment. Considering this, it is important to develop and implement the Plan within the context of a wider and more integrated approach to environmental protection. The SEA should play a key role in ensuring that this is achieved and should inform decision-making around assessment and selection of actions and measures.	Noted, the SEA and AA have helped to inform plan preparation and please see Chapter 8 Mitigation in particular
	<p>The SEA should also assist in identifying ways to maximise the potential co-benefits of climate-related measures for air quality, human health, biodiversity, water quality and other interrelated areas (i.e. win-win solutions).</p> <p>A key role of SEA is in assessing and informing the selection and refinement of actions and measures that maximise the co- benefits of climate actions for the wider environment and society, should be highlighted in the SEA Report and the Plan.</p>	Noted, in particular certain actions in each theme already provide co-benefits and the SEA has provided additional mitigation to further enhance certain actions please see CCAP and Chapter 8 Mitigation of this SEA ER
	<p>Relevant Plans and Programmes</p> <p>You should ensure that the Plan aligns with national commitments on climate change mitigation and adaptation. Actions and measures proposed should be consistent with the National Policy Position on Climate Action and Low Carbon Development, the National Mitigation Plan and the National Adaptation Framework, as well as considering any relevant sectoral and regional adaption plans.</p> <p>We recommend including a flow diagram or/ schematic, illustrating where the Plan fits within the hierarchy of land-use, climate and related plans</p>	Noted and agreed, in response to this comment the SEA ER included a table that highlights consistency with these plans and programmes and also provides a preliminary schematic to illustrate the hierarchy of plans and programmes. Please see Chapter 3.

Consultee	Key Issue Raise	SEA Response
	<p>It would be useful to explain the relevance of the various plans listed in section 2 of the SEA Scoping Report to the CCAP, for example by way of an additional column. Reference to the Draft Regional Spatial Economic Strategy, currently at consultation, should be included.</p>	<p>Noted and agreed. Chapter 3 has been amended to provide this and a more detailed overview of key relevant plans and programmes is provided in Annex B of this SEA ER.</p>
	<p>Greenhouse Gas Emissions</p> <p>In preparing the Plan and SEA, the direct and indirect impacts of the Plan on greenhouse gas emissions and removals should be assessed. The Agency's most recent projections report Ireland's Greenhouse Gas Emissions Projections for 2017-2035 (EPA, 2018) should be taken into account.</p> <p>The National Mitigation Plan (NMP) identifies 106 actions to decarbonise electricity generation, the built environment and transport and to move towards carbon neutrality for agriculture, forest and land use sectors. The Plan should integrate and align with the relevant actions in the NMP, as appropriate.</p>	<p>Noted.</p> <p>With support from the Sustainable Energy Authority of Ireland (SEAI), Codema developed an energy and emissions baseline, which shows the current level of emissions and energy efficiency for both DLRCC's own operations and emissions for the whole of Dun Laoghaire Rathdown.</p> <p>Consideration of significant effects in Chapter Seven of this SEA ER discusses this point.</p> <p>Noted, this SEA ER addresses this in Table 3 and shows where the DLR CCAP actions are consistent with the National Mitigation Plan. Please note that many of the actions in the National Mitigation Plan are identified at central</p>

Consultee	Key Issue Raise	SEA Response
		government level rather than local authority.
	<p>Adaptation</p> <p>In preparing the Plan and SEA, you should consider how the impacts of climate change, individually and in combination, are likely to influence the implementation of the Plan.</p> <p>The Plan should look to improve resilience of existing and planned critical infrastructure, systems and procedures to the effects and variability of climate change. Recent extreme weather events could be useful to assist in identifying areas where for further work is needed to improve resilience, e.g. the resilience of critical water service infrastructure to flooding and drought.</p> <p>The Plan should include appropriate adaptation measures that can be implemented either directly or through relevant land use plans and/or specific plans e.g. Flood Risk Management Plans, Integrated Coastal Zone Management Plans etc. The Plan will also help inform local authority land use and transport planning within the county.</p> <p>Additional aspects to consider may include changes in native species and habitats and the spread of invasive species, pests and pathogens.</p>	<p>Codema carried out an adaptation risk assessment on behalf of DLRCC, which identifies and assesses the current climate change risks facing Dun Laoghaire Rathdown. Research into people's attitudes and awareness was used in order to inform the stakeholder engagement actions of the plan.</p> <p>A key principle and stage of the CCAP relates to adaptation and responses to same.</p> <p>Noted, this is highlighted in Chapter 4 Baseline as a key issue for biodiversity and human health.</p>
	<p>EPA State of the Environment Report 2016</p> <p>The EPA published our most recent State of the Environment Report in 2016 'Ireland's Environment – An Assessment (EPA, 2016). The recommendations, key issues and challenges described within this report should be considered, as relevant and appropriate to the Plan area in preparing the Draft CCAP and associated SEA. This report can be consulted at: http://www.epa.ie/irelandsenvironment/stateoftheenvironmentreport/</p>	<p>Noted and utilised in this SEA ER.</p> <p>Please see Chapter 3.</p>
	<p>Air quality</p> <p>We welcome that the Plan will take into account the Draft National Clean Air Strategy (DCCAE), due to be finalised in 2019. Recent EPA reports on air quality should also be considered, in preparing the Plan and SEA.</p>	<p>Noted this is used in Chapter 4 Baseline Environment</p>

Consultee	Key Issue Raise	SEA Response
	<p>This includes the Air Quality in Ireland 2017 Report (EPA, 2018) which sets out the most recent status in each of the four air quality zones in Ireland. Data on levels of atmospheric pollutants from the EPA’s national ambient air quality monitoring network (http://www.epa.ie/air/quality/monitor/), should also be integrated as appropriate. The pollutants of most concern are traffic-related, including Particulate Matter and Nitrogen Dioxide.</p>	
	<p>Noise The Plan should take into consideration available noise action plans prepared within and adjacent to the Plan area.</p>	<p>Noted and included in Chapter Four.</p>
	<p>Available Guidance & Resources Climate</p> <p>The EPA has published guidelines to support Local Authorities in developing local climate adaptation strategies (EPA, 2016). The DCCA have incorporated this EPA guidance into national level Guidelines, to also assist local authorities prepare adaptation strategies. (DCCA, 2018).</p> <p>The ‘Climate Ireland’ website provides information, support and advice to help local authorities, sectors and government departments to adapt to climate change and includes a Local Authority Adaptation Support Wizard. It can be consulted at http://www.climateireland.ie/#/</p> <p>Renewable Energy The recently published Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (DHPCLG, 2017) should be taken into account, where relevant.</p> <p>Water Quality Our WFD Application provides a single point of access to water quality and catchment data from the national WFD monitoring programme. The Application is accessed through EDEN https://wfd.edenireland.ie/ and is available to public agencies. Publicly available data can be accessed via the Catchments.ie website</p>	<p>Noted</p>

Table 4 Submissions on SEA ER and CCAP

	Submissions on the Environmental Report	SEA and AA Response
<p>Cian O'Mahony, Environmental Protection Agency (EPA)</p>	<p>Health related aspects It would be useful to include additional information on the potential health impacts of climate change (e.g. hot and cold extremes) and how they are to be addressed. The interactions with the health sectoral adaptation plan should also be discussed.</p>	<p>Chapters Four and Seven of the SEA ER will be expanded upon to highlight and discuss the health related aspects.</p>
	<p>SEA and Plan Integration We recommend that consideration is given to including a subsection in the Plan, showing how the SEA has influenced its preparation. This would serve to clearly show the link between the Plan and SEA processes.</p>	<p>A section in the Final CCAP will be included that provides information on how the SEA and AA has influenced the plan process.</p> <p>Strategic Environmental Assessment (SEA) is a statutory process, involving the systematic evaluation of the likely significant environmental effects of implementing the new Climate Change Action Plan before a final decision has been made to adopt it. SEA applies to environmental assessment of plans and strategic actions that influence and set the framework for projects. The EU Directive on Habitats (92/43/EEC) (the Habitats Directive) as transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations</p>

2011 (S.I.477 of 2011) requires the assessment as to whether the implementation of a plan is likely to have significant effects on any Natura 2000 site(s).

The CCAP was screened to determine whether it has any significant impact on any Natura 2000 site. This screening determined that stage 2 Appropriate Assessment was required.

It should be noted that whilst the AA is a statutorily separate process to the SEA, it is, in fact, a parallel process and as such the outcomes of the AA fed into and informed the SEA process outlined above.

The SEA and AA processes have worked together to influence of plan preparation and the SEA process highlights where particular environmental sensitivities arise, and also make recommendations as to how proposed actions may be improved to increase their environmental performance.

Proposed changes to the CCAP through the Chief Executives Report have been screened for SEA and AA to ascertain if likely significant environmental effects or significant effects on European sites would arise.

	<p>Both processes have identified additional mitigation measures for the CCAP and the SEA has also provided for a monitoring regime, which is included within this CCAP. All mitigation measures identified for the CCAP through the SEA and AA process will be adhered to and implemented over the course of the plan.</p>
<p>Assessment of Alternatives We welcome that the EPA ‘Developing and Assessing Alternatives in Strategic Environmental Assessment’ (2015) guidance document has been considered in preparing and assessing alternatives. We also note the alternatives considered in the SEA, and the selection of the preferred alternative</p>	<p>Noted.</p>
<p>Additional Plan Considerations Irish Water’s Draft National Water Resources Plan should be useful to refer to, in terms of ensuring security of drinking water supply within the Plan area, is also considered. This plan includes consideration of climate change impacts. Aligning adequate and appropriate critical service infrastructure and population / economic growth of the Dublin region is essential.</p>	<p>Noted and agreed. Chapters 4 and 7 of the SEA ER will be expanded in the material assets section to discuss this. Chapter 3 will include reference to the Draft National Water Resources Plan</p>
<p>The link between the Plan and the sectoral adaptation plans could also be expanded on. This would clarify the alignment between the plan and other higher level sectoral plan.</p>	<p>Noted and agreed. Chapter 3 of the SEA ER will expand upon this and the links to other high level sectoral plans where</p>

	appropriate
Mitigation Measures	
We acknowledge the SEA recommendations, to improve the Plan in terms of integrating wider environmental considerations into the Plan. We note the recommendation to prepare and implement a coastal zone management plan for Dublin Bay. This should be prepared in collaboration with relevant stakeholders and consider the requirements of the SEA and Habitats Directives, as appropriate.	Noted, during the preparation of such a plan, the existing mitigation measures of the DLR CDP will apply as listed and presented in Chapter 8 of the SEA ER.
In relation to the application of strategic urban drainage systems as part of flood risk management actions described, these should be supported by relevant monitoring and maintenance also to ensure they operate effectively over the lifetime of the Plan.	Noted. Noted and agreed. All DLRCC installed SUDS measures will be maintained and monitored
Where the potential for likely significant effects is identified, appropriate mitigation measures should be recommended and implemented, to avoid or minimise these. You should ensure that the Plan includes clear commitments to implement these mitigation measures	Noted – it is recommended that as part of the text on the influence of the SEA and AA on the plan preparation, a specific commitment is included regarding mitigation measures and adherence to same. Please see the CCAP for this commitment as addressed in Point 2 <i>SEA and Plan Integration</i> above.
Monitoring The Monitoring Programme should be flexible to take account of specific environmental issues and unforeseen adverse impacts should they arise. It should consider and address the possibility of cumulative effects. Monitoring of both positive and negative effects should be considered. We welcome that the proposed SEA monitoring programme sets out the various data sources, monitoring frequencies and	SEA recommends inclusion of the Monitoring Table in the final Plan. The introduction to Chapter 9 monitoring of the SEA ER highlights

<p>responsibilities. We recommend that the SEA Monitoring of environmental receptors, as set out in Table 12 (Chapter 9 - Monitoring) of the SEA, is incorporated into the Plan review to monitor how effectively environmental considerations are being implemented.</p>	<p>additional monitoring in the event of unforeseen and cumulative effects arising.</p>
<p>Where possible, additional information on monitoring and indicators of the transition should be considered to ensure that resources continue to be appropriately directed and to help avoid unintended secondary adverse impacts</p>	<p>Noted, Given that the SEA monitoring table will provide environmental monitoring of the CCAP as well as annual monitoring of the CCAP, it is considered sufficient at this point to capture the transition based on annual monitoring of the action plan, supported by SEA monitoring.</p>
<p>The potential for environmental impacts of 'grey' and 'green' adaptation options will differ. Where 'grey' adaptation options are chosen / proposed to be implemented, these should be adequately mitigated for, to minimise potential adverse significant environmental effects.</p>	<p>Noted and agreed. Mitigation Measures for 'grey' infrastructure will be highlighted in the Final SEA ER.</p>
<p>Should the monitoring identify adverse impacts during the implementing the Plan, DLR Council should ensure that suitable and effective remedial action is taken.</p>	<p>Noted, this statement is included in the SEA ER.</p>
<p>It is noted in Milestone 5 that the Plan will be monitored and updated on an annual basis, with a review and revision every 5 years. Any updates to the Plan, should be screened in the context of SEA and Appropriate Assessment requirements</p>	<p>Noted, this statement will be included in the final CCAP, see also proposed text below</p>
<p>Monitoring should capture the overall achievement of the actions set out in the Plan and the contribution to the overall combined actions and targets of the four local authority plans.</p>	<p>Noted. It is recommended an additional text be provided to the above to highlight</p>

	<p>consistency with the requirements of the SEA Directive and reflecting the submission by the EPA, as follows:</p> <p>Monitoring at local authority level is in line with current best practice such as EU Covenant of Mayor’s approach. Each CCAP will be submitted to the Department of Communications, Climate Action and Environment. Under current obligations monitoring is adequately addressed in the CCAP and SEA. In addition, this may be premature in light of forthcoming Final Eastern Midland and Regional Spatial and Economic Strategy and upcoming Whole of Government Climate Action Plan.</p>
<p>Future Amendments to the Plan You should screen any future amendments to the Plan for likely significant effects, using the same method of assessment applied in the “environmental assessment” of the Plan.</p>	<p>Noted, and agreed. See above text which addresses this point.</p>
<p>SEA Statement – “Information on the Decision” Once the Plan is adopted, you should prepare an SEA Statement that summarises: How environmental considerations have been integrated into the Plan; How the Environmental Report, submissions, observations and consultations have been taken into account during the preparation of the Plan; The reasons for choosing the Plan adopted in the light of other reasonable alternatives dealt with; and, The measures decided upon to monitor the significant environmental effects of implementation of the Plan.</p>	<p>Noted, the SEA Statement will be prepared and issued upon adoption of the CCAP.</p>

	You should send a copy of the SEA Statement with the above information to any environmental authority consulted during the SEA process.	Noted and agreed.
Dylan Potter , Geological Survey Ireland	<p>Geoheritage Information provided on Geoheritage data.</p>	
	<p>Groundwater With regard to Flood Risk Management, there is a need to identify areas for integrated constructed wetlands. We recommend using the GSI's National Aquifer and Recharge maps on our Map viewer to this end.</p>	Noted
	<p>Urban Geology As the proposed developments take place in an urbanized environment, we suggest looking at our Urban Geology section on our website. Geological Survey Ireland produces urban geoscience data on a project basis, informing the areas of soil geochemistry and contamination, 3D modelling of ground conditions, and assessing ground motions that present a hazard to citizens in the urban environment. We also have a GeoUrban section to our Map Viewer which covers the Greater Dublin Area.</p> <p>Nature based solutions should be considered even in an urban environment. For example, an analysis of soil sealing could be done to determine levels of permeability in the Greater Dublin Area. We recommend using the GSI's Quaternary subsoil map and geotechnical database for this task.</p>	Noted- Soil Sealing study is included in the Dublin City CCAP (Action 38), and consideration will be given to extending this to a regional assessment
	<p>Coastal Vulnerability Vulnerability of the coast is intimately correlated to its characteristics and the intricate physical processes that intervene on its evolution. Strategies for coastal protection should include information from local to regional coastal vulnerability and impact assessments. Geological Survey Ireland is undertaking a new coastal vulnerability to sea-level rise mapping initiative. The maps produced in this project will aim to identify the coastal regions most likely to be affected by impacts of sea-level rise by using a coastal Vulnerability index (CVI) approach. Areas of assessment will include getting up-</p>	Noted. Reference to this data, modelling and the Coastal Change for Space research project will be included in the SEA ER

to-date information on current state of coastal defences, records of areas of inundation during extreme events for validating models and access to quality controlled and publically available tide gauge records for Dublin Bay.

Management strategies for adaptation should be flexible and centred on monitoring the most vulnerable areas. Monitoring short and long-term responses in soft cliffs, such as shoreline and sediment volumetric changes is key to understand coastal behaviour and to validate forecasting models. The current ESA (European Space Agency) funded coastal erosion project (Coastal Change from Space), which GSI is a partner will extensively look at some of these issues over the next two years (2019-2021). This project will provide an intertidal extent model and shoreline extraction tools, will monitor sediment change in the near shore using primarily satellite derived bathymetry, and quantify backshore to foreshore sediment volumetric change over the last 20 years for targeted areas.

**Oonagh Duggan,
BirdWatch Ireland**

5.0 Biodiversity Adaptation to Climate Change
Ireland’s draft Biodiversity Sectoral Climate Change Adaptation Plan⁸ which is subject to public consultation until April 17 2019 states that ‘Irish biodiversity is highly vulnerable to the impacts of climate change and has a low adaptive capacity compared to other vulnerable sectors. Climate change has major indirect impacts on Irish biodiversity through its interaction with other stressors, in particular habitat fragmentation and loss; overexploitation; pollution of air, water and soil; and spread of invasive species’. We would encourage that the local authority or CARO would review the final national biodiversity action plan when it is completed to ensure coherence between plans for the Greater Dublin Area with the national biodiversity adaptation plan.

Noted, the SEA ER Chapter Three will reference the draft Biodiversity Sectoral Climate Change Adaptation Plan along with any other required updates.

Chapter 4 of the SEA ER will restate this finding and highlight same as a key issue and challenge.

6.0 Waterbirds and Sea Level Rise
In 2013 BirdWatch Ireland published a report on the Impacts of Sea-level Rise on the Birds and Biodiversity of Key Coastal Wetlands⁹. The report assessed the level of risk posed to each of 52 waterbird species by increasing sealevels such that those risks are:

Noted.
These comments will be included in the final SEA ER.

o high for species with wholly coastal species distributions and which rely on intertidal habitats (such as Shelduck *Tadorna Knot Calidris canutus* and Sanderling *Calidris alba*), to medium for species as above but that can feed in alternative locations, such as on grasslands (Light-bellied Brent Goose *Branta bernicla hrota*, Oystercatcher *Haematopus ostralegus* and Black-tailed Godwit *Limosa limosa*) and for those with predominantly coastal distributions but which are localised in Ireland (Greenland White-fronted Goose *Anser albifrons flavirostris* and Bewick's Swan *Cygnus columbianus bewickii*), and too low for other waterbirds whose distributions are not restricted to the coast (e.g. Teal *Anas crecca*, Golden Plover *Pluvialis apricaria* and Lapwing *Vanellus vanellus*) or which occur predominantly in deeper water (e.g. Red-throated Diver *Gavia stellata*, Great Crested Grebe *Podiceps cristatus*, Cormorant *Phalacrocorax carbo* and Common Scoter *Melanitta nigra*)

In addition, the report states that 'Coastal sites are under increasing pressure from a range of anthropogenic sources such as human development, fisheries, aquaculture and human recreation. It is likely that these factors will operate cumulatively with the effects of climate change. There is an increasing need to understand the cumulative nature of pressures already operating at our coastal sites and to predict how this may be exacerbated by future sea-level rise'.

Dublin Bay is the fourth most important site in the country for wintering waterbirds. It is critical that research is undertaken on the climate change impacts to waterbirds within Dublin City but also within the context of the Greater Dublin area where there is significant movement of species between wetlands.

In relation to waterbirds which frequent coastal sites BirdWatch Ireland recommends the following in the context of this Climate Action Plan:

1. A thorough review of coastal sites that are of importance to coastal waterbirds is required, with particular emphasis on the SPA/ Natura 2000 network. The Office of Public Works is already some way towards modelling likely change and identifying vulnerable sections of coast, and such information once available is essential to this review. This review should:
 - a. Set out to quantify the impact of sea-level rise on coastal birds and their habitats.

The inclusion of Swift bricks in new build construction will be assessed on a case by case basis and included where appropriate

b. Identify sections of the (national) coastline that are used by significant numbers of coastal waterbirds (high and medium-risk especially) and explore/promote managed realignment to minimise impacts of sea-level rise over time.

2. Coastal sites are under increasing pressure from a range of anthropogenic sources such as human development, fisheries, aquaculture and human recreation. It is likely that these factors will operate cumulatively with the effects of climate change¹⁰ to result in some sites being at greater risk or more vulnerable to biodiversity loss than others. There is therefore an increasing need to understand the cumulative nature of pressures already operating at our coastal sites and to predict how this may be exacerbated by sea-level rise in the future.

3. In addition, the greatest of efforts must be made to reduce the existing pressures and threats to waterbirds within the control of Dublin City Council including development, pollution, disturbance issues caused by dogs off leash on beaches and in the coastal environment and disturbance from people and recreational activities in sensitive locations.

4. Internationally important migratory species such as Brent Geese can utilise the playing pitches including those of school grounds to forage when eel grass supplies have reduced at coastal sites. These areas are hugely important within a climate change adaptation scenario for Brent in the future and need to be secured.

7.0 Breeding river birds

Dublin's rivers and associated habitats are known to contain breeding Annex 1 Kingfisher, Dipper, Grey Wagtail, and Sand Martin. In order to protect nest sites and to provide adaptation solutions under a changing climate but also within the context of any flood mitigation measures, BirdWatch Ireland recommends that further survey work is undertaken to determine where these birds are breeding so as to conserve and improve breeding sites and also to prepare an evidence-based report on appropriate adaptation measures for these important species. Ensuring that river ecosystems are healthy and support fish and insect populations stocks is also critical as these are food sources for these bird species.

8.0 Breeding Swifts

Within a climate change context, BirdWatch Ireland is concerned that with the potential for deep-retrofit, energy-saving projects that some Swift breeding sites may be lost due to construction work. It is really important that Swift breeding sites are

<p>investigated in Dublin and that any works to buildings with known breeding sites include actions such as insertion of ‘Swift bricks’ to provide alternative nesting sites for them. All new builds or deep retrofit programmes should also include Swift bricks in those projects. BirdWatch Ireland’s publication Saving Swifts is due out in 2019 and will help inform the conservation of Swifts in Ireland."</p>	
<p>9.1 The Natura Impact Report lists that the NIR for the East Midlands Regional Spatial and Economic Strategy (RSES) has been concluded and that there are no significant adverse impacts on the European sites in this area. However, the RSES has been re-opened for public consultation due to material developments which alter the original plan distributed for consultation. Further, these actions have been subject to Article 6.3 assessment, but the final plan has not been agreed.</p> <p>It is premature to state that as the NIR does that there are no impacts as the plan is not finalised since it is not clear if mitigation actions within the NIR will be incorporated into the final plan.</p>	<p>AA: The material amendments and reopening of the RSES is noted, and its status will be assessed as part of the updating to the draft CCAP, NIS and SEA ER.</p> <p>The Mitigation Actions within the NIS will be incorporated into the final plan.</p>
<p>9.2 There is no mention of the requirements of Article 4(4) of the Birds Directive the second sentence of which states ‘Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats’. This is reaffirmed in Article 27 (4)(b) the European Communities Birds and Habitats Regulations (2011). In 2007 the European Court of Justice ruled against Ireland in C-418/0411 ‘The Birds Case’ for various breaches of the Birds and Habitats Directives including on Article 4 (4) which are still being addressed by the State(see Programme of Measures to comply with the ECJ Ruling)12.</p> <p>There is no reference to the requirement that local authorities must strive to avoid the deterioration of the habitats of Annex 1 bird species found outside of European sites. In addition, it is important to recall that the Birds Directive also calls for protection of birds in the wider countryside (outside of SPAs) and this is detailed further in the NPWS Programme of Measures to address compliance issues in C-418/04.</p> <p>All efforts must be made to enforce the regulations to support birds in the wider countryside.</p>	<p>Noted, this will be included in the SEA ER and the NIS.</p>
<p>9.3 BirdWatch Ireland would like clarification on the statement in the NIR that there will be no significant adverse effects on the European sites when it is unclear whether</p>	<p>Noted, for clarification the mitigation measures in Table 7.2 will be included</p>

	<p>the suggestions in Table 7.2 will be incorporated into the final plan. The suggested text is NOT in the draft climate action plan submitted for consultation. We would appreciate clarification of this.</p>	<p>in the final plan.</p>
<p>Patrick Molloy, Coppinger Wood</p>	<p>Sewage and waste water management: Indicators are that in the not too distant future clean, potable drinking water will not be so readily available. Currently rain water run off joins and mixes with sewage on its way to the sewage treatment plant at Salthill by the West Pier at Dun Laoghaire Harbour, where the combined foul water is treated. The lack of foresight and appropriate investment in infrastructure to manage the run off rainwater and sewage separately to each other, gives cause during heavy and/or prolonged rain for the combined volume of foul water to overcome the capacity of the Sewage treatment plant. This in turn necessitates the opening of an overflow and pumping the sewage/foul water out into the sea waters of the Dublin Bay Biosphere, just to the west of the west pier. This practice is unsustainable</p> <ol style="list-style-type: none"> 1. Polluting Dublin Bay South, the beaches, bathing waters and contributing to a health hazardous environment for living things including the estimated 300,000 humans living within the Biosphere area. 2. Not keeping rain water runoff separate from sewage and harvesting and treating the rain water runoff to make it potable water. <p>A further thought in the advent of rising sea levels, is there a case to be made to increase the height above sea level of the sewage treatment plant or build a levee wall around it?</p> <p>Biodiversity: As reported recently, Ireland is losing its insect population at a rate of 2.5% per annum. At this rate they will be well on the road to extinct by 2060. See Kevin O’Sullivan’s article in the Irish Times Saturday 16th February 2019 Bee friendly planting of pro-pollinator flora I commend the Council on its programme of “Nature Wildlife Area, Do not cut or spray” areas in residential areas and suggest that Council and Councillors encourage residence associations to set aside areas for a Nature Wildlife Area.</p>	<p>Comments relating to rainwater, potable and foul water are noted. The potential effects of climate change on material assets including water services are addressed in the SEA ER and NIS. Additional analysis will be provided in light of the Irish Water Draft National Water Resources Plan.</p> <p>Potential effects on European Sites within the zone of influence of the DLR CCAP are considered in the NIS.</p> <p>This proposal is noted. Amendments to Action 35 in Nature Based Solutions is recommended for amended to extend the Slow to Mow campaign and wildlife and pollinator areas.</p>

	I would also ask DLRCoCo to extend the season of designated Bulb Planting areas to include time for wild flower and grasses to mature before cutting in the late Autumn	
Diarmuid McAcree PPN Member of DLRCC SPC on Environment and Climate Change	Check to ensure proper compliance with all EU Directives and National Legislation	Noted.
Michelle Ritchie	<p>One Tree Per Child' wants to have every child planting one tree as part of a primary school activity. This is a global initiative that I hope could be part of the Nature-Based-Solutions section of the Draft Climate Change Action Plan. The aim is to get millions of children planting millions of trees.</p> <p>"As the council will have identified the appropriate land, they will complete the Strategic Environmental Assessment (SEA) and / or Appropriate Assessment (AA) .</p> <p>Accrding to Coillte :www.coillte.ie/our-forests/public-goods/climate-change/ ""Forests help reduce climate change effects by reducing the amount of greenhouse gases in the atmosphere. Carbon dioxide is the main greenhouse gas responsible for climate change and emissions of it from man-made sources have been increasing year on year since the 1950s. Trees absorb carbon dioxide from the atmosphere for growth, convert it to sugars and wood and release pure oxygen back to the atmosphere. In Ireland, young forests grow quickly and absorb large amounts of carbon dioxide""."</p>	Noted

3.3 SEA and Chief Executives report

As the Chief Executive was preparing responses and recommendations in relation to submissions received from the public, prescribed bodies including Environmental Authorities on the Draft CCAP, the SEA provided a commentary on these emerging recommendations. Commentary from the SEA (and AA) in terms of the recommendations of the CE, can be found in the Chief Executive's Report on Submissions Received (May 2019).

4 Consideration of Alternatives 4.1 Introduction

One of the critical roles of the SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative development scenarios, in this case the Dun Laoghaire Rathdown CCAP 2019-2024.

These alternative development scenarios should meet the following considerations:

- Take into account the geographical scope, hierarchy and objectives of the plan –be realistic
- Be based on socio-economic and environmental evidence – be reasonable
- Be capable of being delivered within the plan timeframe and resources –be implementable
- Be technically and institutionally feasible – be viable

In developing, refining and assessing the alternatives for the CCAP, the toolkit included in Developing and Assessing Alternatives in Strategic Environmental Assessment Good Practice Guidance (EPA 2015) was utilised.

4.2 Alternative Scenarios for Dun Laoghaire Rathdown CCAP 2019-2024

In a *Strategy towards Climate Change Actions Plans for Dublin 2017*, seven focus areas were identified as having the greatest potential to help the Dublin LAs move towards a zero-carbon society and adapt to the effects of climate change. These focus areas were as follows:

- Water, Waste, Planning, Transport, Energy, Ecosystems and Biodiversity and Citizen Engagement.

The focus areas can have predominately either mitigation or adaptation solutions, or both. For example, the Energy focus area mainly concerns mitigation (i.e. reducing the use of fossil fuels and their associated CO2 emissions), while Water largely focuses on adapting to changes that are occurring or will occur in the near future due to climate change. Meanwhile, the Citizen & Stakeholder Engagement focus area concerns both mitigation and adaptation.

The aim of the CCAP is to work with the other Dublin local authorities in a co-ordinated manner to achieve the actions identified as being capable of implementing over a Five Year Period whilst also contributing to both mitigation and adapting to climate change. In considering Alternative Scenarios for the CCAP, the following questions were used to help frame the Consideration of Alternatives¹:

¹ Adapted from Figure 4.3 Developing and Assessing Alternatives in the Strategic Environmental Assessment Process (EPA, 2015).

WHY?

Can the objectives be met without a new plan/programme?

- Is the alternative viable? Is it a reasonable/realistic alternative?
- Are there other relevant considerations (e.g. AA, WFD, FRA)?

What?

How should the alternative be implemented (e.g. using which technology/method)?

- Can environmental best practice be applied to meet the need?
- Can environmentally less damaging methods be applied?

Where?

Where is the alternative intended to go?

What is its extent?

Can alternative locations be identified for the identified technologies/methods/zonings?

Are these less environmentally sensitive?

When?

What are the details of the timeframe for implementation/ which are the critical details

Where is the alternative intended to go?

What is its extent?

- Can alternative locations be identified for the identified technologies/methods/zonings?
- Are these less environmentally sensitive?

Therefore the Alternatives considered are as follows:

TABLE 5 ALTERNATIVES CONSIDERED

	<p>Why Can the objectives be met without a new plan/programme? •Is the alternative viable? Is it a reasonable/realistic alternative? •Are there other relevant considerations (e.g. AA, WFD, and FRA)?</p>	<p>What What? How should the alternative be implemented (e.g. using which technology/method)? •Can environmental best practice be applied to meet the need? •Can environmentally less damaging methods be applied?</p>	<p>Where Where? Where is the alternative intended to go? What is its extent? Can alternative locations be identified for the identified technologies/methods/zonings? Are these less environmentally sensitive?</p>	<p>When When? What are the details of the timeframe for implementation/ which are the critical details here is the alternative intended to go? What is its extent? •Can alternative locations be identified for the identified technologies/methods/zonings? •Are these less environmentally sensitive?</p>
<p>Alternative 1: Do-Nothing (rely CDP policies and objectives to address and adapt to climate change)</p>	<p>This alternative could see the do nothing scenario be continued by using the existing CDP policies and landuse zonings to continue to adapt and plan for effects on climate change.</p>	<p>Through using climate change policies in the CDP and providing the landuse framework for responding to climate change. Landuse activities relevant could include renewable energy, transport and flood risk management</p>	<p>This would include DLR</p>	<p>This would cover the timeframe of the current CDP upto 2022</p>
<p>Alternative 2: Prioritise largest greenhouse gas emission sectors – Energy and Transport</p>	<p>This would require the preparation of an action plan that would concentrate on energy and transport for Fingal as a means to address and respond to climate change</p>	<p>It would prioritise measures that would reduce energy emissions, promote renewable energy and sustainable transport projects</p>	<p>This would include DLR</p>	<p>This would likely reflect the timeframe of the CDP given its landuse implications.</p>

	<p>Why Can the objectives be met without a new plan/programme? •Is the alternative viable? Is it a reasonable/realistic alternative? •Are there other relevant considerations (e.g. AA, WFD, and FRA)?</p>	<p>What What? How should the alternative be implemented (e.g. using which technology/method)? •Can environmental best practice be applied to meet the need? •Can environmentally less damaging methods be applied?</p>	<p>Where Where? Where is the alternative intended to go? What is its extent? Can alternative locations be identified for the identified technologies/methods/zonings? Are these less environmentally sensitive?</p>	<p>When When? What are the details of the timeframe for implementation/ which are the critical details here is the alternative intended to go? What is its extent? •Can alternative locations be identified for the identified technologies/methods/zonings? •Are these less environmentally sensitive?</p>
<p>Alternative 3: Approach the priority areas in a balanced manner to provide for both responses to climate change impacts (adaptation) and reduce greenhouse gas emissions mitigation).</p>	<p>This is the existing CCAP. It would consider a mixture of adaptation and mitigation measures for the climate change action plan and would include citizen engagement and awareness raising throughout. It would be underpinned by a baseline assessment of greenhouse gas emissions and sectoral use in the county</p>	<p>This would include a suite of measures that would aim to bring co-benefits where possible and rely on nature based solutions where possible</p>	<p>This would be tailored to DLR County but prepared as part of a broader regional approach to climate change</p>	<p>This would extend to 2024 and include a detailed monitoring regime to allow for annual reporting and monitoring of actions.</p>

In terms of all Strategic Environmental Objectives that were used to undertake the SEA process (and are presented in Table 6 as targets), Alternative 3 is identified as creating most positive interactions as it provides greater environmental performance overall and also allows for a greater environmental gains, than may be achieved through Alternatives 2 and 1. In addition, the multi-faceted approach contributes to greater co-benefits by providing for a wider range of environmental effects particularly around nature based solutions and resource management. The inclusion of measures for citizen engagement and awareness raising through the CCAP option is also positive for a number of SEOs.

5 Monitoring

5.1 Introduction

The targets and indicators are derived from the Strategic Environmental Objectives (SEOs) discussed in Chapter Five. The target underpins the objective whilst the indicators are used to track the progress of the objective and targets in terms of monitoring of impacts. The monitoring programme will consist of an assessment of the relevant indicators and targets against the data relating to each environmental component. Similarly, monitoring will be carried out frequently to ensure that any changes to the environment can be identified.

Overall, this Climate Change Action Plan will be monitored and updated on an annual basis, with a review and revision every five years. This draft of the Climate Change Action Plan was developed through DLRCC's Environment, Climate Change and Energy SPC and approved by the full County Council. The Director of Infrastructure and Climate Change will report on progress to the SPC annually and the SPC will monitor progress towards the set targets. Every five years there will be a full review and revision of the plan taking into account demographic, technical and other changes that have occurred and any new targets that have been introduced.

Consequently, it is recommended that this SEA monitoring regime be undertaken in line with the development plan review process; as the data will be captured through the CCAP monitoring regime, the strategic environmental monitoring can both use these data and also be derived from the planning and landuse data by DLRCC.

In turn the list below is subject to review at each reporting stage to reflect new data. Should the monitoring regime identify significant impacts (such as impacts on designated sites) early on in the plan implementation, this should trigger a review of the CCAP and monitoring regime. In addition, the identification of positive impacts from monitoring should also be reported as this will assist in determining successful environmental actions.

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

- Monitoring specific indicators and identifying any significant effects, including cumulative effects;
- Reviewing the effectiveness of monitoring/mitigation measures during the lifetime of the CCAP; and
- Identifying any cumulative effects.

It is recommended that the monitoring report be made available to the public upon its completion. Table 6 below presents the SEA Monitoring Table. This is derived from the SEA ER Monitoring Table prepared for the DLR County Development Plan 2016-2022 and where new or altered text is included, this is shown in bold, italic font. This table sets out the strategic environmental objectives, indicators and targets to be applied in monitoring the significant environmental effects of the implementation of the CCAP, in accordance with Section 13J(2) of the Planning and Development (SEA) Regulations 2004, as amended. It is proposed that the SEA monitoring reporting should go parallel with the reviewing of the CCAP to the CDP and when the next plan is being prepared.

Table 6 Monitoring Measures

SEA Topic	Target	Indicator	Data Source
Biodiversity Flora and Fauna ²			Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).
	<i>B1: To avoid the loss of important habitats and species identified in the DLR County Biodiversity Plan along with their supporting environmental features, or their sustaining resources and also to ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species.</i>	B2: Percentage increase of functional connectivity and ecosystem services value due to remediation resulting from development provided for by the Plan	Mapping of DLR important habitats and species as part of the new DLR County Biodiversity Plan Department of Arts, Heritage and the Gaeltacht report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years). •Department of Arts, Heritage and the Gaeltacht's National Monitoring Report for the Birds Directive under Article 12 (every 3 years). Consultations with the NPWS .
	B2: No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for by the Plan	B2: Number of significant impacts on the protection of listed species	Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). CORINE mapping resurvey (every c. 5 years).

² Biodiversity SEOS B1, B3 and B4 were amended in consultation with DLR Biodiversity Officer.

SEA Topic	Target	Indicator	Data Source
	<i>B3: To avoid significant adverse impacts, including direct, cumulative and indirect impacts, resulting from the implementation of the Plan, to important habitats and species identified in the DLR County Biodiversity Plan along with their supporting environmental features or their sustaining resources and also to ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species.</i>	As above for B1 and B3	Review of Council Ecological Network Mapping Mapping of DLR Wildlife Corridor Plan 2019 Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). Consultations with the NPWS
	<i>B4 To maintain and restore key ecological processes (e.g. ecohydrology, hydrogeology, hydrogeomorphology, water quality, coastal processes).</i>	Interacts with Soil and Geology (S1) and Water (W1, W2 and W3) Please see the indicators for these parameters	Please see soil and geology and water resources data sources.
Population and human health Noise	PHH1: No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan	PHH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for by the Plan, as identified by the Health Service Executive and Environmental Protection Agency	Dún Laoghaire Rathdown County Council, EPA Consultations with EPA and Health Service Executive (at monitoring evaluation - see Section 10.
Soil and Geology	S1: To minimise reductions in soil extent and hydraulic connectivity	S1: Soil extent and hydraulic connectivity	Internal monitoring of likely significant environmental effects of grants of permission (grant by grant)

SEA Topic	Target	Indicator	Data Source
Water	<p>W1i: Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status'</p> <p>W1ii: To achieve - as a minimum - Mandatory values and, where possible, to achieve Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)</p>	<p>W1i: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009)</p> <p>W1ii: Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008)</p>	<p>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). •Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual). •EPA The Quality of Bathing Water in Ireland reports.</p>
	<p>W2: Not to affect the ability of groundwaters to comply with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p>	<p>W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p>	<p>Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). •Data issued under the Water Framework Directive Monitoring Programme for Ireland (multi-annual)</p>
	<p>W3: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk in compliance with The Planning System and Flood Risk Management Guidelines for Planning Authorities</p>	<p>Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk</p>	<p>•Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).</p>
Material	<p>M1: All new developments granted</p>	<p>M1: Number of new developments</p>	<p>Internal monitoring of likely significant</p>

SEA Topic	Target	Indicator	Data Source
Assets	permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan	granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	environmental effects of grants of permission (grant by grant).
	M2: No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan	M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan	<ul style="list-style-type: none"> •EPA The Provision and Quality of Drinking Water in Ireland reports (multi-annual). •EPA Remedial Action List (every quarter).
	M3i: Minimise increases in and, where possible, reduce household waste generation M3ii: Maximise increases in packaging recovered (tonnes) by self-complying packagers	M3i: Total collected and brought household waste M3ii: Packaging recovered (t) by self-complying packagers	<ul style="list-style-type: none"> •EPA National Waste Reports •EPA Ireland's Environment Reports
Air Quality and Climatic Factors	C1: An increase in the percentage of the population travelling to work, school or college by public transport or non-mechanical means	C1: Percentage of population travelling to work, school or college by public transport or non-mechanical means	CSO Population Data (every c. 5 years).
Cultural Heritage	CH1: Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and their	CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological	<ul style="list-style-type: none"> •Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). •Consultation

SEA Topic	Target	Indicator	Data Source
	context of the above within the surrounding landscape where relevant) from significant adverse effects arising from new development granted permission under the Plan	Potential (and the context of the above within the surrounding landscape where relevant) - protected from significant adverse effects arising from new development granted permission under the Plan	with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 10.4).l
	CH2: Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan	CH2: Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan	•Internal monitoring of likely significant environmental effects of grants of permission (grant by grant). •Consultation with Department of Arts, Heritage and the Gaeltacht (at monitoring evaluation - see Section 10.4).
	L1: To implement Plan Policies LHB2 to LHB6 which provide for the protection and management of Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects	L1: Implementation of Plan Policies LHB2 to LHB6 which provide for the protection and management of Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects	Internal monitoring of likely significant environmental effects of grants of permission (grant by grant).
Inter-relationships	<i>Maintain and improve the health of people, ecosystems and natural processes Actively seek to integrate opportunities for environmental enhancement during adaptation to climate change</i>	<i>% or number of blue and green infrastructure measures included in approved planning applications within Dún Laoghaire Rathdown including SUDS, Integrated Wetlands, Hedgerows, Native tree</i>	<i>Review per grant application and # of DLR supported schemes such as integrated wetlands.</i>

SEA Topic	Target	Indicator	Data Source
		<i>planting scheme</i> <i>DLR supported community</i> <i>blue/green infrastructure measures</i>	