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SOUTH DUBLIN COUNTY COUNCIL CLIMATE CHANGE ACTION PLAN 2019-2024

STRATEGIC ENVIRONMENTAL ASSESSMENT STATEMENT







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1 Introduction

South Dublin County Council (SDCC) approved the SDCC Climate Change Action Plan 2019-2024 (CCAP) at the council meeting on Monday 6th 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 South Dublin 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:

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.

TABLE 1 STAGES IN SEA

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 South Dublin 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 South Dublin 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 South Dublin CDP Plan 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 SDCC CCAP 2019-2024 as approved. The final recommendations and text is provided below in Table

Table 2 Mitigation Measures

	Mitigation Measure
	Transport Actions
5	Strengthen traditional villages by improving the public realm through enhancement of green infrastructure measures and sustainable transport linkages
	Flood Resilience
13	Develop template to capture impacts, response and costs (including ecosystem services/natural capital costs) for all major climate events
15	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
20	Minor flood schemes and general maintenance that are designed and implemented to promote nature based solutions where practical
21	Communication and awareness campaigns on flood risk management and natural flood management measures
	Nature Based Solutions
22	Include native species into local authority plans where appropriate as a key nature based measure where appropriate

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

Consult	ee Key Issue Raised	SEA
	c Officer, SEA Section f Evidence and Assessment. Environmental Protection Agency, Regional Inspectorate, Inniscarra, County Cork	Response
C t	We welcome the preparation of the Plan, which sets out a clear set of actions to be taken by South Dublin County Council, in collaboration with other key stakeholders, over the next five years. The inclusion of clear Cargets will facilitate monitoring and reporting on the Plan implementation, which should in turn help to drive delivery.	Noted
a F K	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
f A r	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). 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.	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 CCAR and Chapter 8 Mitigation of this SEA ER
	Relevant Plans and Programmes (ou 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. We recommend including a flow diagram or/ schematic, illustrating where the Plan fits within the hierarchy of and-use, climate and related plans	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.

Consultee Key Issue Raised	SEA Response
	Please see Chapter 3.
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.	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.
Greenhouse Gas Emissions 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.	Noted. 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
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.	for both SDCC's own operations and emissions for the whole of South Dublin County Consideration of significant effects in Chapter Seven of this SEA ER discusses this point.
	Noted, this SEA ER addresses this in Table 3 and shows where the South Dublin 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

tee Key Issue Raised	SE
	Re
	government level rather
	local authority.
Adaptation	Codema carried out an
In preparing the Plan and SEA, you should consider how the impacts of climate change, individually and in	adaptation risk assessme
combination, are likely to influence the implementation of the Plan.	behalf of DCC, which ide
	and assesses the current
The Plan should look to improve resilience of existing and planned critical infrastructure, systems and procedures	climate change risks faci South Dublin. Research
to the effects and variability of climate change. Recent extreme weather events could be useful to assist in	people's attitudes and
identifying areas where for further work is needed to improve resilience, e.g. the resilience of critical water	awareness was used in o
service infrastructure to flooding and drought.	inform the stakeholder
The Plan should include appropriate adaptation measures that can be implemented either directly or through	engagement actions of t
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	A key principle and stage
county.	CCAP relates to adaptati
Additional aspects to consider may include changes in native species and habitats and the spread of invasive	responses to same.
species, pests and pathogens.	
	Noted, this is highlighted
	Chapter 4 Baseline as a k
	issue for biodiversity and
	, human health
EPA State of the Environment Report 2016	Noted and utilised in this
	ER.
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	Please see Chapter 3.

sultee Key Issue Raised	SEA Respons
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/	
Air quality 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. 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 integrated as appropriate. The pollutants of most concern are traffic-related, including Particulate Matter and Nitrogen Dioxide.	Noted this is used in Chapter 4 Baseline Environment
Noise The Plan should take into consideration available noise action plans prepared within and adjacent to the Plan area.	Noted and included in Chapter Four.
Available Guidance & Resources Climate	Noted
The EPA has published guidelines to support Local Authorities in developing local climate adaptation strategies (EPA, 2016). The DCCAE have incorporated this EPA guidance into national level Guidelines, to also assist local authorities prepare adaptation strategies. (DCCAE, 20185).	
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/#/	
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.	
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	

Table 4 Submissions on SEA ER and CCAP

Consultee	Comments on the Environmental Report	SEA Response
Cian O'Mahony Environmental Pr	rotection Agency	
1	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.	Chapters Four and Seven of the SEA ER will be expanded upon to highlight and discuss the health related aspects.
2	SEA and Plan Integration	A section in the Final CCAP will be
	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.	included that provides information on how the SEA and AA has influenced the plan process.
		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.
		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

Consultee	Comments on the Environmental Report	SEA Response
		the CCAP through the SEA and AA process will be adhered to and implemented over the course of the plan.
3	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	Noted
4	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.	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
5	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.	Noted and agreed. Chapter 3 of the SEA ER will expand upon this and the links to other high level sectoral plans where appropriate
	Mitigation Measures	
6	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 South Dublin CDP will apply as listed and presented in

Consultee	Comments on the Environmental Report	SEA Response
		Chapter 8 of the SEA ER.
7	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
8	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</i> <i>Integration</i> above.
9	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 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.	SEA recommends inclusion of the Monitoring Table in the final Plan. The introduction to Chapter 9 monitoring of the SEA ER highlights additional monitoring in the event of unforeseen and cumulative effects arising.
	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	Noted, Given that the SEA monitoring table will provide environmental monitoring

Consultee	Comments on the Environmental Report	SEA Response
		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.
	The potential for environmental impacts of 'grey' and 'green' adaptation options will	Noted and agreed.
	differ. Where 'grey' adaptation options are chosen / proposed to be implemented, these	Mitigation Measures for 'grey'
	should be adequately mitigated for, to minimise potential adverse significant	infrastructure will be highlighted in the
	environmental effects.	Final SEA ER
	Should the monitoring identify adverse impacts during the implementing the Plan, South	Noted, this statement is included in
	Dublin County Council should ensure that suitable and effective remedial action is taken.	the SEA ER.
	It is noted in Milestone 5 that the Plan will be monitored and updated on an annual	Noted, this statement will be included
	basis, with a review and revision every 5 years. Any updates to the Plan, should be	in the final CCAP, see also proposed
	screened in the context of SEA and Appropriate Assessment requirements	text below
	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	Noted –
	plans.	It is recommended an additional text
		be provided to the above to highlight
		consistency with the requirements of
		the SEA Directive and reflecting the
		submission by the EPA, as follows:
		Monitoring at local authority level is in
		line with current best practice such as
		EU Covenant of Mayor's approach.

Consultee	Comments on the Environmental Report	SEA Response
		 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
	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.	Noted, and agreed. See above text which addresses this point.
	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.	Noted, the SEA Statement will be prepared and issued upon adoption of the CCAP.
	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 Geol	logical Survey Ireland	
	Geoheritage	

Consultee	Comments on the Environmental Report	SEA Response
	Information provided on Geoheritage data.	
	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.	Noted, this will be highlighted in the SEA ER and Action 11 of the SDCC CCAP – Action 11 of the SDCC CCAP states: Integrated constructed wetlands for water attenuation and purification.
	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.	Noted
	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.	
	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 upto-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.	Noted. Reference to this data, modelling and the Coastal Change for Space research project will be included in the SEA ER.

Consultee	Comments on the Environmental Report	SEA Response
	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 behavior 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 chapters 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: o high for species with wholly coastal species distributions and which rely on intertidal	Noted. These comments will be included in the final SEA ER. The mitigation measure proposed in

Consultee	Comments on the Environmental Report	SEA Response
	habitats (such as Shelduck Tadorna 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 to 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 carboand Common Scoter Melanitta nigra)	relation to retrofitting of housing and swifts is recommended for inclusion in the CCAP. This is included in the Final CCAP.
	 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: 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: Set out to quantify the impact of sea-level rise on coastal birds and their habitats. 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. 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 	

Consultee	Comments on the Environmental Report	SEA Response
Consultee	 Comments on the Environmental Report 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. a. 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. 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 BirdWatch Ireland is concerned that with the potential for deep-retrofit, energy-saving projects that some Swift breeding sites are investigated in Dublin and that any works to buildings with known breeding sites for them. All new builds or deep retrofit pr	SEA Response

Consultee	Comments on the Environmental Report	SEA Response
	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.	AA: The material amendments and reopening of the RSES is noted, the consultation stage has now closed; its status will be assessed as part of the updating to the CCAP, NIS and SEA ER.
	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.	The Mitigation Actions within the NIS and SEA ER will be incorporated into the final plan.
	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.	Noted, this will be included in the SEA ER and the NIS.
	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. All efforts must be made to enforce the regulations to support birds in the wider countryside.	
	9.3 BirdWatch Ireland would like clarification on the statement in the NIR that there will be no significant adverse affects on the European sites when it is unclear whether the suggestions in Table 7.2 will be incorporated into the final plan. This element of doubt means that NIS is open to challenge. The suggested text is NOT in the draft climate action	Noted, for clarification the mitigation measures in Table 7.2 will be included in the final plan.

Consultee	Comments on the Environmental Report	SEA Response	
plan submitted for consultation. We would appreciate clarification of this.			

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 South Dublin 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 South Dublin 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 exent?

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

Are these less environmentally sensitive?

When

What are the details of the timeframe for implementation/

which are the critical detailshere 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

	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)?	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?	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?	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?
Alternative 1: Do-Nothing (rely CDP policies and objectives to address and adapt to climate change)	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.	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	This would include South Dublin County .	This would cover the timeframe of the current CDP upto 2022
Alternative 2: Prioritise largest greenhouse gas emission sectors – Energy and Transport	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	It would prioritise measures that would reduce energy emissions, promote renewable energy and sustainable transport projects	This would include South Dublin County.	This would likely reflect the timeframe of the CDP given its landuse implications.

	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)?	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?	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?	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?
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).	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	This would include a suite of measures that would aim to bring co-benefits where possible and rely on nature based solutions where possible	This would be tailored to South Dublin County but prepared as part of a broader regional approach to climate change	This would extend to 2024 and include a detailed monitoring regime to allow for annual reporting and monitoring of actions.

	Why	What	Where	When
	Can the objectives be	What?	Where?	When?
	met without a new	How should the	Where is the alternative intended to	What are the details of the
	plan/programme?	alternative be	go?	timeframe for implementation/
	•Is the alternative	implemented (e.g. using	What is its extent?	which are the critical details here is
	viable? Is it a	which	Can alternative locations be	the alternative intended to go?
	reasonable/realistic	technology/method)?	identified for the identified	What is its extent? •Can
	alternative?	•Can environmental best	technologies/methods/zonings?	alternative locations be identified
	•Are there other	practice be applied to	Are these less environmentally	for the identified
	relevant	meet the need? •Can	sensitive?	technologies/methods/zonings?
	considerations (e.g.	environmentally less		•Are these less environmentally
	AA, WFD, and FRA)?	damaging methods be		sensitive?
		applied?		
<u></u>				

In terms of all SEOs, 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 mulit 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 indictors 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 Climate Change Action Plan was developed through the Environment, Public Realm and Climate Change SPC of South Dublin County Council and approved by the full County Council. The Director of Environment, Water 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 SDCC

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.

South Dublin 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 12 below presents the SEA Monitoring Table. 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	Strategic Environmental Objectives	Indicator	Target	Data Source
Biodiversity Flora and Fauna	To avoid loss of habitats, geological features, species or their sustaining resources in designated ecological sites	Percentage of relevant habitats lost as a result of implementation of the CCAP	No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the CCAP	Designated ecological sites mapping, CORIN Mapping, National Parks and Wildlife Service Records & Development Management Process in SDCC. Designated ecological sites mapping, Development Management Process in SDCC Council & Consultation with the National Parks and Wildlife Service Primary ecological corridors mapping,
	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites.	Number of significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the CCAP	No significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated	CORINE mapping and Development Management Process in SDCC.

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
			ecological sites by development within or adjacent to these sites as a result of implementation of the CCAP	
	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity.	Area of Biodiversity Network (County's primary ecological corridors which has been lost without mitigation) Percentage loss of functional connectivity without remediation	No ecological connectivity provided by the area's primary ecological corridors to be lost without mitigation as a result of implementation of the CCAP.	
		resulting from development provided for in the CCAP	No significant ecological networks or parts thereof which provide functional connectivity to be lost without	

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
			remediation resulting from development provided for in the CCAP	
Population and human health Noise	To protect human health from hazards or nuisances arising from traffic and incompatible landuses in particular noise and light pollution.	Number of occasions that PM ¹⁰ limits have been exceeded in at Air Monitoring stations closest to CCAP lands. Number of complaints from the CCAP re; noise, light and air quality.	Reduce number of people exposed to traffic noise and air quality levels which endanger health and quality of life.	South Dublin County Council, EPA
Air Quality and Noise	To minimise air, noise and light pollution where possible.	Number of air, noise and light pollution measures including in each phase (may be in conjunction with green infrastructure measures)	Air, noise and light pollution measures designed into CCAP	South Dublin County Council
Water	To maintain and improve, where possible, the quality of rivers, lakes and surface water.	Biotic Quality Rating (Q Value) and risk assessment.	To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water	Environmental Protection Agency.

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
			Framework Directive, by 2027.	Environmental Protection Agency As noted under Section 2.3.1, data may not
			To improve biotic quality ratings, where possible, to Q5.	be available for this indicator when the monitoring evaluation is being prepared.
	To prevent pollution and contamination of ground water.	Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC.	Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC.	SDCC Irish Water EPA
	To prevent development on lands which pose - or are likely to pose in the future – a significant flood risk	Implementation and monitoring of Strategic Flood Risk Assessment for CCAP	No significant flood events associated with development activities on CCAP.	Development Management Process in South Dublin County Council
Soil and Geology	To conserve soil resources where possible.	Area of greenfield land developed. Number of contaminated sites identified and	S1ii: To reduce the amount of Greenfield lands developed subject to CCAP	Development Management Process in SDCC As above Environmental Services Dept. SDCC Annual Waste Arisings Report from Environmental Services Dept. SDCC

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
		remediated. Volume of waste recycled and volume of waste sent to landfill.	Objectives To meet national and EU targets on the recycling of municipal waste and its diversion from landfill	
Material Assets	To maintain and improve the quality of drinking water supplies.	Drinking water quality standards, (Microbiological, Chemical and Indicator parameters)	To maintain and improve drinking water quality in South Dublin County to comply with requirements of the European Communities (Drinking Water) Regulations 2000	SDCC Irish Water EPA
	To serve new development under the CCAP with appropriate waste water treatment	Phasing Programme of CCAP	All new developments to require appropriate waste water systems.	SDCC Irish Water EPA
	To reduce car dependency	Extent of developments	An increase in	SDCC

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	within the CCAP by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport.	built within the CCAP lands of high quality public transport accessibility. Percentage of population within the CCAP lands travelling to work or school by public transport or non-mechanical means	the percentage of the population within the County travelling to work or school by public transport or non-mechanical means. A decrease in the average distance travelled to work or school by the population of the County.	CSO Census
	To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices	Volume of waste recycled and volume of waste sent to landfill	To meet national and EU targets on the recycling of municipal waste and its diversion from landfill	Development Management Process in SDCC As above Environmental Services Dept. SDCC Annual Waste Arisings Report from Environmental Services Dept. SDCC
Cultural	To protect the archaeological	Percentage of entries to	Protect entries	SDCC Development Control

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
Heritage	heritage of South Dublin with regard to entries to the Record of Monuments and Places - including Zones of Archaeological Potential - and the context of the above within the surrounding landscape where relevant.	the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) - protected Number of archaeological surveys required as part of planning applications	to the Record of Monuments and Places - including Zones of Archaeological Potential (and their context of the above within the surrounding landscape where relevant)	
		Conditions attached to permissions on archaeological monitoring during excavations.	Protect unknown archaeological resources within CCAP area.	
	To preserve and protect the special interest and character of the CCAP lands architectural heritage with regard to entries to the Record of Protected Structures, the Architectural Conservation Area and their	Percentage of entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant) protected.	Protect entries to the Record of Protected Structures (and/or their context within the surrounding landscape	SDCC

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	context within the surrounding landscape where relevant.	Number of architectural condition surveys attached to planning applications.	where relevant) Renovate and reuse architectural heritage structures and features	
Landscape	To protect and avoid significant adverse impacts on the landscape, landscape features and designated scenic routes; especially with regard to areas of high amenity.	The creation of a sense of place and coherence/ appreciation for the overall setting and context of the CCAP.	Creation of sense of place with all phases of development associated with CCAP	SDCC
		Number of development applications with landscape and habitat plans and Design Statements.		
		Amount of land allocated to temporary greening measures.		
Climate Change and	To integrate climate change adaptation to the CCAP	Number of SUDs measures included and developed as	Integrated blue and green	SDCC

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
energy	process	part of CCAP Number/extent of additional tree planting as part of applications.	infrastructure through the CCAP	
	Interrelationships Maintain and improve the health of people, ecosystems and natural processes Actively seek to integrate opportunities for environmental enhancement during adaptation to climate change	Blue and Green Infrastructure measures implemented over lifetime of plan Number of Blue infrastructure features included in development.	Integration of blue and green infrastructure measures including in approved planning applications within South Dublin including SUDS, Integrated Wetlands, Hedgerows, Native tree planting scheme	SDCC