

Section 5 Mitigation and Monitoring Measures

5.1 Mitigation

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Plan.

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

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

The findings of this strategic work have been integrated into the Plan and will be implemented when it is adopted, contributing towards both environmental protection and management and sustainable development within the County.

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

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

The undertaking of this SEA process as well as the undertaking of the AA and SFRA were part of this strategic work and contributed towards the integration of environmental considerations into individual Plan provisions.

Table 5.1 links key mitigation measure(s) - which have been integrated into the Plan - to the likely significant effects of implementing the Plan, if unmitigated, as well as showing monitoring measures. The integration of these measures into the Plan occurred over a number of iterations and was informed by, inter alia, various communications through the SEA, AA and SFRA processes.

The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example.

The reference codes are those which accompany the relevant measures in Section 8 of the main Environmental Report and in the Plan.

5.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. The Environmental Report contains proposals for monitoring the Plan which are adopted alongside the Plan. Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

The Environmental Report identifies indicators - which allow quantitative measures of trends and progress in the environment over time. Measurements for indicators generally come from existing monitoring sources or from an internal monitoring of the environmental effects of grants of permission in the Council.

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan will be prepared before in advance of beginning the review of the Plan. This report will address the indicators that are set out on Table 5.1.

Table 5.1 SEA Summary Table: Likely Significant Effects (if unmitigated), Mitigation Measures and Indicators for Monitoring

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from the Plan	Primary Indicator(s) for Monitoring
Loss of biodiversity with regard to Natura 2000 Sites and Annexed habitats and species & Loss of biodiversity with regard to designated sites including Wildlife Sites and listed species	Policy LHB19: Protection of Natural Heritage and the Environment* Policy LHB20: Habitats Directive* Policy LHB22: Designated Sites* Policy LHB27: Geological Sites Development Management 8.2.2 (v) Appropriate Assessment Development Management 8.2.9.4 Appropriate Assessment Development Management 8.2.7.1 Biodiversity Policy LHB16: National Park* Appropriate Assessment & Coastal Cycling Infrastructure Objective Policy EI1: Water Supply & Appropriate Assessment Policy EI2: Wastewater Treatment & Appropriate Assessment* Policy E13: Surface Water Drainage & Appropriate Assessment* Policy E14: Groundwater Protection & Appropriate Assessment	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in designated sites including Wildlife Sites resulting from development provided for by the Plan B3ii: Number of significant impacts on the protection of listed species
Loss of biodiversity with regard to ecological connectivity and stepping stones and non-designated biodiversity	Policy LHB23: Non-Designated Areas of Biodiversity Importance* Policy LHB 24: County-Wide Ecological Network* Policy LHB25 Rivers and Waterways* Policy LHB26: Hedgerows* Policy LHB29: Invasive Species	B2: Percentage loss of functional connectivity without remediation resulting from development provided for by the Plan
Spatially concentrated deterioration in human health	Policy CC10: Radon Gas Policy EI25: Major Accidents Policy EI20: Air and Noise Pollution Also see measures related to soil, water quality, flooding, waste water treatment and drinking water supply and quality.	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
Damage to the hydrogeological and ecological function of the soil resource	Development Management 8.2.9.7 New Developments–Environmental Impacts Also see measures related to water quality and waste water treatment.	S1: Soil extent and hydraulic connectivity
Adverse impacts upon the status and quality of water bodies, including bathing waters	Policy EI22: Water Pollution Policy EI23: Rathmichael Ground and Surface Water Protection Policy E13: Surface Water Drainage & Appropriate Assessment* Policy E14: Groundwater Protection & Appropriate Assessment Policy EI6: Integrated Water Management Plans* Policy EI7: Water Quality Management Plans Policy EI8: Sustainable Drainage Systems* Policy EI10: Storm Overflows of Sewage to Watercourses* Policy LHB10: Beaches Also see measures related to water quality and waste water treatment.	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) W1ii: Mandatory and Guide values as set by the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008) W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC

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Non-Technical Summary

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from the Plan	Primary Indicator(s) for Monitoring
Increase in the risk of flooding	Policy CC14: Catchment Flood Risk Assessment and Management Policy Policy CC15: Flood Risk Management*. Policy CC16: Cross-Boundary Flood Management Policy CC17: Coastal Defence*. Policy EI8: Sustainable Drainage Systems* Policy EI9: Stormwater Impact Assessments* Policy LHB23 Rivers and Waterways*	W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk
Failure to provide adequate and appropriate waste water treatment & Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean	Policy EI5: Water Supply and Wastewater* Policy EI11: Water Services Investment Programme* Development Management 8.2.9.3 Environmental Impact Assessment	M1: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of 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
Failure to contribute towards sustainable transport and associated impacts (including emissions)	See Sustainable Communities Strategy in Section 2 of the Plan. Also: Policy CC1: National Climate Change Adaptation Framework.* Policy CC2: Development of National Climate Change Policy and Legislation.* Policy CC3: Development of National Energy Policy and Legislation.* Policy CC4: Sustainable Energy Action Plan* Policy CC5: Limiting Emissions of Greenhouse Gases.*	C1: Percentage of population travelling to work, school or college by public transport or non-mechanical means
Increases in waste levels	Policy EI12: Waste Management Strategy* Policy EI13: Waste Plans Policy EI14: Private Waste Companies Policy EI15: Waste Prevention and Reduction* Policy EI16: Waste Re-use and Recycling* Policy EI17: Refuse Disposal* Policy EI18: Hazardous Waste Policy EI19: Rehabilitation of the Former Ballyogan Landfill	M3i: Total collected and brought household waste M3ii: Packaging recovered (t) by self-complying packagers
Effects on entries to the Record of Monuments and Places and other archaeological heritage	Policy AH1: Protection of Archaeological Heritage Policy AH2: Protection of Archaeological Material in Situ Policy AH3: Protection of Historic Towns Policy AH4: Carrickmines Castle Site Policy AH5: Historic Burial Grounds Policy AH6: Underwater Archaeology	CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) - protected from significant adverse effects arising from new development granted permission under the Plan

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from the Plan	Primary Indicator(s) for Monitoring
Effects on entries to the Records of Protected Structures, Architectural Conservation Areas and other architectural heritage	Policy AR1: Record of Protected Structures Policy AR2: Protected Structures Applications and Documentation Policy AR3: Protected Structures and Building Regulations Policy AR4: National Inventory of Architectural Heritage (NIAH) Policy AR5: Buildings of Heritage Interest Policy AR6: Protection of Buildings in Council Ownership Policy AR7: Energy Efficiency of Protected Structures Policy AR8: Nineteenth and Twentieth Century Buildings, Estates and Features Policy AR9: Protection of Historic Street Furniture Policy AR10: Protection of Coastline Heritage Policy AR11: Industrial Heritage Policy AR12: Architectural Conservation Areas Policy AR13: Demolition within an ACA Policy AR14: Shopfronts within an ACA Policy AR15: Public Realm and Public Utility works within an ACA Policy AR16: Candidate Architectural Conservation Areas (cACA) Policy AR17: Development within a cACA	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
Occurrence of adverse visual impacts	Policy LHB2: Preservation of Landscape Character Areas* Policy LHB3: Seascape Policy LHB4: High Amenity Zones* Policy LHB5: Historic Landscape Character Areas Policy LHB6: Views and Prospects Policy LHB7: Coastal Zone Management and Dublin Bay* Policy EI21: Light Pollution	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