South Dublin County Council
Development Plan
2016 – 2022

Proposed Variation No.3

Zoning Objective Amendment on Lands at Ballymount / Naas Road

Strategic Environmental Assessment
Environmental Report

Comhairle Contae
Átha Cliath Theas
South Dublin County Council

November 2018

This report has been prepared by Minogue & Associates with all reasonable skill, care and diligence. Information report herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is prepared for South Dublin County Council and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

Version	Prepared by	Reviewed
Draft 1 12.11.2018	R Minogue MCIEEM	SDCC
Draft 2 15.11.2018	RM SDCC including SFRA report and NIR	SDCC

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1 INTRODUCTION

1.1 PURPOSE OF THIS SEA SCOPING REPORT

This Environmental Report has been prepared as part of the Strategic Environmental Assessment (SEA) of the Proposed Variation No.3 (the Variation) to the South Dublin County Council Development Plan 2016-2022 (the Development Plan) .

It sets out how the SEA has been undertaken and presents the findings of the assessment of the policies, objectives and landuse zoning of the Variation together with its' reasonable alternatives.

The Environmental Report complies with the requirements of the Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the SEA Directive) as implemented in Ireland through Statutory Instrument (SI) No.436 of 2004 European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (as amended).

These regulations are a statutory requirement for plans or programmes (including where relevant Variations to County Development Plans) which could have significant environmental effects, and the assessment process aims to identify where there are potential effects and how any negative effects might be mitigated.

The Environmental Report is required to include information that may be reasonably required, taking into account the following:

- Current knowledge and methods of assessment;
- Content and level of detail in the proposed variation to the Development Plan;
- Stage of the proposed variation in the decision-making process and
- The extent to which certain matters are more appropriately assessed at different levels in the decision-making process in order to avoid duplication of environmental assessment.

1.2 SCALE, NATURE AND LOCATION OF VARIATION

South Dublin County Council (SDCC) has prepared a variation to the Development Plan under Section 13 of the Planning and Development Act 2000 (as amended). The proposed variation provides for the following:

Proposed Variation No 3 to the Development Plan is proposed to zone circa 178 hectares of the Employment and Enterprise (EE) zoned lands in the Naas Road / Ballymount area for Regeneration (REGEN). Through the 'REGEN' zoning objective, South Dublin County Council seeks to facilitate the regeneration of existing brownfield lands, close to existing and proposed transport nodes, to provide for a more intensive mix of enterprise / and/or residential led development.

The reason for the proposed variation is to facilitate the regeneration of the brownfield lands at this location, which is in close proximity to existing and proposed transport nodes and would provide for a more intensive mix of enterprise and/or residential led development.

The proposed variation supports the implementation of the National Planning Framework (NPF) 2018 and the Eastern and Midland Assembly (Draft) Regional Spatial and Economic Strategy (RSES) 2018, in particular National Strategic Outcome (NSO) No. 1 of the NPF, which seeks to achieve compact growth and consolidation of Ireland's cities as a top priority.

This rezoning, will form a variation to the existing Development Plan. This plan came into effect in June 2016 and established the framework for the development over a six year period for the County. The Development Plan was subject to Strategic Environmental Assessment (SEA) and Habitats Directive Assessment. Within the hierarchy of landuse plans, the proposed variation should be compliant with the policies, objectives of the Development Plan, as well as national and regional plans and guidelines.

Figure 1 shows the outline of the Proposed Variation No.3 lands within the wider context of Dublin.

FIGURE 1: CONTEXT MAP

1). Land Use Zoning Map change. Increase 'REGEN' zoning in Naas Road area by circa 178 ha as a replacement of existing 'EE' zoning

2). Amendment to the Core Strategy figures as follows:

- Increase the New Regeneration lands in Table 1.9 of the Core Strategy (proposed changes are shown in red with original values shown in strike-through.

- Insert Footnotes and amend figures in Table 1.9 - Amend figures in Table 1.10 South Dublin County Development Plan 2016 -2022 Total Capacity

Table 1.9 (of the CDP)- NEW RESIDENITAL AND MIXED USE ZONING 2016 -2022

HIERARCHY	New Zonings	Housing Capacity	New REGEN Zoning	Housing Capacity	TOTAL (HA)	TOTAL (UNITS)
Consolidation Areas within the Gateway						
Palmerstown, Naas Road, Templeogue, Balyroan, Ballyboden, Edmondstown, Knocklyon, Firhouse / Ballycullen and parts of Greenhills, Terenure and Rathfarnham.	0	669	256 v~~78~~	2419 vv	256 ~~78~~	3088
Metropolitan Consolidation Towns						
Tallaght	10	820	58	1444	67	2264
Lucan (inc. Adamstown)	4	151	2	26	6	177
Clondalkin (inc. Clonburris)	41	0	0	0	41	0
Moderate Sustainable Growth Towns						
Saggart / Citywest	3	120	0	0	3	120
Small Towns (within the Metropolitan Green Belt)						
Newcastle	0	0	0	0	0	0
Rathcoole	5	100	0	0	5	100
Rural Areas						

Metropolitan Area				75		75
Hinterland Area				25		25
Total	63	1860	316 ~~137~~	3989	379 ~~200~~	5849

New footnotes:

v - Additional 178 ha added as part of Variation No.3 (Q1 2019)

vv - Additional strategic long term units excluded from new residential capacity. Assumed that the additional land bank of REGEN at Naas Road will not exceed 2,419 units in the life time of this Plan

Table 1.10 (of the CDP): South Dublin County Development Plan 2016 -2022 Total Capacity

HIERARCHY	TOTAL LAND (HA)	TOTAL CAPACITY (UNITS)
Consolidation Areas within the Gateway		
Palmerstown, Naas Road, Templeogue, Balyroan, Ballyboden, Edmondstown, Knocklyon, Firhouse / Ballycullen and parts of Greenhills, Terenure and Rathfarnham.	473 ~~295~~	9620
Metropolitan Consolidation Towns		
Tallaght	156	5412
Lucan (inc. Adamstown)	218	8304
Clondalkin (inc. Clonburris)	315	10748
Moderate Sustainable Growth Towns		
Saggart / Citywest	138	4196
Small Towns (within the Metropolitan Green Belt)		

Newcastle	28	701
Rathcoole	44	1062
Rural Areas		
Metropolitan Area	0	75
Hinterland Area	0	25
Completions 2011 to jan 2015		1,001
Total	**1372** ~~**1194**~~	**41144**

3). Amend CS6 SLO 1 of the County Development Plan (page 24)

CS6 SLO 1:

To initiate a plan led approach to the sustainable regeneration of the brownfield lands in the Naas Road / Ballymount REGEN zoned lands. The plan led approach will include the preparation of a masterplan in 2019 with a view to preparing a Local Area Plan or other appropriate mechanism for the Regeneration (REGEN) and Local Centre (LC) at Walkinstown zoned lands. The masterplan will provide a framework for the sequential and phased development of the lands, integrating sustainable transport, land use and blue and green infrastructure. The spatial planning of the area will be informed by the Naas Road Framework Plan (2010)

Delete

~~prepare a Ballymount Local Area Plan for lands zoned REGEN, EE, and LC, stretching southwest from Walkinstown Roundabout along the Greenhills Road (including those areas adjacent to Greenhills Estate) to the M50, north from there to the Red Cow, east from there along the Naas Road to the city boundary, and along the boundary back to Walkinstown Roundabout. The subject Local Area Plan to be concluded by the end of 2018; and the lands north of this between the M50, the Grand Canal and city boundary currently zoned EE to be considered for inclusion in this plan. The Naas Road Framework Plan (2010) to be taken into consideration during the preparation of the Local Area Plan.~~

1.3 Strategic Environmental Assessment

Under Directive 2001/42/EC - Assessment of Effects of Certain Plans and Programmes on the Environment, certain plans and programmes require an environmental assessment. This is known as the Strategic Environmental Assessment (SEA) Directive. Article 1 of this Directive states that its objective is:

> *'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development*.'

1.3.1 Structure and Preparation of this Environmental Report

Regulations contained in Schedule 2B of Statutory Instrument (S.I.) 436 of 2004(as amended) details the information to be contained in an Environmental Report. The following Table 1 lists the information required and details where this information is contained in this Environmental Report.

TABLE 1 INFORMATION REQUIRED TO BE CONTAINED IN AN ENVIRONMENTAL REPORT.

Schedule 2B of Statutory Instrument 436 of 2004	**Addressed in this SEA ER**
(a) an outline of the contents and main objectives of the plan and relationship with other relevant plans	Chapter One Introduction and Chapter Two Methodology outlines contents and main objectives Chapter Three details the relationship with other relevant plans
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan	Chapter Four Baseline Environment provides this information
(c) the environmental characteristics of areas likely to be significantly affected	Chapter Four Baseline Environment provides this information
(d) any Issues and Threats problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or Habitats Directive	Chapter Four Baseline Environment provides this information
(e) the environmental protection objectives, established at international, European Union or national level, which	Chapter Five: SEA Objectives provides this information

are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation	
(f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors	Chapter Seven, Significant Effects on the Environment provides this information
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan	Chapter Eight, Mitigation Measures provides this information
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	Chapter Six, Alternatives Considered provides this information and difficulties encountered are listed at the end of Chapter Two, Baseline Environment.
(i) a description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan	Chapter Nine, Monitoring provides this information
(j) a non-technical summary of the information provided under the above headings	This is provided as a separate document to this Environmental Report but is also available

1.4 Report Preparation

The SEA Team worked with the SDCC Forward Planning team and other specialists. The following consultants prepared this SEA ER:

- Ruth Minogue MCIEEM, AILI, (BSoc Sc) Social Anthropology, University of Manchester 1996, MA (Econ) Environment and Development, University of Manchester 1998, Dip Field Ecology, University College Cork 2003, ongoing CPD including certificate in Health Impact Assessment (2012) and diploma in Planning and Environmental Law (2017);

- Pat Doherty MCIEEM, MSc in Applied Environmental Science (Ecology), University College Dublin, 2003;BSc (Honours) in Environmental Earth Science, University of Wales, Aberystwyth, 2000; ongoing CDP including Habitat Assessment (NVC) and flora and fauna identification through IEEM, and

- Dr Ronan Hennessey, PhD Earth and Ocean Sciences, Higher Diploma in Remote Sensing and Geographical Information Systems, BSc Earth Sciences.

2 APPROACH TO STRATEGIC ENVIRONMENTAL ASSESSMENT

2.1 INTRODUCTION

This chapter presents the SEA methodology in detail and outlines the steps required for SEA. The methodology used to carry out the SEA of the plan reflects the requirements of the SEA regulations and available guidance on undertaking SEA in Ireland, including:

- SEA Methodologies for Plans and Programmes in Ireland – Synthesis Report Environmental Protection Agency (EPA), 2003;
- Implementation of SEA Directive (2001/42/EC) Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities - published by the Department of the Environment, Heritage and Local Government, 2004;
- Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI 436 and SI 435 of 2004);
- Planning and Development (Strategic Environmental Assessment) Regulations 2011 (S.I. No. 201 of 2011);
- Planning and Development (Environmental Assessment of Certain Plans and Programmes) (S.I No 200 of 2011);
- SEA Process Checklist Consultation Draft 2008, EPA 2008;
- Circular Letter PSSP 6/2011 Further Transposition of EU Directive 2001/42/EC on Strategic Environmental Assessment;
- Guidance on integrating climate change and biodiversity into Strategic Environmental Assessment European Union 2013;
- SEA Resource Manual for Local and Regional Authorities, Draft Version, 2013;
- Integrating Climate Change into Strategic Environmental Assessment in Ireland – A Guidance Note, EPA, 2015;
- Developing and assessing alternatives in Strategic Environmental Assessment, EPA, 2015 and
- SEA of Local Authority Land Use Plans - EPA Recommendations and Resources (Version May 2018).

2.2 STAGES IN THE SEA PROCESS

The steps involved in SEA are as follows:

- Screening (determining whether or not SEA is required).
- Scoping (determining the range of environmental issues to be covered by the SEA).
- The preparation of an Environmental Report (***current stage***)
- The carrying out of consultations.
- The integration of environmental considerations into the Plan or Programme.
- The publication of information on the decision (SEA Statement).

2.2.1 SCREENING

The SEA Regulations state that SEA is mandatory for certain plans while screening for SEA is required for other plans including Variations to County Development Plans. A Screening assessment was undertaken and it determined the requirement to progress to full SEA. In conjunction with the SEA Screening, a screening under Article 6 (3) of the EU Habitats

Directive has also been prepared and should be read in conjunction with the Variation and this SEA ER.

2.2.2 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 September 2018 for comment. The table below summarises the main issues raised by consultees and the SEA response to same.

TABLE 2 SCOPING SUBMISSIONS

Consultee	Key Issue Raised	SEA Response
Scientific Officer, SEA Section Office of Evidence and Assessment. Environmental Protection Agency, Regional Inspectorate, Inniscarra, County Cork		
	As a priority, we focus our efforts on reviewing and commenting on key sector plans. For land use plans at county and local level, we provide a 'self-service approach' via our guidance document 'SEA of Land Use Plans – EPA Recommendations and Resources'. This document is updated regularly.	The Guidance document has been used and informed this SEA process to date.
	Where we provide specific comments on plans and programmes, our comments will focus on the EPA's remit and areas of expertise (in particular water, air, climate change, waste, resource efficiency, noise, radon and the inter-relationships between these and other relevant topics e.g. biodiversity), as appropriate and relevant to the particular plan or programme.	Noted
	The Agency responds to Plans on a priority basis. The attached SEA integration guidance document sets out the key environmental issues, as relevant and appropriate, to be taken into account in the preparation of the SEA and Variation	Noted, and has been used to guide and inform this SEA process.
Specific Comments	We note that the Variation seeks to 'facilitate the regeneration of existing brownfield lands'. Any brownfield lands proposed for reuse / regeneration, should be appropriately remediated to avoid or minimise any potential significant environmental impacts or human health impacts that may arise.	Noted, this will be included and appropriate measures recommended.
	We also note that the Camac River runs through the lands proposed for rezoning. Where lands are proposed for rezoning/zoning or development, land use should be appropriate to the risk of	Noted and will be included and considered

	flooding identified. The *Planning System and Flood Risk Management Guidelines* (DEHLG 2009) and the relevant aspects of the Eastern CFRAMS should be fully integrated, as appropriate.	through the SEA ER.
	Further comment on the Variation may be provided upon receipt of the Draft Environmental Report and Plan and associated documents during the next statutory consultation phase of the SEA Process.	Noted.
	Guidance on Developing and Assessing Alternatives in SEA (EPA, 2015) is also available at: http://www.epa.ie/pubs/advice/ea/developingandassessingalternativesinsea.html	Noted and utilised in this SEA ER
	EPA State of the Environment Report 2016 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 Variation and associated SEA. This report can be consulted at: http://www.epa.ie/irelandsenvironment/stateoftheenvironmentreport/	Noted and utilised in this SEA ER
	SEA WebGIS Search and Reporting Tool The EPA SEA WebGIS Search and Reporting Tool is a GIS based web application that allows users to explore, interrogate and produce an indicative report on key aspects of the environment in specific geographic areas. These reports are indicative and will provide an overview of key aspects of the environment within a specific plan area. This may be used to inform the SEA screening and scoping stages for Plans and Programmes with reference in the first instance to the land use sector, though it is also applicable to other sector plans. It may be accessed via www.edenireland.ie	Considered at SEA Screening stage of this Variation.
	River Basin Catchment Management Tool The EPA WFD Application provides a single point of access to catchment data which will be useful for a range of catchment science and management purposes, not just those that are specific to the Water Framework Directive. The Application is accessible through EDEN External linkhttps://wfd.edenireland.ie/ and is available to public agencies.	Noted, used in Chapter Four Environmental Baseline

	Environmental Authorities Under the SEA Regulations (S.I. No. 436 of 2004, as amended by S.I. No. 200 of 2011), notice should also be given to the following: The Minister for Housing, Planning and Local Government Minister for Communications, Climate Action and Environment, where it appears to the planning authority that the plan or programme, or modification of the plan or programme, might have significant effects on fisheries or the marine environment where it appears to the competent authority that the plan or programme, or modification to a plan or programme, might have significant effects in relation to the architectural or archaeological heritage or to nature conservation, the Minister for Culture, Heritage and the Gaeltacht), and any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a draft plan, proposed variation or local area plan.	Noted and notified
Head of Transport Planning, Transport Infrastructure Ireland, Parkgate Street, Dublin 8.		
	TII supports this approach to transform this sustainable brownfield area within the M50 to support compact development in accordance with the National Planning Framework. From TII perspective, this area is the City gateway for both n/M7 and the Red Line Luas service, given the importance of the network it is a critical requirement to plan carefully. The Authority recommends that a transport plan be prepared which both promotes sustainable transport and also advocates protecting the strategic national road network.	Noted. Transport plan is recommended as a mitigation measure for next phase.
	The SEA Scoping Report does not include reference to Section 28 DoECLG Spatial Planning and National Roads Guidelines or the NTA Transport Strategy. It is recommended the SEA address these policy documents in terms of integrating sustainable transport provision and assessing potential implications for M50 and N/M7 to ensure future development proposals are progressed in compliance with provisions of official policy.	Included in Chapter 3, Annex A and referenced in Chapters 7 and 8.
	Following general guidance: National Roads – will seek to uphold policy and guidelines such as Section 28 Guidance Spatial Planning	Noted. Reference will

	TII Area Based Transport Assessment Guidance Notes SEA should identify methods proposed for works traversing/in proximity to national road network TII environmental Assessment and Construction Guidelines And Environmental Noise Regulations Road Safety Audit or Road Safety Impact Assessment	be made as appropriate
	Light Rail Address transport issues refer to NTA Transport Strategy for Greater Dublin Area Permeability Best Practice Guide Areas Based Transport Assessment Any proposal in close proximity to a Luas line, should ensure no adverse impact on comply with Code of Practice for Working On, Near or Adjacent to Luas Tram System	Noted. Reference will be made as appropriate. These may be better addressed at subsequent stages.
Department of Agriculture, Marine and Food Gratten Business Centre, Portlaoise		
	No comments at this point	

2.3 Baseline Data

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 Issues and Threats 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. Additional primary research included site visits and appraisal. Other data was gathered from the SEA ER of the South Dublin County Council Development Plan 2016-2022, Irish Water, the EPA, Met Eireann and other sources as appropriate. Footnotes throughout the document, particularly in Chapter Four present the reference and source.
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.

2.4 Approach to assessment of significant environmental impacts

The principal component of the SEA involves a broad environmental assessment of the objectives (including zoning objectives) of the Variation to the Development Plan. A methodology that uses the concept of expert judgement, public consultation, GIS and

matrices, both to assess the environmental impact and to present the conclusions has been adopted in this SEA.
Key to assessing the above is setting a specific set of environmental objectives for each of the environmental topics. The objectives are provided in Chapter Five and include all aspects of the environment such as Cultural Heritage, Population and Human health, and Biodiversity, Flora and Fauna.

The assessment described within this Environmental Report aims to highlight the potential conflicts, if they are present, between the aims and proposals contained in this Proposed Variation No.3 with the Strategic Environmental Objectives. Furthermore the assessment examines the potential impact arising from the plan's implementation on sensitive environmental receptors.

The SEA Directive requires that information be focused upon relevant aspects of the environmental characteristics of the area likely to be significantly affected by the plan and the likely change, both positive and negative, where applicable.
Chapter Seven provides a discussion, where relevant, on the significance and type of the identified impact in accordance with current guidelines.

The SEA legislation and guidelines highlight the importance of the integration between the preparation of the Variation and the SEA and AA processes. The iterative nature of the SEA process is such that the Variation is informed by environmental considerations throughout the preparation of the Variation and development of objectives and landuse zonings as relevant. The Screening Statement in support of Appropriate Assessment Report is a separate document to the Environmental Report both of which accompany this Proposed Variation No.3 to the South Dublin County Council Development Plan 2016-2022.

2.5 Mitigation

Section (g) of Schedule 2B of the SEA Regulations requires information on the mitigation measures that will be put in place to minimise/eliminate any significant adverse impacts due to the implementation of the Variation. Chapter Eight of this SEA ER highlights the mitigation measures that will be put in place to counter identified significant adverse impacts due to the Variation's implementation.

The Variation has been prepared having regard to the environmental protection objectives contained within the South Dublin County Council Development Plan 2016-2022. However, some unavoidable residual issues may remain and therefore mitigation measures are required. Chapter Eight details the mitigation measures necessary to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Variation.

2.6 Monitoring

Article 10 of the SEA Directive sets out the requirement that monitoring is to be carried out of the significant environmental effects of the implementation of the Variation in order to identify at an early stage any unforeseen adverse effects and to be able to undertake appropriate remedial action. Chapter Nine presents the monitoring requirements for the

plan, aligned where possible with those of the SEA of the South Dublin County Council Development Plan 2016-2022.

2.7 Strategic Flood Risk Assessment

The Planning System and Flood Risk Management Guidelines (DoEHLG 2009) provide a methodology to incorporate flood risk identification and management into land use strategies. It also requires the alignment and integration of flood risk into the SEA process. The core objectives of the Guidelines are to:

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water run-off;
- Ensure effective management of residual risks for development permitted in floodplains;
- Avoid unnecessary restriction of national, regional or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders; and
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.

Potential flood issues in the plan area are an important consideration in the preparation of the Variation. Therefore the Variation has been guided by the information on flood risk currently available and has been informed by the currently up to date flood risk information including Catchment Flood Risk Assessment and Management (CFRAM) studies as well as a specific flood risk assessment by JBA Consulting. These findings have been integrated into the Variation and this SEA ER (See Chapters Four and Seven in particular).

2.8 Data Gaps

Data gaps are present in terms of human health and population and potential historical land contamination associated with former landuse activities.

3 RELATIONSHIP TO RELEVANT PLANS AND PROGRAMMES

3.1 INTRODUCTION

Under the SEA Directive, the relationship between the proposed variation and other relevant plans and programmes must be taken into account. A review of the relevant plans and programmes will be prepared as part of the SEA ER. The preparation of the proposed variation must be considered within the context of a hierarchy of policies, plans and strategies which include international, national, regional and local level policy documents. These documents set the policy framework within which the proposed variation will operate.

The South Dublin County Development Plan 2016-2022 (CDP) operates as the primary land use framework for the county and as such, key policies/objectives and environmental protective objectives and policies of the CDP will be applied during plan implementation stage. A list of the key relevant international, national, regional and county policies to be included in the review are provided below in Sections 3.2 to 3.4; Section 3.5 identifies key principles that will inform the SEA process arising from this review.

3.2 INTERNATIONAL

- UN Convention of Biological Diversity, 1992
- The Convention on Wetlands of International Importance (The Ramsar Convention) 1971 and subsequent amendments
- EU Environmental Action Programme to 2020
- SEA Directive - Assessment of the effects of certain plans and programmes on the Environment, (2001/42/EC) 2001
- Environmental Impact Assessment Directive (85/337/EEC) (97/11/EC), 1985 and Environmental Impact Assessment Directive (2014/52/EC)
- EU Biodiversity Strategy to 2020
- EU Directive on the Conservation of Wild Birds, (2009/147/EC) 1979. Known as the Birds Directive
- EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, (92/43/EEC), 1992 known as the Habitats Directive
- European Communities (Birds and Natural Habitats) Regulations 2011
- EU Green Infrastructure Strategy 2013
- The Stockholm Convention 2001
- EU Soil Thematic Strategy
- Water Framework Directive (2000/60/EC) as amended
- Floods Directive (2007/60/EC)
- The Drinking Water Directive (DWD), (98/83/EC) 1998
- Groundwater Directive, (2006/118/EC) 2006
- EC Bathing Water Quality Directive, (2006/7/EC) 2006
- Paris (Climate Change) Agreement
- Kyoto Protocol
- The Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive
- EU Directive on Waste, (2006/12/EC), 2006
- EU Directive on Waste (2008/98/EC), 2008
- EU Urban Waste Water Treatment Directive (91/271/EEC), 1991

- Directive 2009/28/EC on the promotion of the use of energy from renewable sources
- European Convention on the Protection of the Archaeological Heritage,
- 1992 (The Valletta Convention)
- Convention for the Protection of the Architectural Heritage of Europe, 1985 (Granada Convention)
- The European Landscape Convention 2000
- The Aarhus Convention
- Environmental Liability Directive 2004/35/EC

3.2.2 NATIONAL

- National Planning Framework 2018
- Water Framework Directive River Basin Management Plans 2018
- National Mitigation Plan
- Sectoral Climate Adaptation Plans 2018
- Local Authority Adaptation Strategy Development Guidelines, EPA 2016
- Our Sustainable Future A framework for sustainable development in Ireland (2012)
- The National Spatial Strategy 2002 -2020
- National Landscape Strategy (2015-2025)
- 3rd National Biodiversity Action Plan, 2017-2021
- The Wildlife Acts 1976 to 2012
- National Heritage Plan (2002)
- Irish Water's Capital Investment Programme
- Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) (2009)
- Geological Heritage Sites Designation (under the Wildlife Amendment Act 2000)
- Water Services Act (2007)
- Water Services (Amendment) Act (2012)
- Irish Water Services Strategic Plan SEA and AA (2015)
- Irish Water Capital Investment Programme (2017-2021) including forthcoming planning application for Ringsend WWTP upgrade.
- Waterways Ireland Heritage Plan 2014-2020
- The Planning System and Flood Risk Management Guidelines (and Technical Appendices) for Planning Authorities (DoEHLG, OPW), 2009
- National Climate Change Strategy (2007-2012)
- Review of Ireland's climate change policy and Climate Action and Low Carbon Bill 2013
- Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020
- Spatial Planning and National Roads Guidelines
- National Transport Strategy for Greater Dublin Area 2016-2023[1]
- National Monuments Act 1930 with subsequent amendments
- Architectural Heritage Protection - Guidelines for Planning Authorities (2011)
- National Inventory of Architectural Heritage (NIAH)
- Draft Landscape and Landscape Assessment Guidelines, (2000)

[1] Inserted following Scoping Submission by Transport Infrastructure Ireland

- Planning and Development Act 2000 (as amended).
- Planning Policy Statement, 2015

3.2.3 Regional and County

- Eastern and Midland Assembly (Draft) Regional Spatial and Economic Strategy (2018)
- Eastern-Midlands Regional Waste Management Plan 2015
- Greater Dublin Area Transport Strategy 2016-2035
- South Dublin County Council Development Plan 2016-2022
- South Dublin Local Economic and Community Plan 2016
- South Dublin Local Biodiversity Action Plan 2010 – 2015 (replacement plan in preparation).

3.3 Key principles identified from review.

Following the review of the relationship between the above plans, policies and programmes (see also Appendix A), the following key principles have been identified and this have been considered through the SEA and helped to inform the Variation development.

Table 3 Principles from plan, policy and programme review.

SEA Topic	Principles/Implications for the Variation and SEA	EPA State of Irelands Environment 2016 Key Issues
Biodiversity, Flora and Fauna	• Conserve and enhance biodiversity at all levels • Avoid and minimise effects on nationally and internationally rare and threatened species and habitats through sensitive design and consultation, recognising ecological connectivity where possible • Facilitate species and habitat adaption to climate change • Avoid and minimise habitat fragmentation and seek opportunities to improve habitat connectivity • Ensure careful consideration of non-native invasive and alien species issues	Implementation of legislation Climate change Environment and health and well being Nature and wild places
Population and Human Health	• Provide for sustainable communities with key services • A high quality environment to live, work and play in	Environment and health and well being Implementation of legislation Climate change

	• Avoid pollution and environmental health impacts (noise and air quality) through mitigation and design	Community engagement Sustainable economic activities
Water	• Maintain and improve water quality • Avoid and minimise effects on natural processes, particularly natural flood management and catchment processes through sensitive design and consultation • Adapt and improve resilience to the effects of climate change, particularly flood risks associated with extreme weather • Minimise water consumption/ abstractions • Design SUDS to facilitate ecological improvement/ enhancement where possible	Restore and protect water quality Implementation of legislation Climate change Environment and health and well being
Soil and Geology	• Conserve soil resources where possible and avoid waste of soil resources • Maintain productive capacity and prevent erosion of soils • Ensure careful consideration of non-native invasive and alien species issues	Climate change Environment and health and well being Sustainable economic activities
Material Assets	• Avoid and minimise waste generation • Maximise re-use of material resources and use of recycled materials • Minimise energy consumption and encourage use of renewable energy • Promote sustainable transport patterns and modes where possible. • Plan and provide for sustainable water management and wastewater treatment	Restore and protect water quality Implementation of legislation Climate change Environment and health and well being Sustainable economic activities
Air Quality and Climate	• Adapt and improve resilience to the effects of climate change • Encourage reduction in greenhouse gases through	Climate change Implementation of legislation

	transport, energy, built development. • Minimise adverse impacts associated with air and noise quality	Environment and health and well being
Cultural Heritage	• Conserve, preserve and record architectural and archaeological heritage • Avoid and minimise effects on historic environment features through sensitive design and consultation	Environment and health and well being Sustainable economic activities
Landscape	• Enhance the landscape character of the area through design • Integrate green infrastructure considerations • Improve landscape connectivity to surrounding area	Environment and health and well being Nature and wild places
Climate change and sustainability	• Adapt and improve resilience to the effects of climate change • Promote local/ sustainable sourcing of materials Promote sustainable design and innovation to reduce material consumption	Environment and health and well being Sustainable economic activities Climate change Implementation of legislation
Inter-relationships	• Maintain and improve the health of people, ecosystems and natural processes • Minimise effects on landscape and historic environment features • Adapt and improve resilience to climate change and extreme weather events • Actively seek to integrate opportunities for environmental enhancement	Environment and health and well being Sustainable economic activities Climate change Implementation of legislation Nature and wild places Restore and protect water quality Community engagement

4 KEY ENVIRONMENTAL RESOURCES

4.1 INTRODUCTION

This chapter describes the environmental baseline for the Variation area. The baseline information presents the environmental context within which the Variation to the Development Plan will operate and the opportunities, constraints and targets placed on the plan in this regard. The environmental data is described in line with the legislative requirements of the SEA Directive and Regulations, as amended under the following environmental parameter headings:

- Population and Human Health
- Biodiversity, Flora and Fauna
- Soil and Geology
- Air and Climate
- Water
- Material assets
- Culture
- Landscape
- The inter-relationship between the above parameters will also be considered in this chapter.

4.1.1 THE PLAN AREA AND SPHERE OF INFLUENCE

The Variation relates to the lands around Ballymount as illustrated and therefore the primary focus of the environmental baseline are the lands themselves, and depending on the environmental parameter at a larger scale. For example, built heritage might be confined to a street or specific sites, whereas water resources such as rivers or lakes are larger in scope and can be influenced by activities at a larger scale or activities upstream. Similarly mobile species may disperse over larger areas of the landscape and require consideration at a different scale.

4.2 POPULATION AND HUMAN HEALTH

This section provides information on the current population, demographic trends and changes in the Variation area and adjacent DEDs between 2011 and 2016 Census. In addition, information is provided on economic and human health trends in the Variation lands and environs. Impacts can arise on people's health and quality of life from a range of environmental factors, often through a combination of environmental impacts such as landuse, water quality, air quality, noise and transport patterns.

Figure 1 below presents the Variation boundary and Census Data (2016) for Electoral Districts showing population change between 2011 and 2016 Census. Figure 2 shows population density for the Variation lands.

Figure 1 Population (Census 2016)

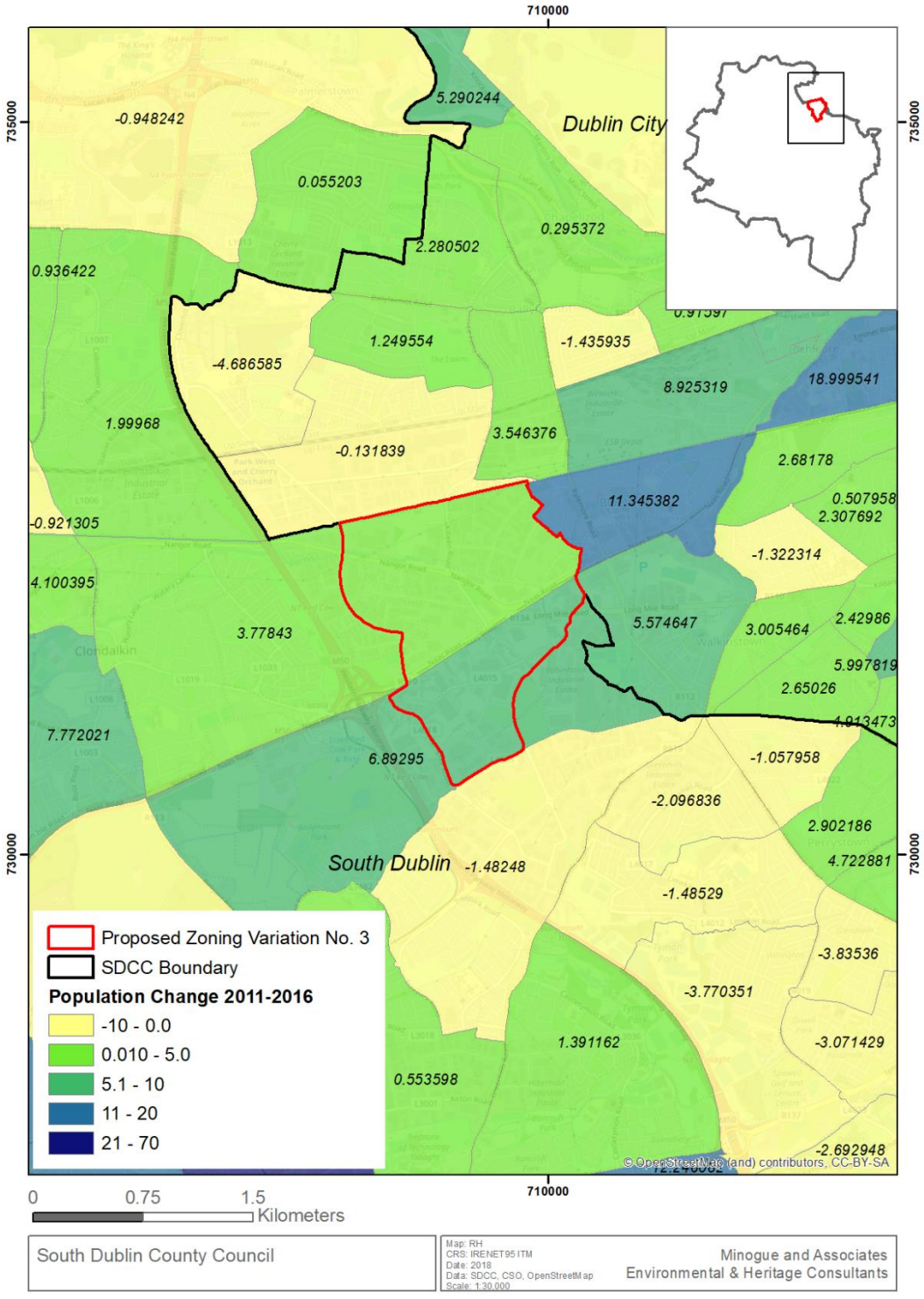
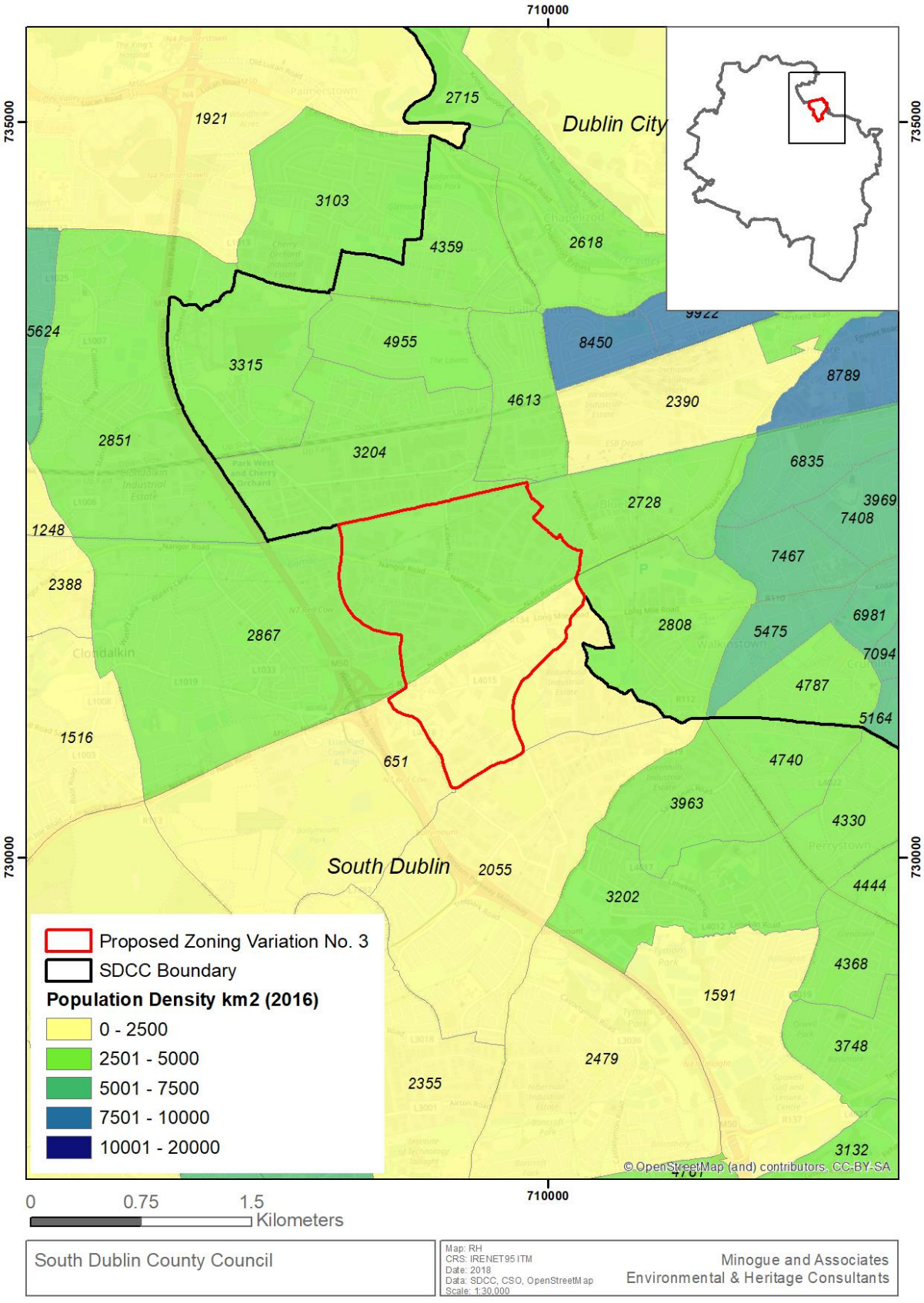


Figure 2 Population Density



4.2.1 Population

The 2016 census data shows that the South Dublin area grew by more than 5% in the period 2011 to 2016.. The most recent available census data at ED level is from the 2016 census. A summary of key population and housing stock data from this census for the relevant EDs is provided below in Table 4.

Table 4 Electoral Districts 2016 Census Data.

ED Name	Total Population 2016	Deprivation Score 2016	Population Change 2016	Unemployment rate-Male 2016	Unemployment rate-Female 2016	Total Households 2016
Clondalkin-Monastry	11,316	0.47	0.04	12.03	13.61	3,793

4.2.2 Human Health

Human health can be determined by social, environmental and economic factors, among others. Human health may be impacted upon in a variety of ways and by a number of environmental receptors such as water, biodiversity, climate, flooding, air and major accidents, etc. The exposure to contaminants or pollutants can have serious implications for human health. Potential impacts on population and human health include inadequate water and wastewater and waste infrastructure, contamination of soils, excessive noise, flooding and poor air quality in areas where there are large volumes of traffic.

The Institute of Public Health states:

'*Where people live affects their health. There are a number of elements of the living environment that influence health including the built environment, travel choices and the communities in which people live. The design, maintenance and location of buildings influence health. Similarly, public spaces and transport networks can facilitate health by providing opportunities for physical activity, social interaction and access to social goods*'.

Disadvantaged people are more likely to live in poor quality built environments and have limited access to transport and local amenities supporting healthy choices. Figure 3 below identifies key factors that contribute to human health. This is followed by a summary of the key environmental factors that can affect human health.

Figure 3 the determinants of health and well being[2]

4.2.3 Human Health and Noise

Environmental noise is treated in a different way to noise nuisance. A nuisance noise is something that occurs from time to time and is not usually considered to be a feature of life in the local area. For example, a noisy dog or late night parties are short term occurrences. Even if they happen regularly, they are not caused by any long term activities and so they are thought of as nuisance noise. Environmental noise is from long term or permanent sources, like major transport routes and factories. Noise from these sources has a different effect on people and is managed in a different way. The Environmental Noise Directive was written into Irish law in 2006, through the Environmental Noise Regulations (Statutory Instrument No. 140 of 2006). This law relates to the assessment and management of environmental noise. They provide for a common approach intended to avoid, prevent or reduce the harmful effects, including annoyance, due to exposure to environmental noise. These regulations do not apply to nuisance noise which can be dealt with under the Environmental Protection Agency Act.

Noise Action Plans are required under the Environmental Noise Directive (EU 2002/49/EC) transposed in to Irish law by SI 140 of 2006. South Dublin in conjunction with the other three Dublin local authorities have prepared a plan for 2013-2018 and establishes the

[2] The determinants of health and well-being (Barton & Grant 2006)

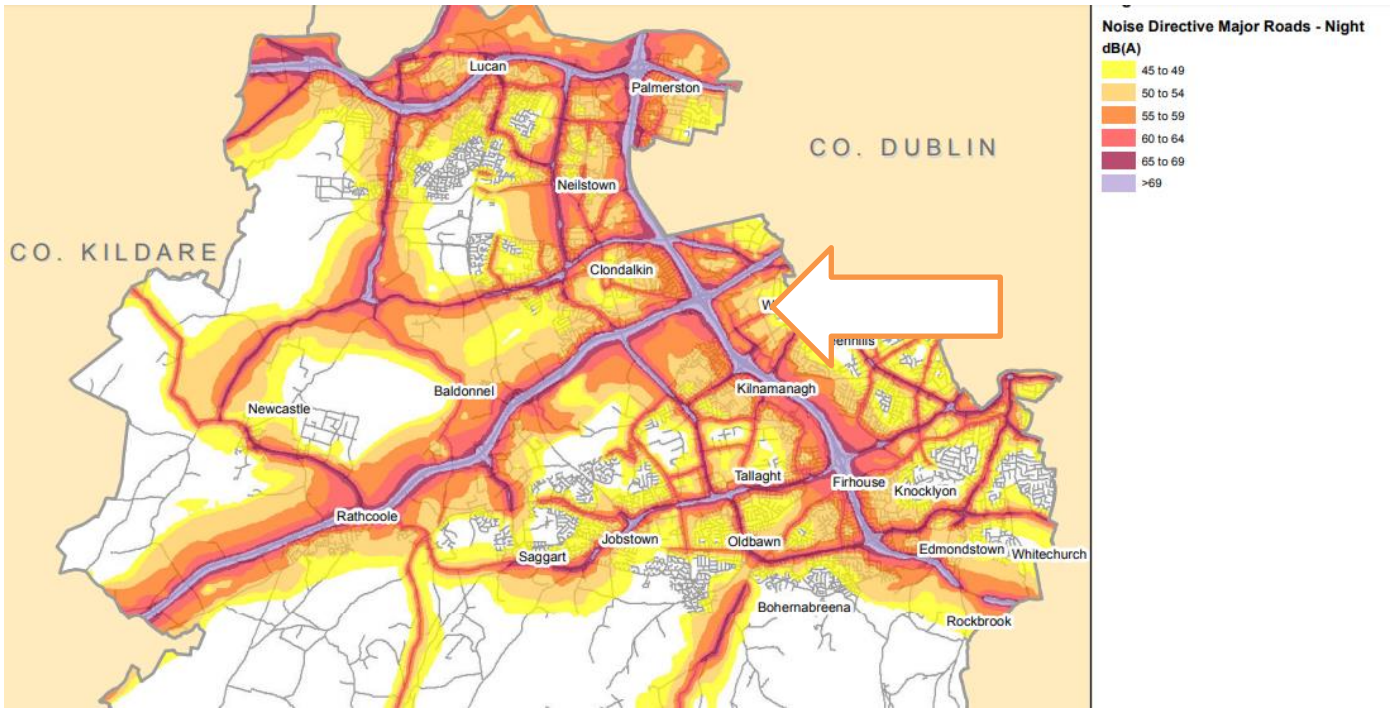
measures that the councils intend to take to manage environmental noise exposure. The plan also contains an assessment of possible noise hotspots throughout the area. The Dublin Agglomeration Environmental Noise Action plan 2018-2023 is currently on public display until December 2018.

In the context of the Variation, existing roads operate as the greatest noise generators. Thresholds for desirable low and undesirable high sound levels in the Noise Action Plan are as follows:

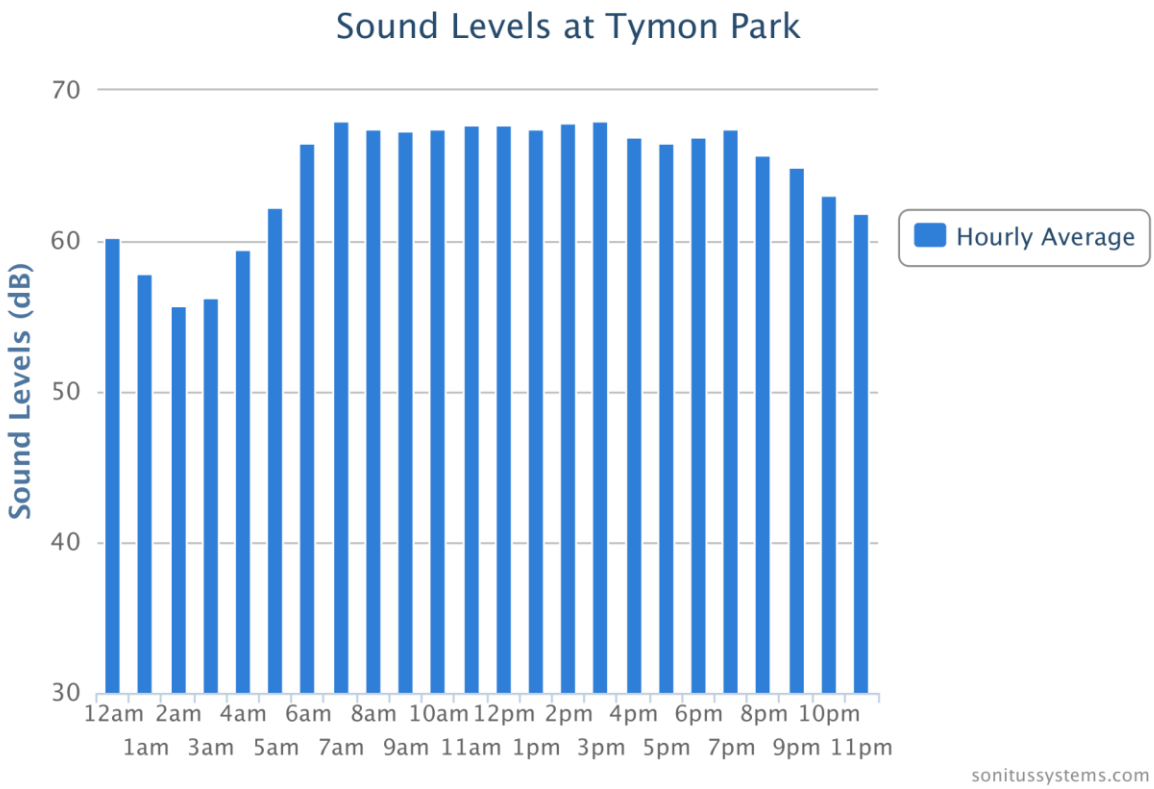
- Desirable Low Sound levels • < 50 dB(A) Lnight • < 55 dB(A) Lday
- Undesirable High Sound levels • > 55 dB(A) Lnight • > 70 dB(A) Lday

The map below shows noise mapping for major roads in South Dublin; the deeper colours (purple to orange) representing undesirable sound levels for nightime (greater than 55db). As the map shows in relation to the Variation lands, the M50 to the west and the Naas Road all exceed desirable sound levels for nightime. The 24 hour mapping for major roads reinforced this finding.

Figure 4 Night Time Levels Major Roads



The closest noise monitoring locations to Ballymount are Tymon Park which is bisected by the M50. The noise monitoring at Tymon Park regularly exceeds the 55db/day desirable day levels. The Graph below shows the average the hourly average readings for noise at Tymon Park for a two week period (20th October to 2nd November 2018). As the data shows the noise levels peak around 7am, 3pm and 7pm.



The Figure overleaf presents the recorded sound levels from traffic over a 24 hour period in the context of the variation lands.

The location of new residential properties, mixed residential/commercial use buildings or noise sensitive premises such as schools or hospitals, adjacent to existing roads, railways, airports, industry or recreational activities can result in significant noise management issues. Noise sensitive locations such as those above have particular requirements for low level noise environments in order to be able to function effectively. A high standard of insulation can be applied to improve noise attenuation in these buildings but this measure is rendered relatively ineffective when windows are opened. It also does not protect the external environment around the noise sensitive location from community/environmental noise.

The Dublin Agglomeration Environmental Noise Action Plan 2013-2018 (and the Draft Dublin Agglomeration Environmental Noise Action Plan 2018-2023) sets out a number of potential mitigation measures to address noise issues that are under the local authorities remit.

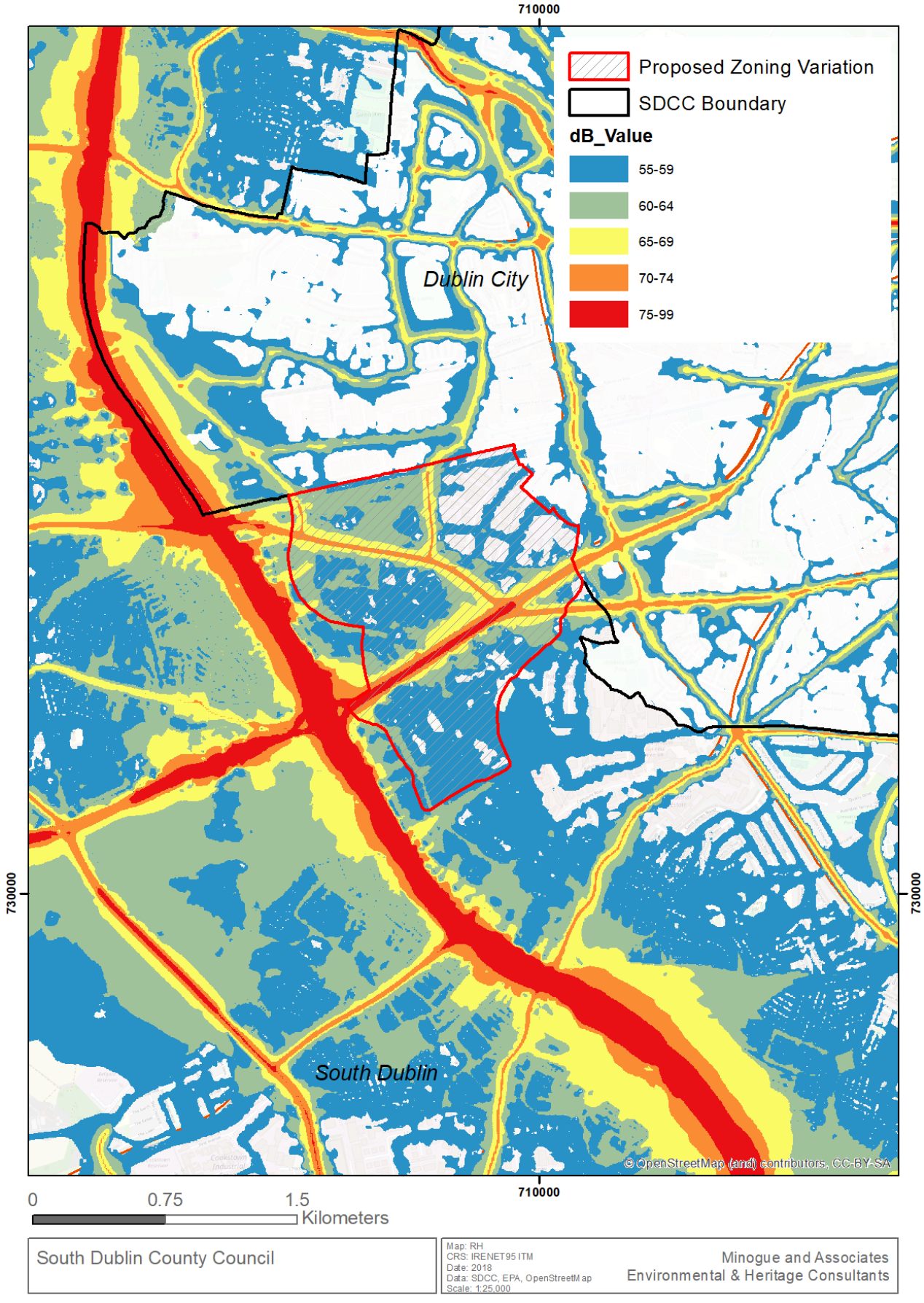


FIGURE 5 RECORDED NOISE LEVELS FROM TRAFFIC 24 HOUR PERIOD

4.2.4 HUMAN HEALTH AND AIR QUALITY

The Air Framework Directive 96/62/EC (CEC, 1996) details how ambient air quality should be monitored assessed and managed. This Directive requires that member states divide their territory into zones for the assessment and management of air quality. South Dublin as part of the Dublin City agglomeration is designated as a Zone A.

The Air Quality Index of health[3] is based on hourly monitoring data from sites around Ireland and is based is based on measurements of five air pollutants all of which can harm health. The five pollutants are:

- Ozone gas
- Nitrogen dioxide gas
- Sulphur dioxide gas
- PM2.5 particles and
- PM10 particle

South Dublin is located within the 'Dublin City' region. The closest Air Quality live monitoring site is on the Old Bawn Road (west of Variation lands). As of 13th October 2018 air quality at this location is good. The two key sectors that predominantly impact negatively on air quality are residential heating and transport[4].

The Air Pollution Regulations (2012) were signed into law by the Minister for Environment, Community and Local Government on 31st August 2012. One of the key elements of the regulations has been the designation of new towns as smokeless zones and the expansion of the ban areas in towns that were previously covered under the old regulations. All of the four local authorities in Dublin have a ban on the sale, marketing, distribution and burning of specified fuel i.e. only smokeless fuel allowed

The EPA State of the Environment Report (2016) has further highlighted the role of environmental quality and health and in turn has highlighted the adoption of the newer more stringent World Health Organization guideline values for air quality. The Clean Air Policy Package (EC 2014) involves a move to tackling air emissions at source with potentially tighter air quality standards from 2020 onwards[5].

4.2.5 RADON

The greatest health risk from radiation in Ireland is caused by radon. It accounts for more than half of the total radiation dose received by the Irish population. As a known carcinogen, in the same category as tobacco smoke and asbestos it is a cause of lung cancer. Up to 250 cases of lung cancer in Ireland every year can be linked to radon. These lung cancer cases are principally associated with exposure to radon in the home, but exposure in the workplace is also a contributor. In the workplace, the employer must protect the health of workers from this identifiable risk.

[3] http://www.epa.ie/air/quality/
[4] Air Quality in Ireland 2016 EPA
[5] SEA ER of National Mitigation Plan 2017.

Radon is only a problem if it is ignored and some simple, inexpensive and straightforward solutions are available to reduce excessive levels both in the workplace and in the home. The EPA Radon map shows that the Variation lands are situated within a 10kmgrid square in which between one to five and five and ten per cent of the homes are estimated to be above the Reference Level for Radon.

4.2.6 Existing issues Population and human health.

- Environmental Health relating to noise and air quality in particular.
- Green infrastructure and lack of green/open space in Variation lands
- Potential historical soil contamination
- Traffic and transport
- Addressing and planning for climate change

The SEA ER of the SDCC Development Plan 2016-2022 identifies traffic emissions as the main area of concern in relation to air pollution; and this is also reflected in the Noise Mapping undertaken as part of the Dublin Agglomeration Action Plan that indicated traffic congestion and movement were the issues of concern regarding noise pollution.
As the noise maps show, much of the Variation area is subject to ongoing high sound levels and these can have long term negative effects on populations and human health.

4.3 Biodiversity, Flora and Fauna

Much of the Variation lands can be classified as Built Land and Artificial Surfaces. In turn, this makes the areas of open space and water courses potentially important as green corridors and stepping stones for biodiversity.

4.3.1 Designated Nature Conservation Areas

The lands occurring within the Variation area are not subject to any statutory conservation designations. Table 5 lists all designated nature conservation areas (European Sites) occurring within a 15 km radius of the Variation lands. These designated areas are illustrated in the following figures. The nearest conservation area to the Variation lands is the Glensamole Valley SAC and pNHA approximately 8km south of Ballymount as the crow flies.

Figure 6 Special Area of Conservation sites within 15km of Variation Lands

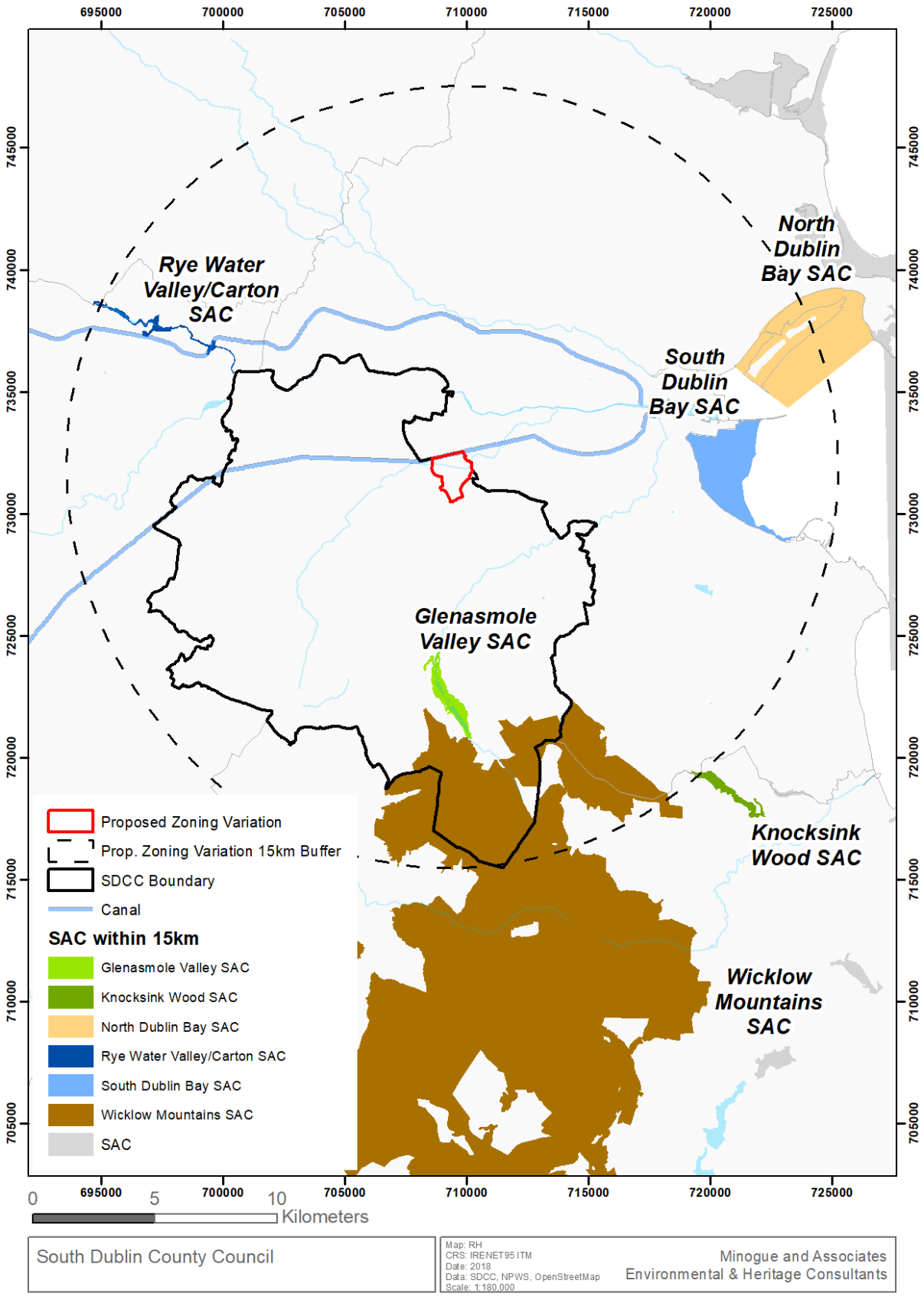


Figure 7 Special Protection Area sites within 15km of the variation lands

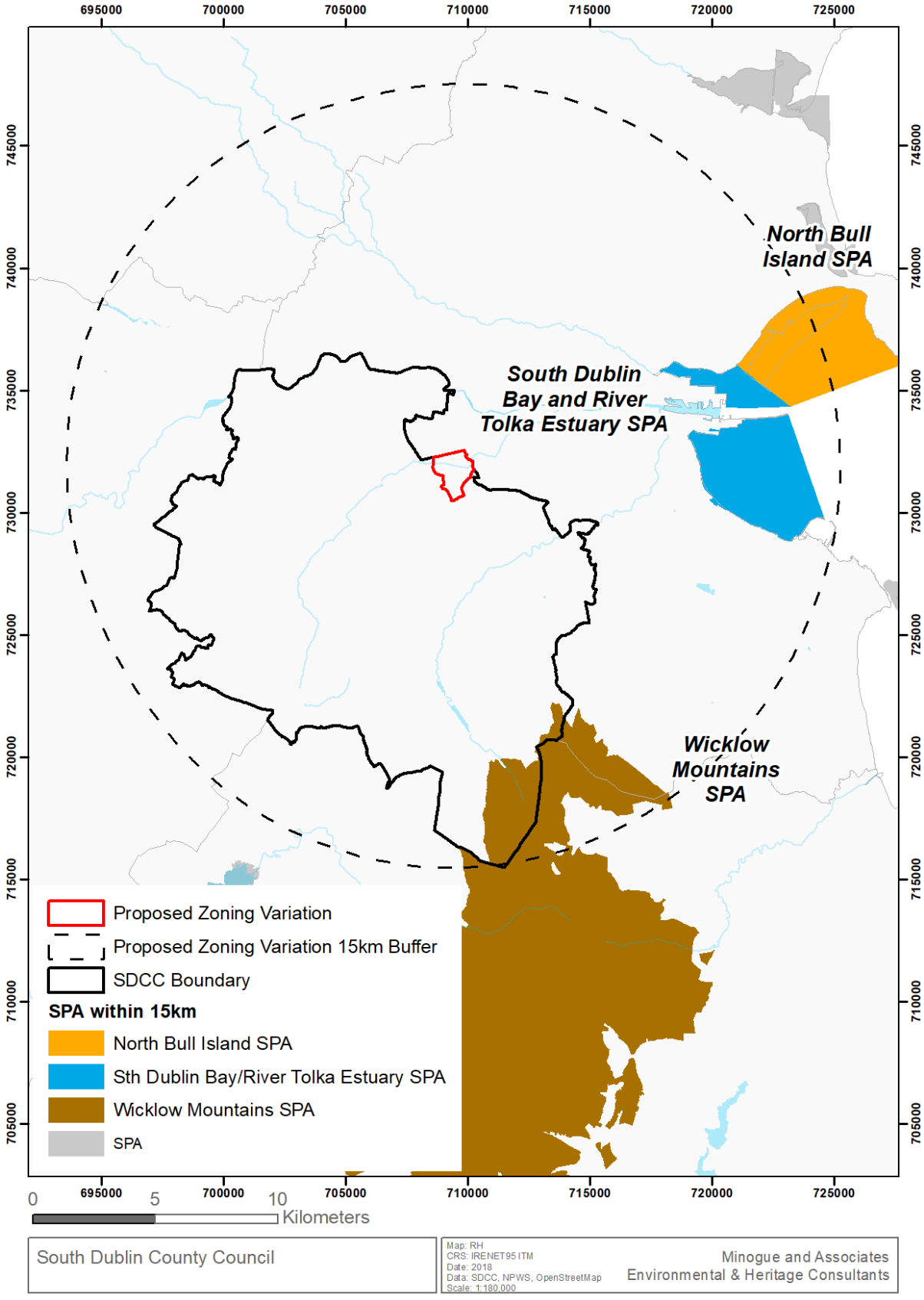


Table 5: Designated Nature Conservation Areas within 15km of the proposed site

Site Code	Name
206	North Dublin Bay SAC & pNHA
210	South Dublin Bay SAC
397	Red Bog, Kildare SAC & pNHA
725	Knocksink Wood SAC
1209	Glenasmole Valley SAC
1398	Rye Water Valley/Carton SAC & pNHA
2122	Wicklow Mountains SAC &SPA
2122	Wicklow Mountains SAC

PROPOSED NATURAL HERITAGE AREAS.

Under the Wildlife Amendment Act (2000), Natural Heritage Areas are legally protected from damage from the date they are formally proposed for designation. The aim of the NHA network is to conserve and protect nationally important plant and animal species and their habitats. They are also designated to conserve and protect nationally important landforms, geological or geomorphological features. Planning authorities are obliged by law to ensure that these sites are protected and conserved. NHAs and pNHAs, although not part of the European network, often provide an important supporting role to it. Therefore in order to protect the European network it may be important to protect the NHA/pNHA. Article 10 of the Habitats Directive together with the Habitats Regulations 2011; place a high degree of importance on these sites as features that connect European sites. The Figure below shows the NHAs and pNHAs within a 15km buffer of the Variation lands.

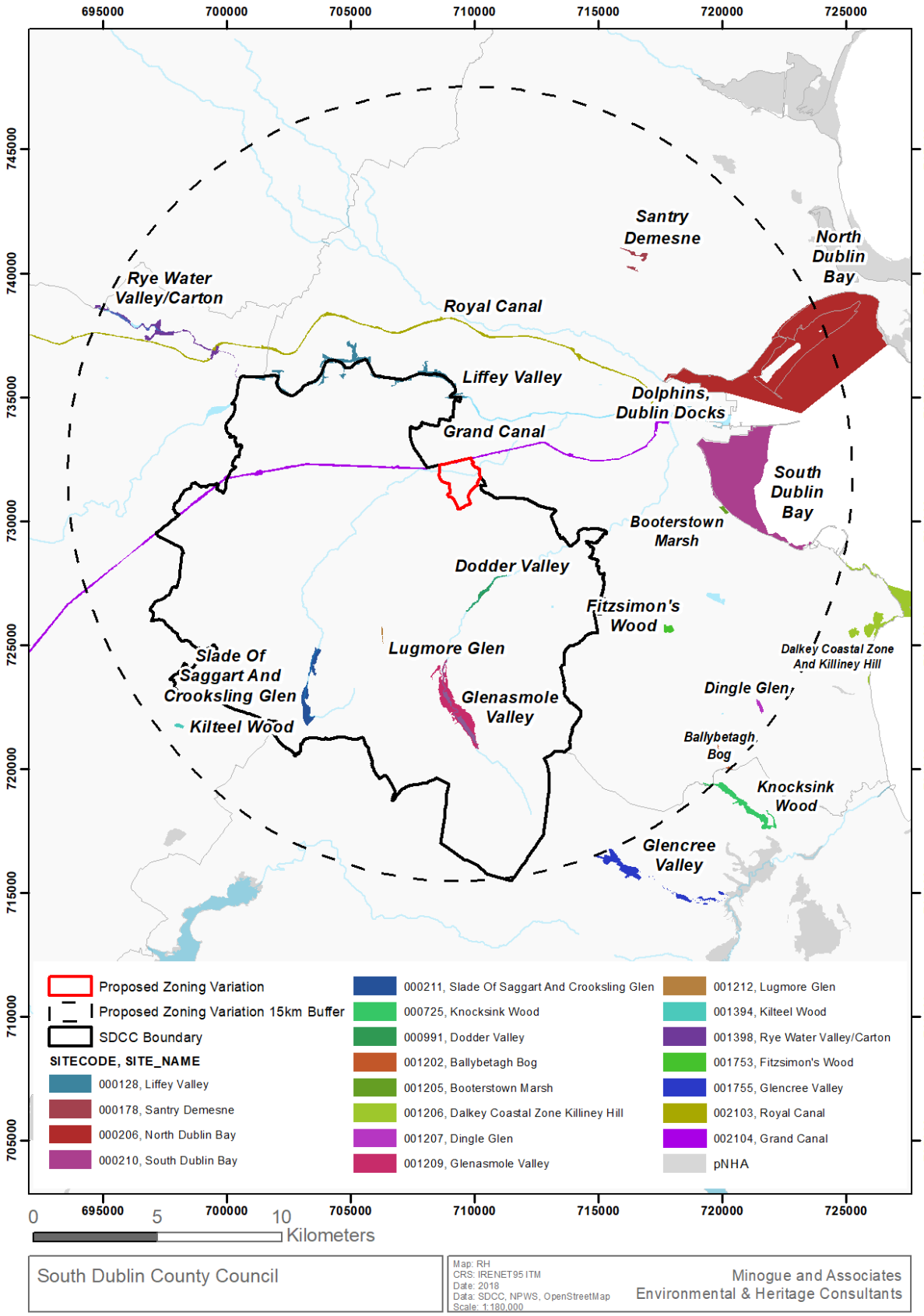


FIGURE 8 NATURAL HERITAGE AREAS AND PROPOSED NATURAL HERITAGE AREAS

4.3.2 The Grand Canal pNHA.

The Grand Canal forms the northern boundary of the Variation Lands and comprises a very significant ecological corridor at national level, traversing the country from Dublin Bay to the River Shannon on the Offaly/Galway border. Waterways Ireland commissioned a series of habitats surveys of the Grand Canal and the 2015 survey shows the southern towpath (northern border of the lands) as comprising narrow strips of amenity grassland and artificial surfaces.

4.3.3 Ecological Corridors and Stepping Stones

As natural habitats become more fragmented as a result of human activity, habitat patches and corridors within a landscape mosaic become increasingly important for species to allow movement between populations, Figure 10 below presents an overview of the landscape mosaic with stepping stones and corridors.

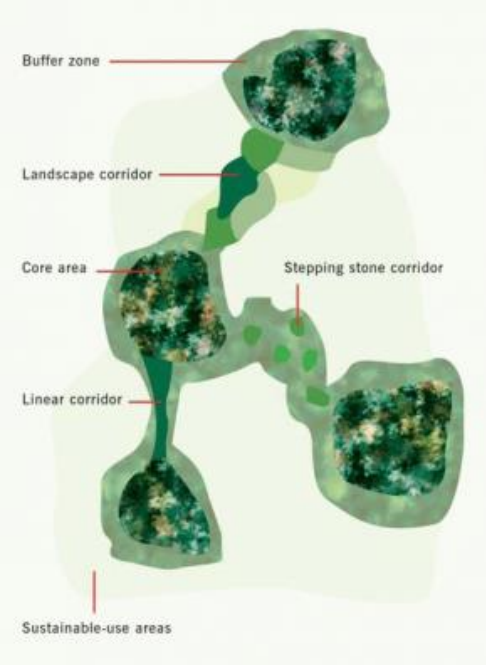


Figure 9 Landscape mosaic with stepping stones, corridors and core areas

(source: http://www.sicirec.org/definitions/corridors)

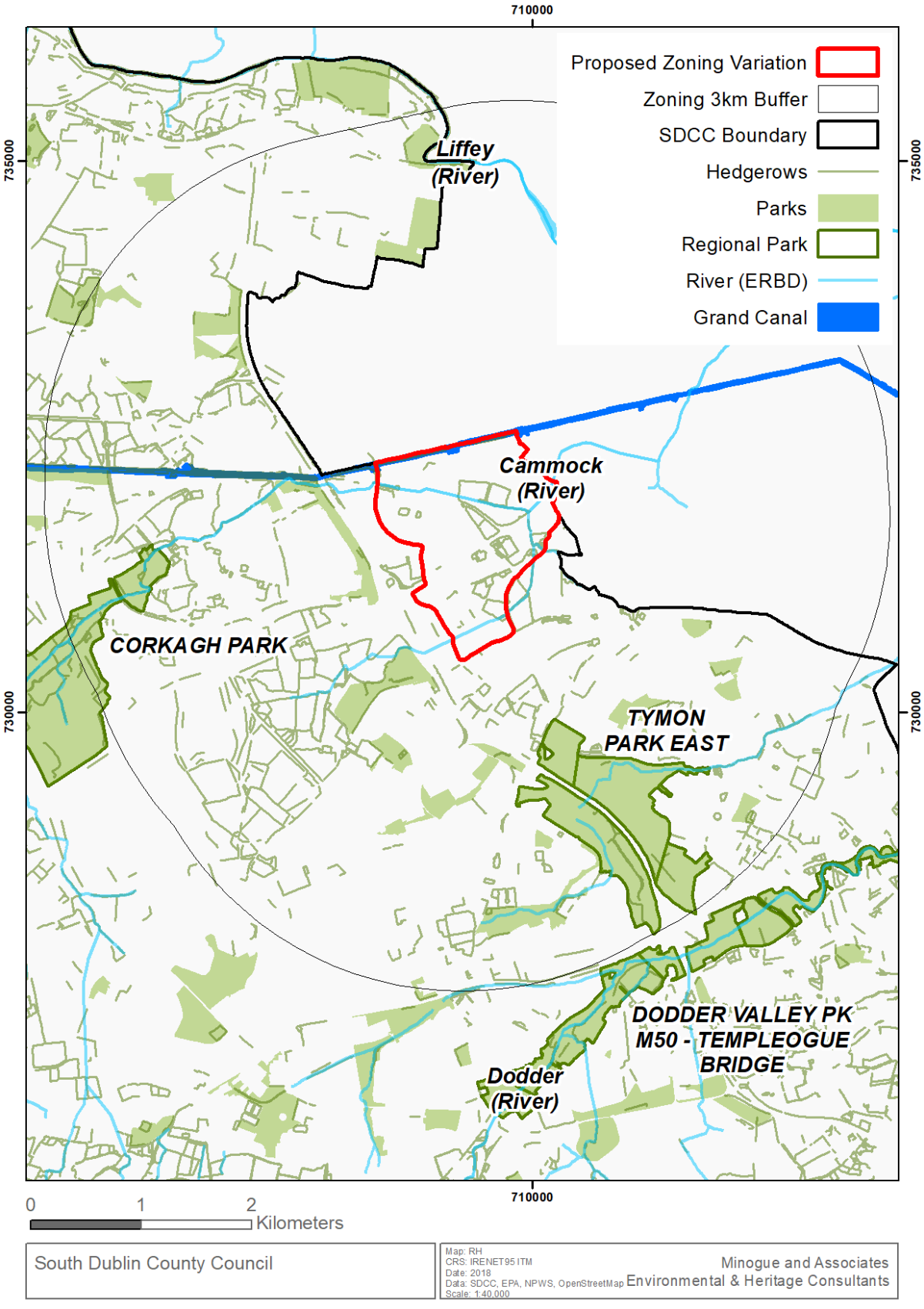
Within the plan area, ecological corridors can include in particular, roadside grassy verges and streams and other waterbodies. In the context of the Variation, the River Camac and Grand Canal currently represent the most significant ecological corridors.

The Camac is open for part of the variation lands and then is culverted further east.

Stepping stones relate to small pockets of habitat can be used by species to shelter, rest or food provision. They can play an important role in facilitating longer distanced dispersal as well as refuges for species to breed in[6]. These can provide important links between larger protected areas and corridors, in this context, this could include small areas of wet grassland, ponds, meadow grassland habitats, and treelines. Figure

[6] "Science for Environment Policy": European Commission DG Environment News Alert Service, edited by SCU, The University of the West of England, Bristol.

Figure 10 Ecological corridors existing in the plan area



4.3.4 Alien and Invasive Species

The control of invasive species in Ireland comes under the Wildlife (Amendment) Act 2000 where it states that '*Any person who— [...] plants or otherwise causes to grow in a wild state in any place in the State any species of flora, or the flowers, roots, seeds or spores of flora, ['refers only to exotic species thereof'][...] otherwise than under and in accordance with a licence granted in that behalf by the Minister shall be guilty of an offence*.'

Under the European legislation, the Birds and Natural Habitats Regulations 2011 (SI 477 of 2011) , Section 49(2) prohibit the introduction and dispersal of species listed in the Third Schedule (including Japanese Knotweed) whereby "any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow [….] shall be guilty of an offence."

The table below shows identified invasive species from Biodiversity Ireland database. Note some of these are considered greater risk than others, and the potential for water corridors such as the Camac or Grand Canal to be vectors of the dispersal of these species is important; as well as accidental transfer or introduction arising from construction activities.

TABLE 6 RECORDED INVASIVE SPECIES IN THE VARIATION LANDS

Species Group	Name
bird	Greylag Goose (Anser anser)
flowering plant	Butterfly-bush (Buddleja davidii)
flowering plant	Canadian Waterweed (Elodea canadensis)
flowering plant	Japanese Knotweed (Fallopia japonica)
flowering plant	Nuttall's Waterweed (Elodea nuttallii)
flowering plant	Sycamore (Acer pseudoplatanus)
mollusc	Common Garden Snail (Cornu aspersum)
mollusc	Keeled Slug (Tandonia sowerbyi)
mollusc	Wrinkled Snail (Candidula intersecta)
terrestrial mammal	Brown Rat (Rattus norvegicus)
terrestrial mammal	Eastern Grey Squirrel (Sciurus carolinensis)
terrestrial mammal	European Rabbit (Oryctolagus cuniculus)

terrestrial mammal	Fallow Deer (Dama dama)
terrestrial mammal	House Mouse (Mus musculus)
terrestrial mammal	Sika Deer (Cervus nippon)

4.3.5 Existing Issues: Biodiversity, Flora and Fauna

Key issues relate to the following:

- Enhancing existing ecological resources such as the Grand Canal and River Camac
- Promoting and facilitating ecological connectivity through consideration of green infrastructure and blue infrastructure
- Considering open space provision
- Enhancing ecological considerations within the urban realm
- Addressing and controlling invasive species

4.4 Water Resources[7] including Flood Risk

Water resources and their quality have a clear interaction and impacts with other environmental parameters, therefore its protection and enhancement is of particular importance.

4.4.1 Water Framework Directive

The Water Framework Directive (WFD) is a key initiative aimed at improving water quality throughout the EU. It applies to rivers, lakes, groundwater, estuarine and coastal waters. The Directive requires an integrated approach to managing water quality on a river basin basis; with the aim of maintaining and improving water quality. The WFD identifies River Basin Districts as the key management units with clearly defined water bodies forming the basis for assessment reporting and management. The first cycle of RBD management plans were from 2009 to 2015. For the second cycle the Eastern, South Eastern, South Western, Western and Shannon River Basin Districts have been merged to form one national River Basin District.

The most recent data for the new plans being prepared is from the catchments.ie website. A catchment is an area where water is collected by the natural landscape and flows from source through river, lakes and groundwater to the sea. The Variation lands are situated within the Liffey and Dublin Bay Catchment (code: 09). The area of this catchment covers 1,624,42km^2 and supports a total population density of 777 people per km^2.

4.4.2 Surface Water

The subject lands are located within the Liffey and Dublin Bay catchment and the Dodder sub-catchment (code SC 010). The Camac River which flows through the Variation lands. is the second largest of three main tributaries of the River Liffey, the catchment is circa 40km^2 prior to the confluence with the Kingswood stream and it flows from the foothills of the Wicklow Mountains into the Liffey via a large culvert at Heuston Station.

[7] From Catchments.ie

The catchment is heavily urbanised in its lower reaches, particularly through the study area where it passes in an easterly direction through numerous culverts. There are also notable tributaries that enter the system close to the Variation lands (the Kilnamanagh & Kingswood Streams) as well as a significant urban surface water network draining into the watercourse. According to the EPA's online Map Viewer, the Camac River (Code 040 www.catchments.ie) is classified as poor quality currently (WFD Data 2010-2015). Surface water status is classified under the WFD from 'high' to 'bad' status. In measuring this status both ecological and chemical parameters are measured and the overall status is determined by the lower threshold achieved for both ecological and chemical parameters

- 2010-2015 Surface Water: Poor Ecological Status.
- 2010-2015 Surface Water: Chemical status: Failing to achieve good status.
- The Grand Canal at the northern boundary of the Variation lands is classified as an artificial and modified waterbody under the WFD.

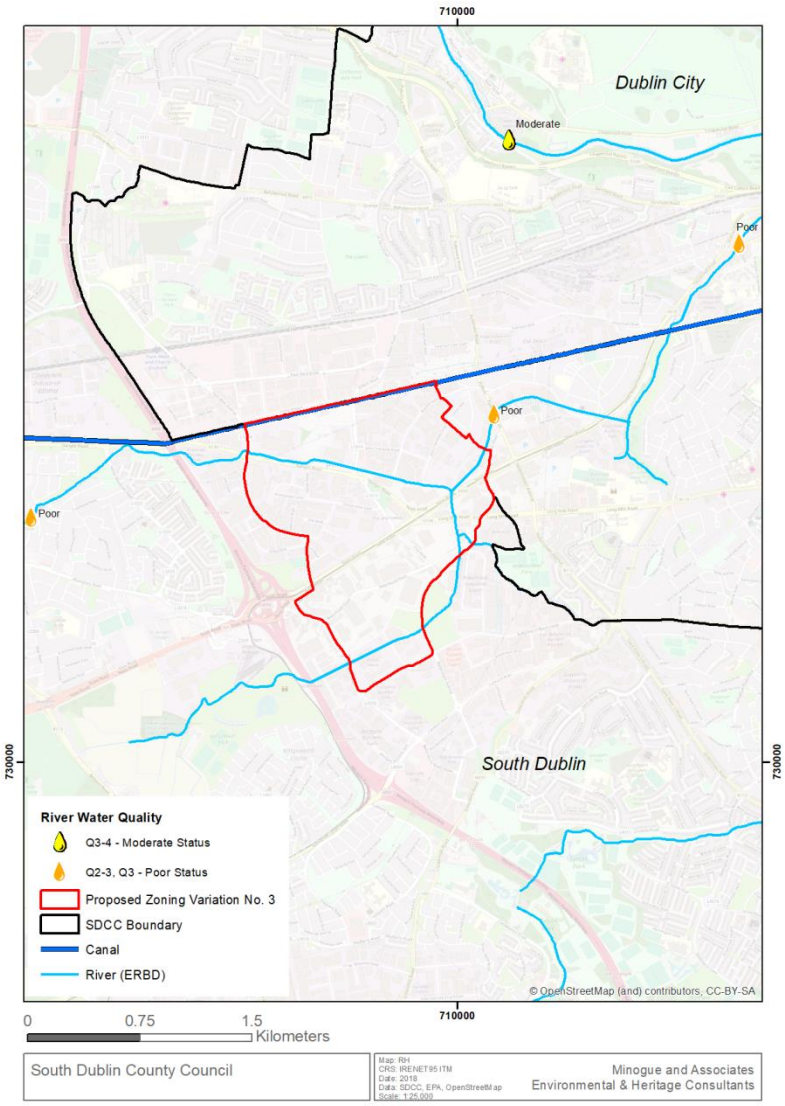


FIGURE 11 SURFACE WATER STATUS

4.4.3 GROUNDWATER:

Groundwater is a further significant resource and refers to water stored underground in saturated rock, sand, gravel, and soil. Surface and groundwater functions are closely related and form part of the hydrological cycle. The protection of groundwater from land uses is a critical consideration and groundwater vulnerability is becoming an important management tool. The entire island of Ireland has been designated as a Protected Area for Groundwater under the WFD. Groundwater is important as a drinking water supply as well as the supply to surface waters. In addition, groundwater supplies surface waters. Groundwater is exposed to higher concentrations of pollutants that are retained in the layers of rock and soil. The exposure to pollutants lasts much longer as groundwater moves at a slower pace through the aquifer. The quality of our drinking water supply, fisheries and terrestrial based habitats is intrinsically linked with groundwater quality. The Geological Survey of Ireland (GSI) aquifer categories are based on their vulnerability to pollution, i.e. the ease at which it can enter the subsurface layers. The classification of extreme or high vulnerability means that the groundwater in these areas is very vulnerable to contamination due to hydrogeological and soil factors.

The Geological Survey of Ireland's Groundwater Vulnerability Mapping shows the groundwater vulnerability for the area of the Variation within a catchment where groundwater vulnerability is considered high to extreme for much of the Variation Area (Figure 12); with an area in the northern part of the plan area identified as being of moderate vulnerability. The groundwater quality of the area is classified as good.

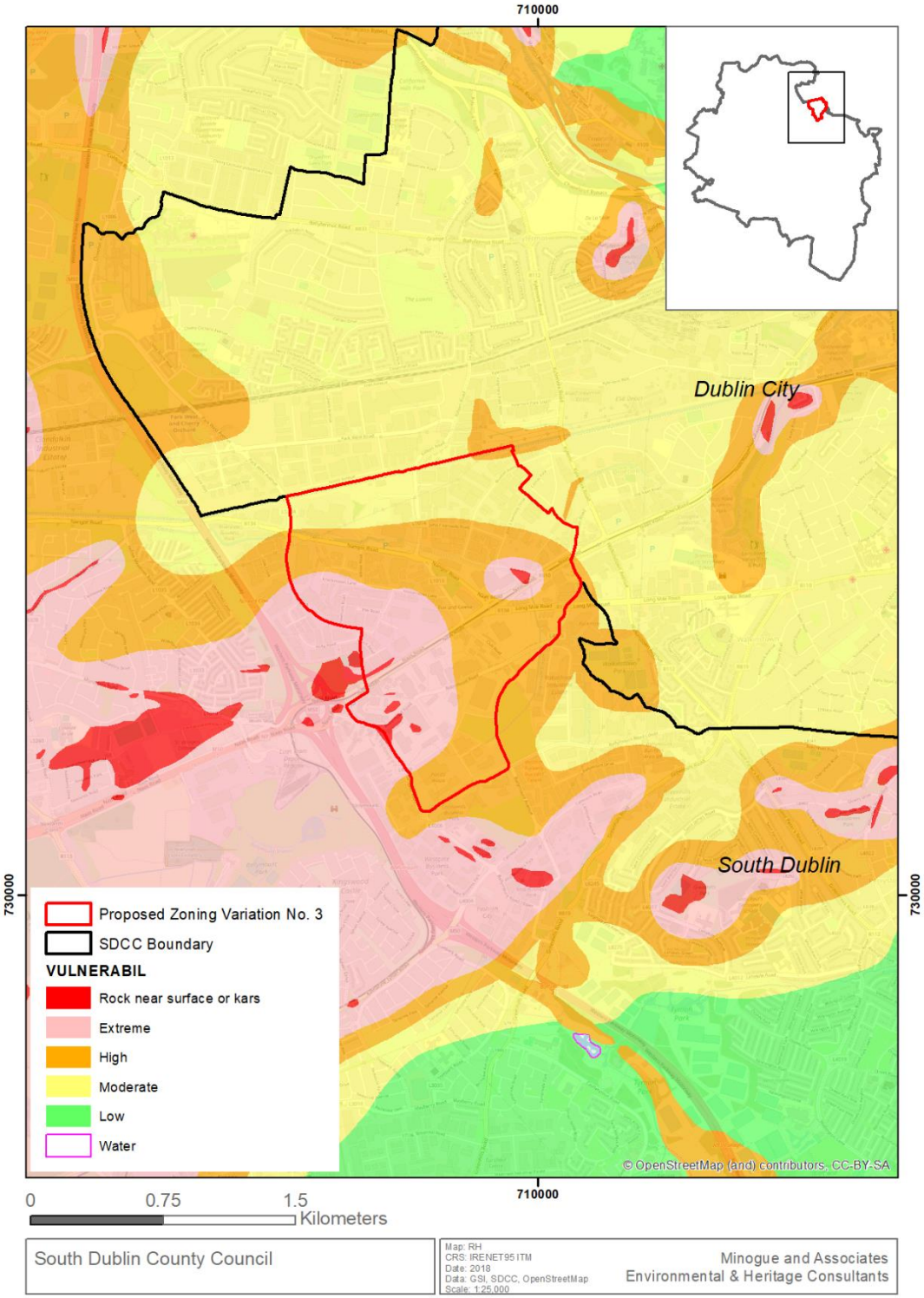


Figure 12 Groundwater vulnerability

The Variation lands are located within the Dublin Urban Waterbody under the Water Framework Directive and overall status of the Groundwater is good; the main risks are from urban derived pressures.

4.4.4 Register of Protected Areas (RPA)

Protected areas are areas that have been designated as needing special protection because of their particular importance for use as bathing waters, drinking water supply, growing and harvesting of shellfish, conserving sensitive habitats and species or because they are particularly affected by eutrophication due to excessive inputs of phosphorus and/or nitrogen. The River Liffey and Estuary are listed on the RPA for Nutrient Sensitive Waters. Nutrient Sensitive Areas comprise nitrate vulnerable zones designated under the Nitrates Directive (91/676/EEC) and areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC).

4.4.5 Flood Risk

The Planning System and Flood Risk Management, Guidelines for Planning Authorities, 2009, issued by the DoEHLG and undertaken in conjunction with the OPW, requires Planning Authorities to prepare a Strategic Flood Risk Assessment (SFRA). The primary purpose of the SFRA is to determine flood risk within a particular geographical area. It should be noted the SFRA is an ever evolving document, which is to be reviewed and updated on a regular basis in the light of emerging information, flood data and an improved understanding of flood risk. Section 4.20 of the above Guidelines states:

'*Flood risk identification (Stage 1) to assess whether full flood risk assessment is required, should ideally be carried out in a manner that is integrated with the SEA process rather than constituting an additional and separate process. Any subsequent stages of flood risk assessment should also be carried out in a way that is integrated with the SEA process*.'

A Strategic Flood Risk Assessment (SFRA)[8] was prepared for the Variation in accordance with the requirements of the DoEHLG and OPW Planning Guidelines, *The Planning System and Flood Risk Management*. To ensure that flood risk is integrated into the Variation process, the main requirements of SFRA are to:

- Produce Flood Mapping using best available data.
- Prepare a Stage 1 & 2 - Flood Risk Assessment of the area (as defined in the OPW/DoEHLG Guidelines) in relation to the change from EE to REGEN land use zoning.
- Provide guidance on the future scope/objectives for the successful delivery of a masterplan for the REGEN lands
- Prepare a Flood Risk Management Plan summarising the above detail that is in compliance with OPW/DoEHLG – "The Planning System and Flood Risk Management –Guidelines for Planning Authorities (OPW/DoEHLG, 2009)" and Circular PL02/2014 (August 2014).
- Advise, assess and report on any submissions received as part of both the preparation and the public consultation stage of the plan, as they relate to flood risk.

It is important to note at the outset that the SFRA does not set out to make adjustments to the REGEN zoning objective in relation to conflicts with Flood Zone A or B. The purpose of the SFRA is to identify the key areas at risk and outline the requirements for the next phases of work on the masterplan.

STRATEGIC FLOOD RISK ASSESSMENT (SFRA) FOR LANDS AT NAAS ROAD/BALLYMOUNT. JBA Consulting 2018

The SFRA recommends a number of objectives to address, manage flood risk and integrate blue infrastructure consideration to the next phase of masterplan preparation.

No.	Objective
1	Promote and support the Camac Flood Protection Plan, integrating the modelling and analysis required for this plan as part of the masterplanning phases.
2	Undertake further detailed hydraulic modelling that integrates the surface water drainage network and allows the development of fluvial and surface water management measures for the regeneration lands, that includes the consideration of residual risk and climate change.
3	Manage the future development of the study area in accordance with the core principles of the Planning System and Flood Risk Management Guidelines.
4	Ensure that surface water management is integrated into the regeneration process through the development of a Surface Water Strategy that is based on current best practise guidance (GDSDS and CIRIA).
5	Develop specific guidance for the management of fluvial and surface water risk at Development Management Stage as part of the masterplanning for the Naas Road / Ballymount area.

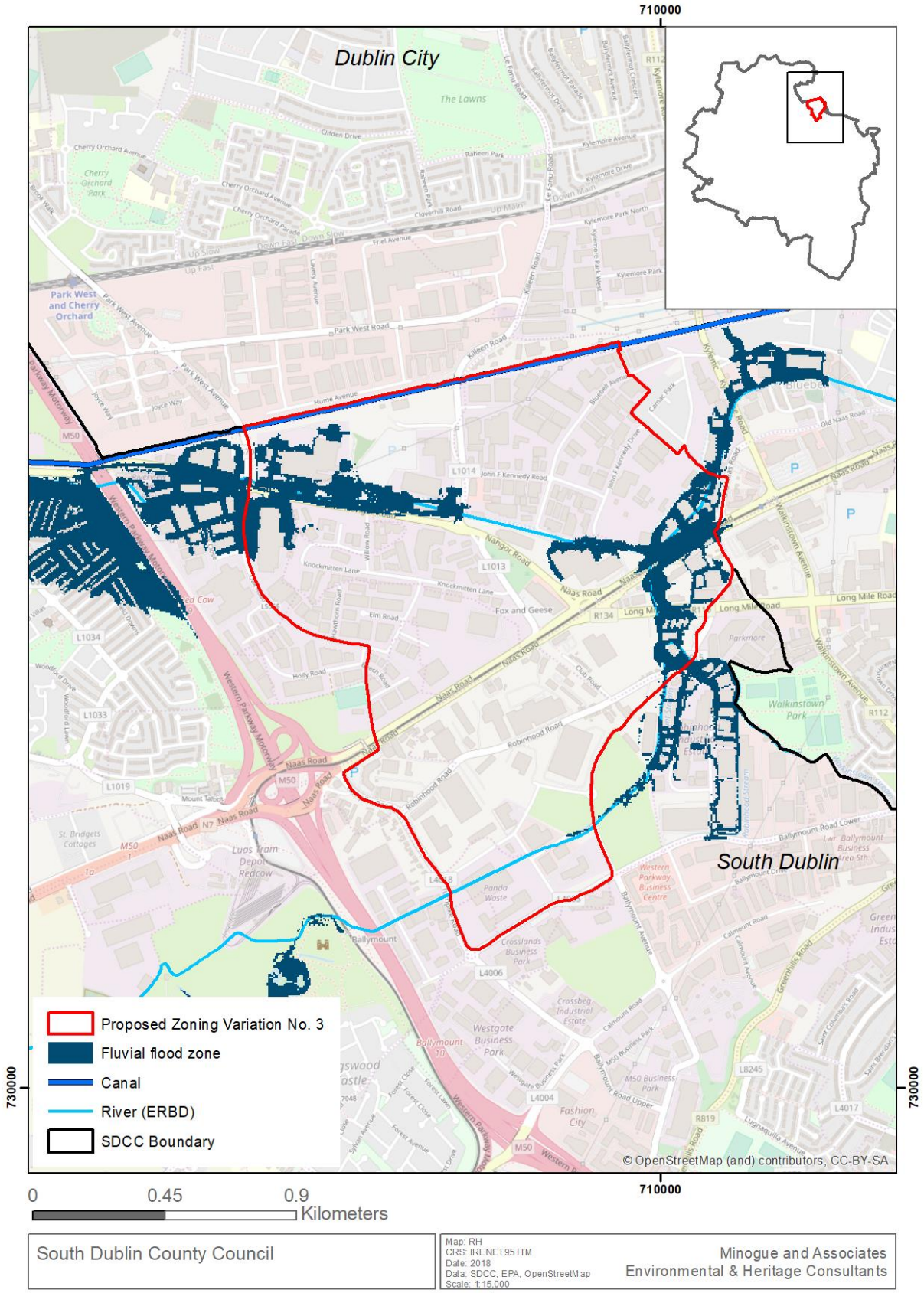


Figure 13 Flood risk assessment for variation lands

4.4.6 Key issues: Water Resources

- Maintaining and enhancing water quality-both surface water and groundwater
- Ensuring no further deterioration in surface water
- Avoiding the spread of alien and invasive species
- Ensuring flood risk is fully considered and embedded in the Variation.
- Opportunities to integrate blue infrastructure measures through flood risk management

Ensuring that water quality is maintained and enhanced is particularly important. Groundwater in South Dublin currently meets the standards of the WFD; however, it is noted in the Greater Dublin Strategic Drainage Study (GDSDS) that there is a likely possibility of the groundwater in the urbanised northern section of the County being at risk from diffuse sources including inadequate urban sewerage systems and point sources including some contaminated land. This section of the County is classified as being 'at significant risk' of failing to achieve the WFDs objective of 'Good' water status by 2027.

4.5 Soil and Geology

4.5.1 Geology

The northern half of South Dublin including the Variation area, is formed of Carboniferous Limestone rocks deposited in a deep marine basin. These rocks were formed around 340 million years ago and are faulted against the older rocks along the base of the Dublin Mountains. The limestone deposited in this basin is a muddy limestone with few fossils, as it was generally a deeper water environment. This limestone underlies most of Dublin and is known as Calp limestone or 'the Calp'. Over the past 2 million years the Ice Age had a big effect on the landscape, eroding the mountains, depositing glacial gravels in places and then rivers such as the Dodder and Liffey have been active in recent times, modifying the sediments at surface.

There are a number of Geological Heritage Sites close to the Variation area. The Table below provides a brief description of those sites closest to the Variation boundary.

Table 7 Geological Heritage Sites closest to Variation boundary.

Name	Brief Description
Dodder Terraces	Flat-topped elevated terraces that formed river floodplain along the Dodder River during the last deglaciation
Greenhills Esker	Large ridge comprising sand and gravel
Belgard Quarry	Large working quarry - Carboniferous limestone

4.5.2 Soil

Soil can be considered as a non-renewable natural resource because it develops over very long timescales. It is an extremely complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance. Soils in any area are the result of the interaction of various factors, such as parent material, climate, vegetation and human action.

There is no overarching soil legislation in place currently, however the 7th Environment Action Programme (EAP) recognises the challenge of soil degradation and provides by 2020 that land be managed sustainably with soil adequately protected.

Whilst much of the Variation lands are classified as urban according to the Teagasc soil map, reflecting the built up character of much of the Variation, the remaining soils are identified in the luvisol group; these are soils with clay enriched subsoil and classified as the Elton Subseries of soils, defined by fine loamy drift with limestones.

Given the historical landuse within this area there may be contaminated soil present.

4.5.3 Existing issues: Geology and Soil

- Maintaining and enhancing soil function and its carbon storage role where possible.
- Addressing extent of soil sealing, increased surface run off and poor permeability of lands in the Variation area
- Retention and creation of areas of greenfield in terms of open space, green infrastructure, permeability and biodiversity considerations.
- Addressing potential historical landuses around Ballymount and potential soil contamination

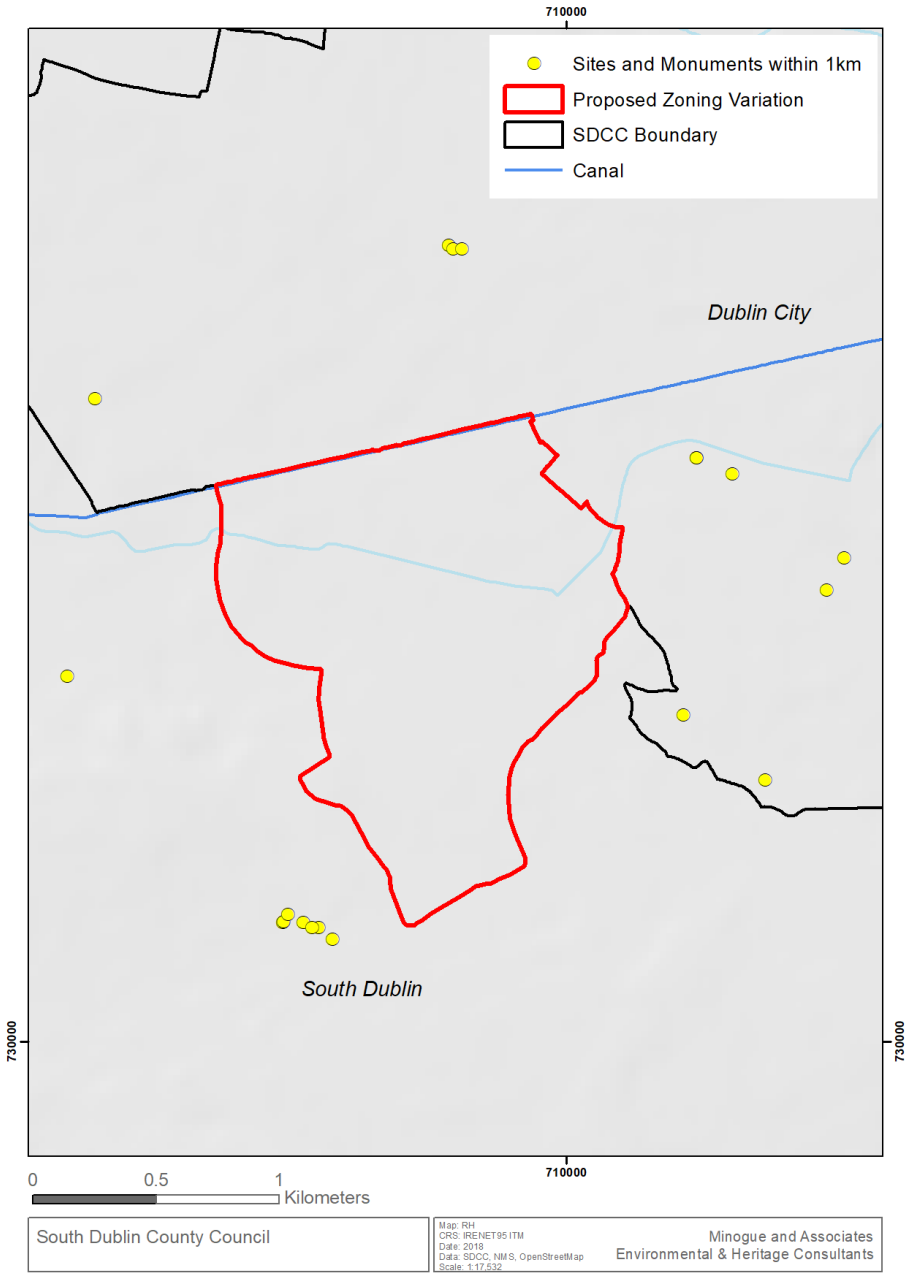
Because of the complex interrelationship between water, air and soil, declining soil quality can contribute to negative or declining water or air quality and function.

4.6 Cultural Heritage

4.6.1 Archaeology

Archaeological heritage is defined as including structures, places, caves, sites, features or other objects, whether on land, underwater or in inter-tidal zones. All archaeological structures, constructions, groups of buildings, development sites, all recorded monuments as well as their contexts, and moveable objects, situated both on land and underwater are part of the Archaeological Heritage. Therefore the archaeological heritage of the area is not confined to the archaeological sites within the Record of Monuments and Places. It also includes any archaeological sites that may not have been recorded yet, as well as archaeology beneath the ground surface, or underwater as well as the context of any such site discovered.

As the Figure below shows there are no recorded monuments within the Variation lands.



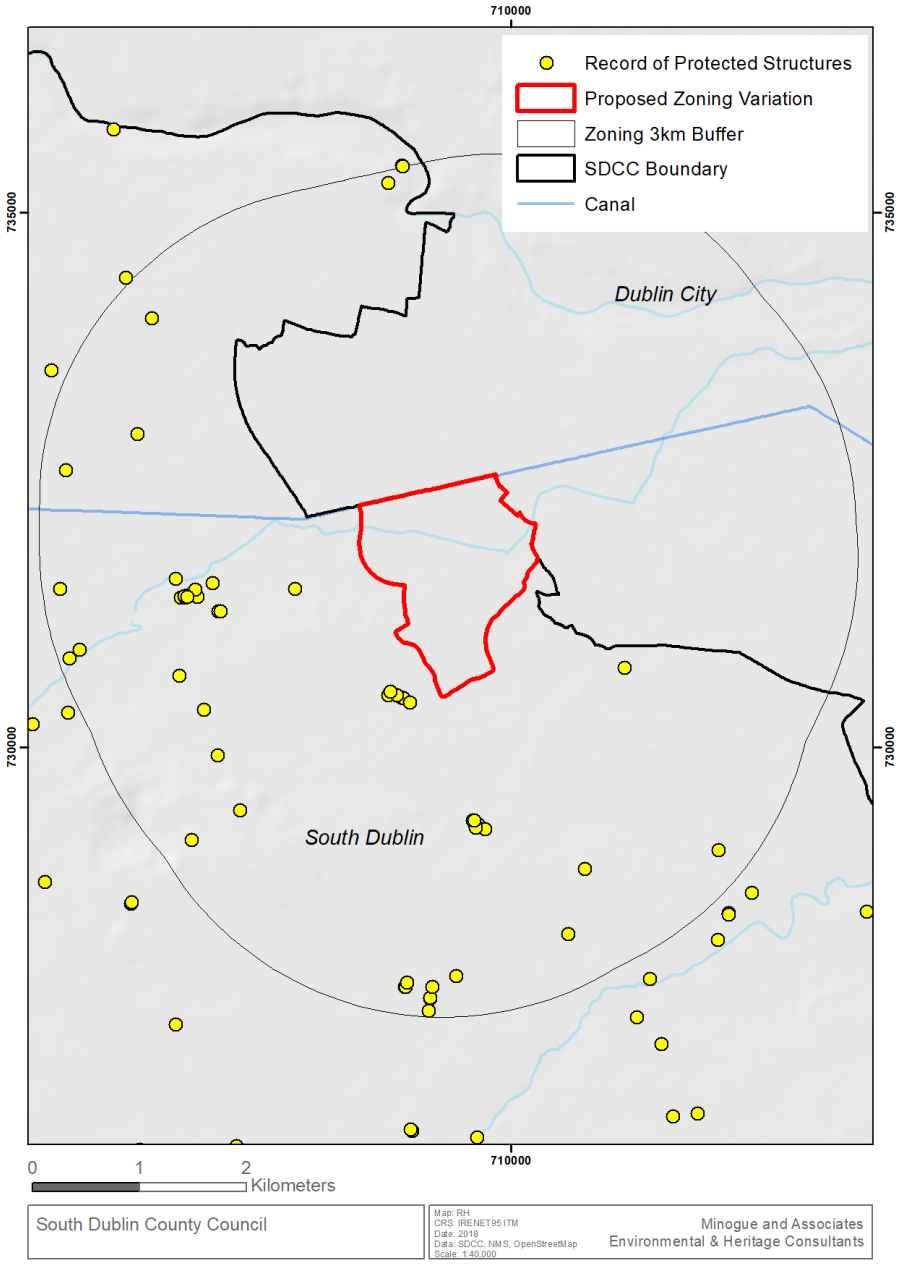
4.6.2 Built Heritage

Part IV of the Planning and Development Act 2000 (as amended) defines the term "architectural heritage" as structures and buildings together with their settings and attendant grounds, fixtures and fittings, groups of structures and buildings and sites, which are of architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, and "where a structure is protected, the protection includes the structure, its interiors and the land within its curtilage (including their interiors) and all fixtures and features which form part of the interior or exterior of all these structures".

There are no Protected Structures in the Variation lands.

An Architectural Conservation Area (ACA) is a place, area, group of structures or townscape that is of special, architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures.

Figure 14 Record of protected structures within 3km



4.6.3 Existing Issues: Cultural Heritage

- Potential for additional archaeological resources
- Enhancing and linking cultural heritage of the area
- Use of heritage design statements to address streetscape, materials and features in new developments.

4.7 LANDSCAPE

The Landscape Character Assessment of South Dublin identified the Variation area as LCA Suburban South Dublin with the following key characteristics:

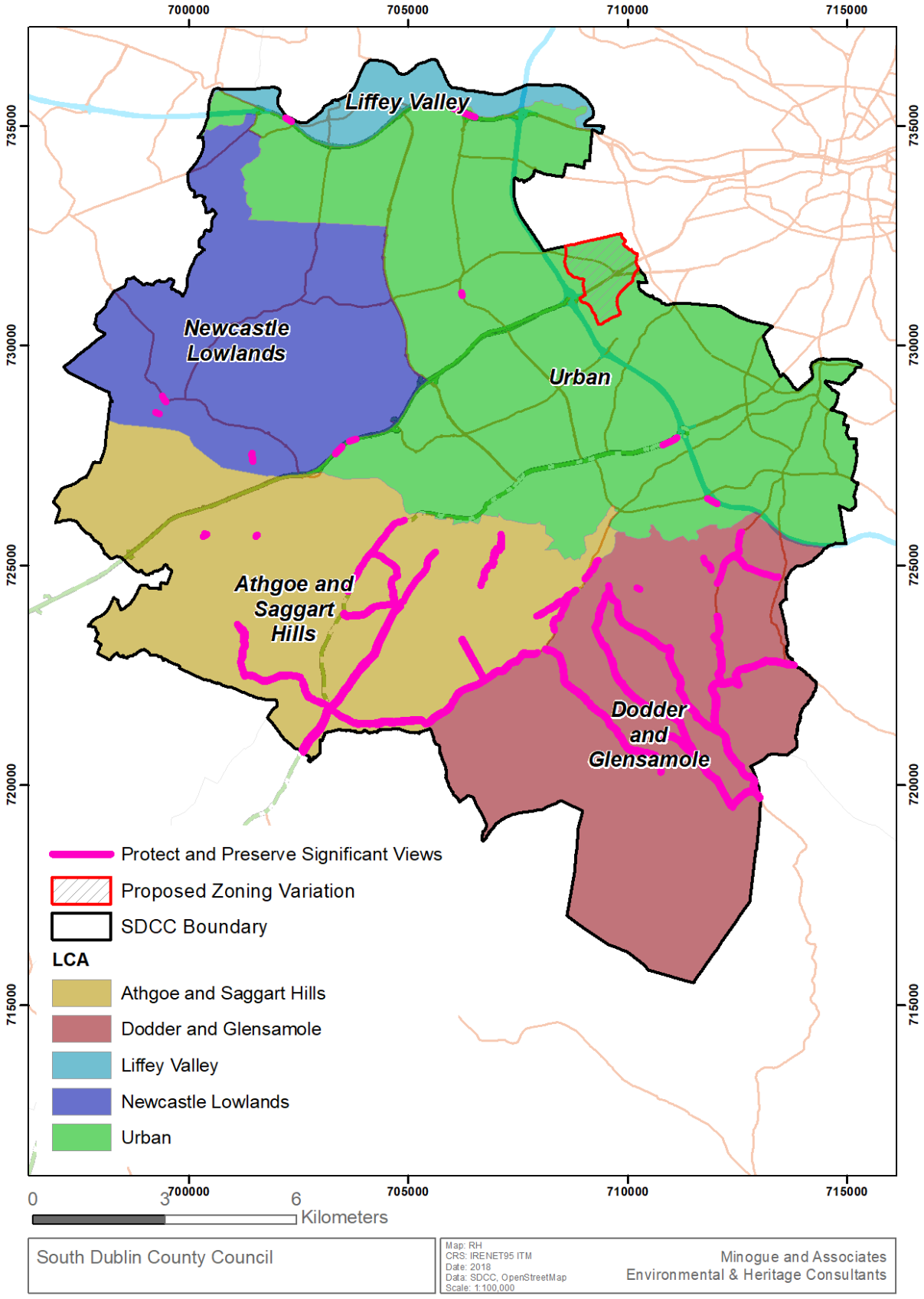
- Built – up urban area with extensive housing estates and industrial /commercial parks. Variety of house styles and layouts dating from the late 19th century to late 20th century
- Settlements of Rathfarnham, Templeogue and Clondalkin with important historical legacy and remnants
- Major traffic corridors with M50 traversing north- south through the area, and LUAS line travelling north from Tallaght, parallel to the M50, to city centre
- Corridors of natural and semi natural vegetation, notably along the River Dodder (a linear park) and the Camac River
- Grass open spaces in gardens, industrial parks, golf courses, school playing fields, and miscellaneous spaces in housing areas
- Street trees planting
- Recreational facilities – public parks and golf courses - provide amenities and ecological resources

The area extends east from Tallaght/Oldbawn to Rathfarnham, and north/ north- west along the county boundary to Clondalkin.

The Variation lands are dominated by transport links and recent and historical enterprise and industrial activities.

The figure below shows the LCA and Variation lands, along with protected views in the South Dublin CDP 2016-2022.

Figure 15 Landscape character areas and protected views



4.7.1 Existing Issues: Landscape

The Variation lands reflect historical landuse and are somewhat degraded in landscape terms. The dominance of transport links detracts further from the area. There is no public realm and open space is largely absent.

4.8 Air quality and Climate

4.8.1 Air Quality

The Air Quality Index for health (EPA) provides air quality information with health advice for both the general public and people sensitive to air pollution. The index is displayed on a colour-coded map, updated hourly. The index is based on information from monitoring instruments at representative locations in each region. South Dublin is located within the 'Dublin City' region. The closest Air Quality live monitoring site is on the Old Bawn Road (west of Variation lands). As of 13th October 2018 air quality at this location is good.

Further information on Air Quality and Human Health is provided in Section 4.2.4.

4.8.2 Climate Change

Adaption to climate change will be considered through the proposed variation process and will be guided by the Local Authority Adaptation Strategy Development Guidelines (EPA, 2016), Integrating Climate Change into SEA (EPA 2015) and the recent Sectoral Planning Guidelines for Climate Change Adaptation. The context for addressing climate change and energy issues in South Dublin County, are set within a hierarchy of EU and National Legislation and Policy. At a European level these directives include, the EU Climate and Energy Package 2008, EU Renewables Directive 2009/28/EC and EU Energy Efficiency Directive 2012/27/EU.

The EU Climate Change and Energy Package 2008 resulted in the 2020 EU wide '20-20-20' energy targets as follows:

- a 20% reduction in EU greenhouse gas emissions from 1990 levels; raising the share of EU energy consumption produced from renewable resources to 20%; and
- a 20% improvement in the EU's energy efficiency.

Under the EU Energy Efficiency Directive 2009/28/EC, each Member State has been assigned a legally binding individual renewable energy target. The Directive's target for Ireland is that 16% of the national gross final consumption of energy will comprise renewable energy sources by 2020, across the electricity, heat and transport sectors.

The Climate Change and Low Carbon Development Act 2015 now provides a statutory, overarching basis for climate change in Ireland. It provides structures to transition to a low carbon economy through the following:

- a national mitigation plan (to lower Ireland's level of greenhouse emissions);
- a national adaptation framework (to provide for responses to changes caused).

4.8.3 Key Issues : Air Quality and Climate

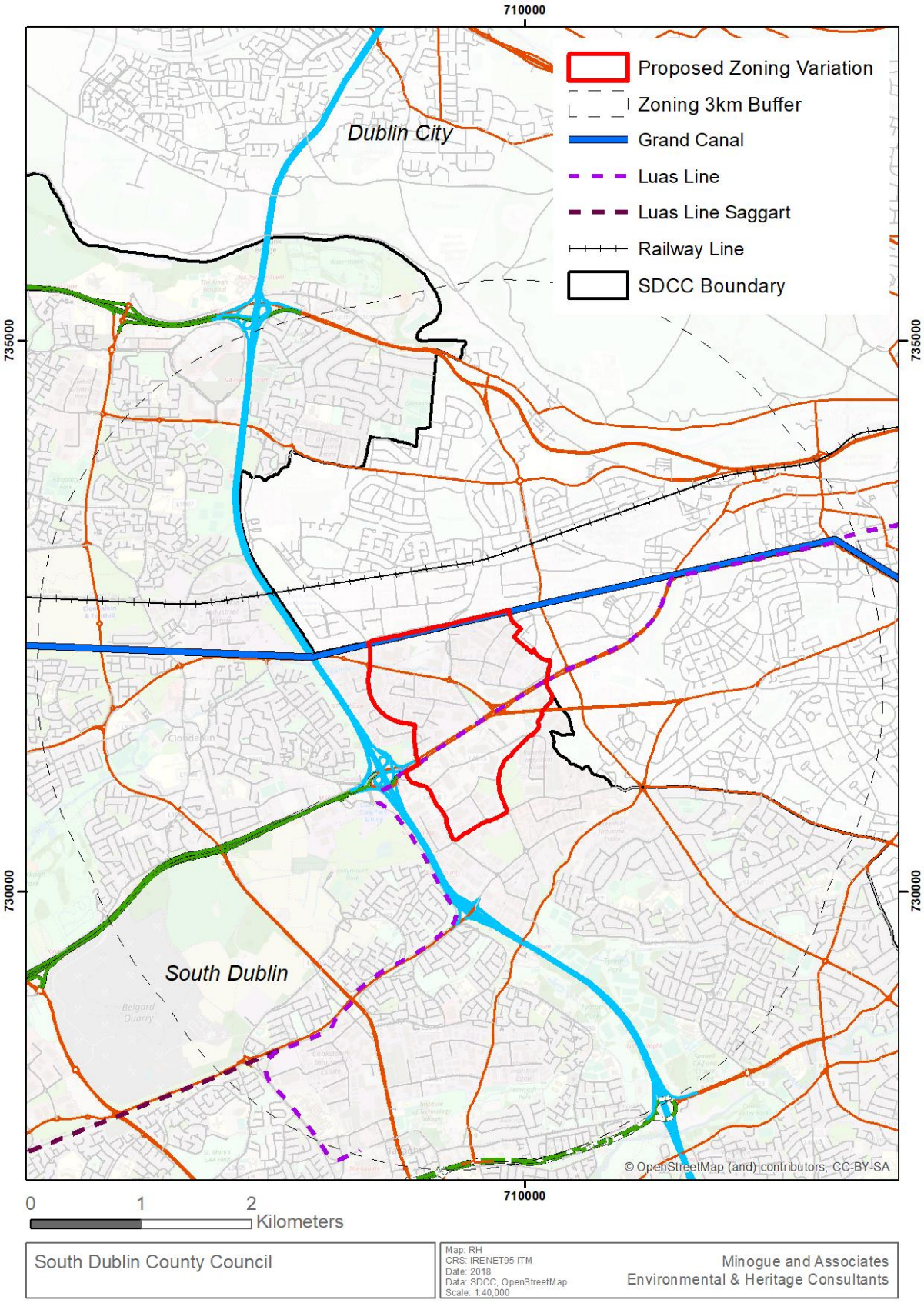
- Planning for and adapting to climate change.
- Sectoral policies can assist in this including transport and energy.
- Measures including carbon sequestration in existing soils and additional appropriate vegetation planting associated with green infrastructure and ecological corridors.
- Integration of blue infrastructure measures
- A modal shift from private transport to public transport
- Increasing energy efficiency in buildings

4.9 Material Assets

The EPA SEA Process Draft Checklist (2008) defines material assets as the critical infrastructure essential for the functioning of society such as: electricity generation and distribution, water supply, wastewater treatment, transportation, etc. An overview is provided below.

4.9.1 Transport

The Variation lands are bisected and bounded by roads dominated by private transport –the M50 to the west and the R110 (Naas Road) to the north. For public transport these include the Luas Red Line and public bus routes. The main Dublin-Kildare railway line runs north of the Variation Lands and a greenway is constructed along the southern towpath of the Grand Canal. The figure below presents the main transport links.


710000
735000
730000
Proposed Zoning Variation
Zoning 3km Buffer
Grand Canal
Luas Line
Luas Line Saggart
Railway Line
SDCC Boundary
Dublin City
South Dublin
© OpenStreetMap (and) contributors, CC-BY-SA
0
1
2
Kilometers
South Dublin County Council
Map: RH
CRS: IRENET95 ITM
Date: 2018
Data: SDCC, OpenStreetMap
Scale: 1:40,000
Minogue and Associates
Environmental & Heritage Consultants

4.9.2 Water Services

The treatment of wastewater is governed by the Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) transposed into Irish law by the Urban Waste Water Treatment Regulations 2001 (SI 254 of 2001) and the Urban Waste Water Treatment (Amendment) Regulations 2004 (SI 440 of 2004). The Directive aims to protect the environment from the adverse effects of the wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. The treatment of wastewater is relevant to the Water Framework Directive which requires all public bodies to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and bring polluted water bodies up to good status by 2027.

Wastewater

Almost all of the waste water in South Dublin is currently treated in Ringsend Wastewater Treatment Works which discharges into Dublin Bay. The treated waters are treated to a Tertiary standard, which is in compliance with the Urban Wastewater Treatment Directive. The quality of the discharged waters is within the requirements of the Urban Waste Water Treatment Directive.

The Greater Dublin Drainage Scheme will represent a significant wastewater infrastructure development for the Greater Dublin Regional area which will allow for an underground orbital sewer and two pumping stations, a new wastewater treatment plan at Clonshaugh (in Fingal County) and an outfall pipe located 6km out to sea from Baldoyle Bay. This project is subject to technical studies with a view to submitting a planning application accompanied by an Environmental Impact Statement (EIS) and Natura Impact Statement (NIS) in 2018.

Water

The Variation lands are located within the Greater Dublin Water Supply Area (GDWSA). The GDWSA is served by 5 major water treatment plants, Ballymore Eustace, Srowland, Leixlip, Ballyboden and Vartry, and a number of smaller sources. The total capacity of current sources and treatment plants is 598ML/day and based on proposed capital investment between 2017 and 2021 this water available from existing sites will increase to 656ML/day. It is anticipated that Dublin will need a new major water source by 2025, based on projection of growth in the Greater Dublin Area. Irish Water is currently planning the development of a new major water source for the East and Midlands which will include supplying projected demand in the GDA water supply area. Irish Water is also currently implementing a major water conservation programme in order to maximise the availability of treated water from current sources.

4.9.3 Waste Management and IPPC

The Regional Waste Management Plan 2015-2021 for the Eastern-Midlands Region encompasses the local authorities: Dublin City, Dún Laoghaire- Rathdown, Fingal, South Dublin, Kildare, Louth, Laois, Longford, Meath, Offaly, Westmeath and Wicklow. The regional plan provides the framework for waste management for the next six years and sets out a range of policies and actions in order to meet the specified mandatory and performance targets.

The Waste Framework Directive(WFD) has incorporated previous separate directives that addressed waste oils and hazardous waste. Principles in relation to waste prevention, recycling, waste processing and the polluter pays principle are included within this Directive.

In 2014 the EC adopted a communication promoting the Circular Economy. The circular economy considers waste as a resource which in turn can be recirculated into systems that focus on maintaining, repairing, reusing, refurbishing and recycling materials.

Denmark, Sweden, Japan, Scotland and the Netherlands[9] are currently the most advanced countries in terms of embedding the circular economy into their waste management system. Key elements of the communication include:

- Increase recycling and preparing for municipal waste to 70% by 2030
- Increase recycling and preparing for reuse of packaging waste to 80% by 2030
- An aspiration to eliminate landfill by 2030
- Member states to be responsible for ensuring the separate collection of biowaste by 2025.
- Reduction of food waste by at least 30% by 2025.

Waste is baled at the SDCC Baling Station at Ballymount and is disposed of in the Council's engineered landfill at Arthurstown, Co. Kildare. In addition, South Dublin County Council will be committing a certain amount of waste to the thermal treatment plant in Ringsend within Dublin City Councils administrative area, the construction and use of which forms a part of the waste management strategy for the Greater Dublin Area.

4.9.4 SEVESO SITES

Seveso sites are those which store significant amounts of dangerous or harmful substances and proximity to these sites could represent a potential impact to human health. They are regulated under the COMAH regulations (Control of Major Accident Hazards Involving Dangerous Substances, S.I. 476 of 2000). If there are planning applications for development occurring within a certain distance of the perimeter of Seveso sites, the Health and Safety Authority (HSA) provides appropriate advice to the planning authorities in respect of development within a distance of these sites. Three such sites are present in the Variation lands and are shown in the figure below.

[9] http://circulatenews.org/2015/04/an-introduction-to-circular-economy-in-scandinavia-sweden-and-denmark-leading-the-race-to-circularity/

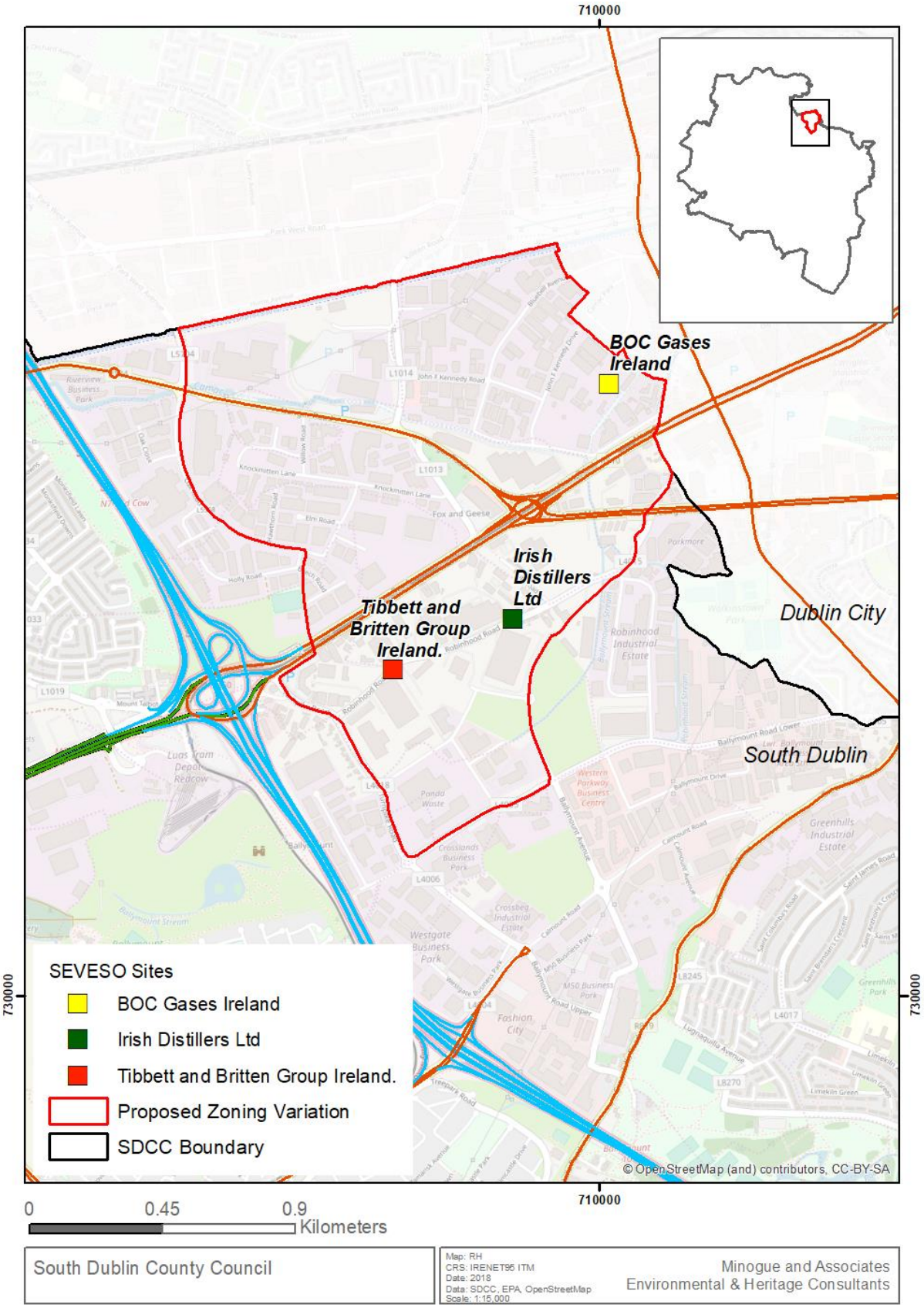


Figure 16 Seveso sites in variation lands

4.9.5 KEY ISSUES: MATERIAL ASSETS

Key issues to consider for material assets include:

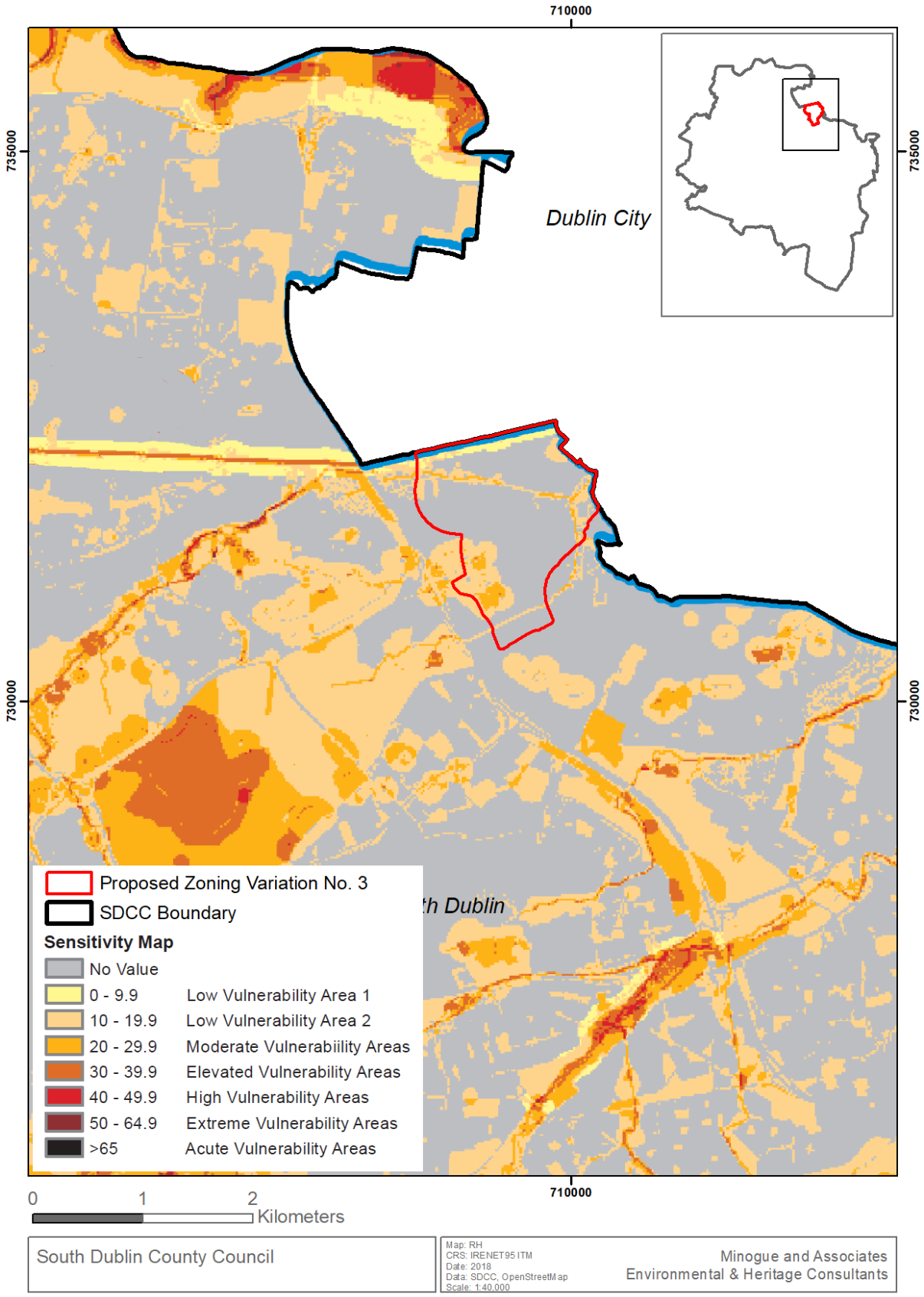
- Planning and ensuring sufficient water services and capacity for the Variation lands
- Encouraging sustainable use of resources
- Reducing reliance on private transport
- Workable alternatives to private transport and future public transport services and infrastructure in the area
- The future road layout in the areas
- Development standards affecting transport e.g. car parking
- Planning for appropriate buffers around Seveso sites.

4.10 INTER-RELATIONSHIPS

In accordance with the SEA Directive, the interrelationship between the environmental parameters above must be taken into account. Although all such parameters may be considered interrelated and may impact on each other at some level environmental sensitivity mapping is commonly used to help identify areas of greater or lesser sensitivity. The Figure below shows the overall environmental sensitivity for the plan area and sphere of influence, and follows the same approach (i.e.: ranking of environmental parameters) as that used in the South Dublin CDP 2016-2022 SEA process.

By mapping key environmental layers (GIS) to produce an environmental sensitivities map, it provides a visual impression which can assist in identifying which areas within the Plan area experience the highest concentration of environmental sensitivities and consequently the areas potentially most vulnerable to potential environmental impacts from development. This can be a useful guide when considering the strategic options in relation to the plan during the early stages in the plan making process, and identifying areas that are of greater or lesser vulnerability. Figure 17 shows the environmental sensitivity map for the Variation lands.

FIGURE 17 Environmental sensitivity mapping variation lands at Ballymount



4.11 Evolution of the environmental baseline in the absence of the variation

The SEA legislation requires that consideration is given to the likely evolution of the current baseline where implementation of the Variation does not take place. In the absence of the Variation the environment would evolve under the requirements of the South Dublin County Development Plan 2016- 2022.

Principal environmental issues in the absence of the Variation include:

- Air Quality: in the absence of the new Variation and rezoning to Regeneration opportunities to promote greater permeability, enhanced measures relating to public transport, pedestrian and cycle movement may not be fully implemented.
- Noise and Human health: aligned to the above point, opportunities to enhance permeability and as above, offer other means of transporting and movement around the Variation area would be lost and means to reduce noise emissions associated with traffic would be lost.
- Biodiversity, flora and fauna: future enhancement measures for open spaces and opportunities to improve ecological connectivity, particularly with the Grand Canal and River Camac may not be implemented.
- Population and Human health: in the absence of this zoning, measures in terms of potential new housing provision and open space would not be implemented. Aligned with this the opportunity to provide for integrated transport and landuse, and efficient use of the land, given its strategic location may be lost.

4.12 Existing environmental issues in neighbouring areas.

The Variation lands at Ballymount are adjacent to Dublin City local authority area and share the northern and eastern boundary with this local authority. Therefore a summary of key environmental issues identified in the SEA ER of the Dublin City Development Plan is presented below:

SEA Topic	Existing Environmental Issues Dublin City Council
	Need to encourage people to move into the city rather than out to the suburbs in the interests of sustainable development. Demand for more housing units and finite stock of zoned and serviced lands. The city has a high vacancy rate and should encourage the use of the existing vacant stock. The effect of changing economic circumstances on population figures. Transboundary impacts with other Dublin Region Local Authorities. These cumulative impacts need to be taken into account. Requirement for adequate infrastructure to serve areas of future development and/or areas of increased density. Traffic-related air emissions and impacts to both health and as a contributor to climate change. Quality of housing, density and locations must be supported by adequate community facilities and services.

	Additional quality open space must be provided to support our increasing density of population. Existing green and recreational spaces must be maintained and developed. Noise in the city, if excessive, can be extremely detrimental to the physical and mental health of the population. The provision of water and sanitation systems must be of sufficient capacity to provide clean, easily accessible water and remove waste products to sustain existing and future populations. The new national utility company Irish Water is responsible for providing safe, clean and affordable water and wastewater services for Dublin city. The supply, storage and treatment of water are all major issues for the city and now lie within the remit of Irish Water. Greater co-ordination with the other planning authorities in the Greater Dublin Region to respond to shared regional issues.
Biodiversity, Flora and Fauna	Potential increased flood risk from changed land-use patterns, climate change and predicted sea rise level could result in loss or alteration of habitats through erosion and alteration of levels. City Council area is traversed by a number of key regional river systems; future development within the city area should not have a deleterious effect on the aquatic life in these systems. The existing wastewater treatment plant at Ringsend is operating over its design capacity and has no additional capacity to facilitate the anticipated increase in population in the city. This will potentially lead to deterioration in water quality and associated ecological impacts if no mitigation measures are put in place. Increased volumes of surface water run-off due to conversion of permeable landscapes to impermeable. This can lead to increased flooding, erosion and alteration and direct loss of habitat. Increased frequency of high rainfall events due to climate change can result in sudden elevated levels of pollutants contaminating aquatic habitats. Existing faulty connections and combined sewer overflows resulting in contamination of surface waters with effluent and degradation of aquatic habitats. Degradation in water quality and ecological status from upstream pollution to rivers. Potential for interference with inland and marine waters morphology and aquatic habitats by watercourse diversions, channel diversions and alterations or removal of bank vegetation can threaten some of the most important species of flora and fauna. Lack of mitigation on construction sites leading to localised pollution of watercourses. Lack of protection and mitigation of impacts of existing flora and fauna on construction sites. Changes in temperature and precipitation levels due to climate change resulting in some species being replaced or under stress. Replacement of native species of flora and fauna by non-natives due to improper land management practices.

	The presence of invasive species in problematic areas such as river valleys and the potential for the introduction, movement and spread of such species during development without proper measures. Recreational uses can result in pressures on the sand dune system of North Bull Island as identified by the NPWS in the Coastal Monitoring Project Report (2004–2006). Pressures can also arise on other coastal areas due to increased commercial, industrial and recreational activities, including more activity in Dublin Bay. Loss of connectivity of habitats for wildlife by development which interrupts or is too close to existing green corridors. Greater powers and extent of enforcement of existing legislation required for local authorities to protect biodiversity, flora and fauna, e.g., tree protection measures, control of dogs in vulnerable habitats in parks. Need to ensure biodiversity interests taken into account in earliest stages of planning of new developments. Further Dublin City Council's objectives for sustainable urban drainage systems (SUDS) for public open spaces in existing and future developments. Continued efforts with Heritage to ensure implementation of the Biodiversity Action Plan. Demolition of older structures (buildings, walls, out-buildings) due to rapid growth results in loss of habitat for fauna. Lack of survey and research data limits tools for decision-making in planning for biodiversity. Greater co-ordination with the other planning authorities in the Greater Dublin Region to respond to shared regional issues. Balance between accommodating future development, recreational, heritage and biodiversity needs of Dublin city. Protection EU and Irish designated sites especially Dublin Bay. Protection of areas, sites and natural features of high biodiversity quality not designated under EU or national legislation. Protection and enhancement of the biological diversity of surface water systems in the city. Importance of ecological corridors to maintain biodiversity. Incorporation of biodiversity into development proposals, e.g., greenway, roof gardens, etc
Water Resources	Compliance with the Urban Wastewater Treatment Directive is required. Irish Water's Water Services Strategic Plan to be taken into account. Requirements of Eastern River Basin Management Plan and associated Programme of Measures (ERBD and POM) to be taken into account, bearing in mind the revised updates to the RBMP. The supply, treatment, storing, delivery and quality of drinking water are all major issues for the city, as demand exceeds supply on occasion. However, this issue is now the responsibility of Irish Water.

	New major drinking water source to meet projected water demand is required. Irish Water is currently examining potential major water sources for the future. Wastewater treatment capacity, particularly with regard to environmental impacts of Ringsend WWTW on Dublin Bay. Limitations in the capacity of the sewer network to be taken into account in the Plan, particularly the need to comply with EPA licence conditions. Continued implementation of Greater Dublin Sustainable Urban Drainage Strategy (SUDS) to be incorporated into the Plan. City Council area traversed by a number of key regional river systems; future development within the city area should not have a deleterious effect on the ecological status of these systems. Existing and proposed flood defence structures to be identified for protection in the Plan. Potential increased flood risk from changed land use patterns, climate change and predicted sea rise level. To comply with Dublin City Council climate change adaption policy 2015 – 2021 in all flood alleviation projects, planning applications and flood warning systems. There is potential for interference with inland and marine waters morphology and aquatic habitats by watercourse diversions, channel diversions and alterations or removal of bank vegetation. Greater co-ordination with the other planning authorities in the GDA to respond to these shared regional issues set out. All river waterbodies in the city are currently at 'moderate' to 'poor' water quality status under the Water Framework Directive.
Soil and Geology	Existing contaminated grounds due to historical or industrial activities at some sites (e.g. vitriol plants, glass manufacture, iron works, fertiliser plants etc.). Contaminated soils may place technical or financial pressures on development. Potential increased flood risk from changed land use patterns, climate change and predicted sea rise level could result in loss of soil organic matter through erosion and alteration of levels. Increased volumes of surface water run-off due to conversion of permeable landscapes to impermeable causes increased flooding, erosion and alteration of soils and their associated habitat. Lack of protection and mitigation of impacts of construction on soils, causing soil structural degradation and compaction. Replacement of existing soil with inferior soil or soil contaminated with invasive species due to improper land management practices. Release of contaminants bound to organic matter in soils due to disturbance, dredging and removal of soils. Contamination of soils by improper storage of materials, pesticides and waste. Direct contact, inhalation and ingestion of contaminated soils and uptake through plants causing adverse effects on human health.

	Reduced water-holding capacity through compaction by construction, causing increased risk of erosion and flooding. Damage or loss of the historic environment (e.g. cultural soils). Reduced groundwater re-charge and loss of supply and quantity to surface waters by increased soil impermeability from development. Changes in hydrological regimes of rivers by increased soil impermeability from development. Recreational uses can result in pressures on soils and their habitats, including erosion. Alteration of catchments of rivers can result in increased erosion, loss of sediments downstream and in coastal environments. Transboundary effects of air pollution from elsewhere in Europe could lead to soil contamination/acidification due to alteration of climate and weather patterns. Increases in extreme rainfall events leading to increased soil erosion. Effects on foundations of built infrastructure by increased erosion. Continued co-operation with the drainage division to further Dublin City Council objectives for sustainable urban drainage systems (SuDs) for public open spaces in existing and future developments. Use of Flood Risk Assessment for projects where erosion is a potential impact. Greater co-ordination with the other planning authorities in the Greater Dublin Region to respond to these shared regional issues set out in RPGs and subsequent reviews of the Guidelines
Cultural Heritage	Impact of major infrastructural projects on protected structures; Difficulty/expense in providing thermal protection to protected structures; Excavation of rear garden areas of protected structures, to provide underground accommodation; Excessive parking in the front gardens of protected structures; Loss of urban fabric due to insensitive development
Landscape	Provision of an accessible public landscape that meets the perception and demands of a European capital city, in particular in the quality of planning and design of the public landscape. Creating landscape linkages within an urban fabric that has reached almost full development. Balancing competing demands or incompatible uses within the public landscape, such as between biodiversity and recreational uses. Provision of universal accessible facilities for users of public landscape. Promoting sustainable landscape solutions (e.g. green roofs, green walls, permeable pavement, SUDS) in the city landscape. Development and environmental impacts on public landscape (e.g. road noise, air quality and services). Changes in the private landscape through development and densification, from small-scale removal of front residential gardens for parking to larger scale changes in the landscape associated with institutional facilities when redeveloped.

	Protecting designated landscapes or elements of the landscape (e.g. urban trees). To ensure that opens space amenities including the natural environment are connected as main features of the city's character and to align with the city's wider Strategic Green Network.
Air Quality and Noise	The effect of transport sector on air quality – results from air quality monitoring indicate that compliance with stringent new PM10, PM2.5 and NO2 standards may present problems in urban areas where there is heavy traffic. Impacts on residents from excessive noise uses, e.g., related to commercial activities, and complaints related to construction. Requirements of the 'Dublin Regional Air Quality Management Plan' to be taken into account. Implementation of the 'Dublin Agglomeration Action Plan relating to the Assessment and Management of Environmental Noise.'
Climatic Conditions	Best practice methods for energy efficiency, energy conservation and water conservation, e.g., district heating network, combined heat and power systems, energy efficiency. Continued regard to the Sustainable Energy Action Plan. Feasibility of renewable energy sources throughout the city. Further reductions in CO2 emissions required. Rising sea levels. Pluvial (rainfall) and coastal flood risk from changing land-use patterns and climate change. Importance of city vegetation/ landscape to act as a carbon sink. Pressure from transport-related emissions. Greater co-ordination with the other planning authorities in the Greater Dublin Region to respond to these shared regional issues set out.
Material Assets	Traffic congestion. The critical need to further integrate transport and land use in a timely manner. Long lead in time until delivery of Greater Dublin Area '2035 Vision' projects. Sustainable travel patterns, i.e., need to motivate greater numbers of people to cycle, walk or use public transport Need to accommodate the needs of public transport, pedestrians, cyclists and the private vehicles given the city's limited road space. Importance of the national road network and other road infrastructure to the 21 Dublin Waste-to-Energy project website: http:// dublinwastetoenergy.ie/ economy and connectivity within the Dublin region. Safe, good quality and attractive streets are key. Requirement for ease of movement of people, goods and services in the city. The following broad range of issues has been identified for waste management in Dublin city. These include localised as well as more strategic issues: Contribute to meeting the strategic Eastern-Midlands Regional Waste Plan Targets.

	Reuse of materials rather than the use of new materials in development; whether in any development, the planning authority should insist on a proportion of building materials being recycled materials such as concrete, brick or stone. Use of renewable materials and those low embodied energy materials and low toxic materials: whether in any development, the planning authority should insist on a proportion of materials being from renewable sources. Understand biowaste is a valuable resource and encourage its recycling. Continued encouragement of reuse, upcycling and recycling and a move away from landfill. Waste issues related to the entire Eastern-Midlands Region as well as Dublin City include: ☐ The assessment of historic and unregulated legacy landfill/illegal dump sites. ☐ Lack of a third or fourth bin in some areas which would allow for better segregation of waste.

5 Strategic Environmental Objectives

5.1 Introduction

The purpose of the SEA Objectives is to ensure that the assessment process is transparent and robust and that the Variation considers and addresses potential environmental effects. SEA Objectives have been set for each of the ten environmental topics identified at the Scoping Stage of the SEA process.

These objectives are derived from the principles identified through the plan, policy and programme review and align where possible with the SEOs developed for the South Dublin County Development Plan 2016-2022. Where they differ from the South Dublin CDP 2016-2022 objectives, the text is shown in italic bold font. The results of this are summarised in a table, called an evaluation matrix (See Chapter Seven SEA ER).

Table 8 Proposed Strategic Environmental Objectives

SEA Topic	Strategic Environmental Objectives
Biodiversity Flora and Fauna	To avoid loss of habitats, geological features, species or their sustaining resources in designated ecological sites
	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
	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
Population and human health Noise	To protect human health from hazards or nuisances arising from traffic and incompatible landuse
Water	To maintain and improve, where possible, the quality of rivers, lakes and surface water***.***
	To prevent pollution and contamination of ground water
	To prevent development on lands which pose - or are likely to pose in the future – a significant flood risk
Soil and Geology	To maximise the sustainable re- use of brownfield lands, and the existing built environment, rather than developing greenfield lands.
	To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices. (S2, an SEO with an objective to reduce contamination and safeguard quantity and quality of soils was excluded because of the absence of adequate information in the County)
Material Assets	To maintain and improve the quality of drinking water supplies
	To serve new development under the CDP with appropriate waste water treatment
	To reduce car dependency within the Variation lands 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
	To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices.
Climate Change, Air Quality and Noise	To minimise increases in travel related greenhouse emissions to air
	To reduce car dependency within the County 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
	Ensure that the Variation proposals are adaptive to expected climate change patterns.
Cultural Heritage	To protect the archaeological 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
	To preserve and protect the special interest and character of architectural heritage with regard to entries to the Record of Protected Structures, Architectural Conservation Areas, and their context within the surrounding landscape where relevant
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 Dublin Mountains Area, and the Liffey and Dodder Valleys

6 CONSIDERATION OF ALTERNATIVES

6.1 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 Variation to the South Dublin CDP 2016-2022. 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 proposed variation , the toolkit included in Developing and Assessing Alternatives in Strategic Environmental Assessment Good Practice Guidance (EPA 2015) was utilised.

In addition to the above, the Variation will function within the policy hierarchy established by national, regional and county strategic plans, as well as relevant legislation.

This chapter presents the approach to considering and assessing the alternatives for the Variation. Section 6.2 presents the alternative scenarios. Section 6.3 explains how the assessment of alternatives was undertaken. Section 6.4 presents the evaluation of the alternatives for potential environmental effects. This in turn informed the selection of a preferred alternative for the Variation which is presented in Section 6.5.

6.2 ALTERNATIVES CONSIDERED

1. These are Retention of existing landuse zoning for Enterprise and Employment
2. Partial rezoning of the lands to Regeneration
3. Full rezoning of the Variation Lands to Regeneration

In undertaking the assessment of alternatives the following approach was applied:

- Review of existing landuse zoning and environmental effects for the Enterprise and Employment zoning
- Review of SEA commentary on this zoning as part of the SEA of the South Dublin CDP 2016-2022.
- Review of aerial photography of enterprise lands within the County
- Professional judgement and expertise in SEA.

6.4 Assessment of potential effects for each alternative scenario

This section presents the assessment of potential environmental effects for each Alternative Scenario. This is undertaken by assessing each alternative against the SEOs presented in Chapter 5 of this SEA ER. It is informed by the environmental baselines as well as the policy review.

The assessment of Alternatives is categorised as follows, as many of the alternatives share similar objectives, to highlight where an alternative may generate particular positive or negative effects, a + or – is shown. :

Positive	
Neutral	
Uncertain	
Negative	

Figure 18 Assessment of Alternatives

Strategic Environmental Objectives	Alternative 1: Retention of existing landuse	Alternative 2.Partial rezoning to Regeneration	Alternative 3 Full rezoning to Regeneration
Biodiversity			
B1: To avoid loss of habitats, geological features, species or their sustaining resources in designation ecological sites.	Positive	Positive+	Positive++
B2: 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	Positive	Positive+	Positive++
B3: To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity	Positive	Positive+	Positive++
Comment: All three alternatives provide for enhancing green infrastructure which a key proposal is given the largely urban landuse within the lands and reflect the objectives of the South Dublin CDP. However, Alternative 3 increases the overall lands significantly and provides for greater potential linkages with existing habitats and enhancement /creation of new habitats given the larger scale.			
Population and Human Health			
PHH1: To protect human health from hazards or nuisances arising from traffic and incompatible landuses	Neutral	Positive+	Positive++
Comment: Alternative 1 does not envisage an increase in residential/mixed use and the impact therefore is neutral. For Alternatives 2 and 3,more positive effects on SEOS are identified as the change in zoning can allow for a plan and design led approach to the regeneration of these lands. As with the above parameter, the larger scale and size under consideration in Alternative 3 increased the overall positive effects on this parameter.			

Strategic Environmental Objectives	Alternative 1: Retention of existing landuse	Alternative 2.Partial rezoning to Regeneration	Alternative 3 Full rezoning to Regeneration
Water			
W1: To maintain and improve, where possible, the quality of rivers, lakes and surface water.	Positive	Positive	Positive++
W2: To prevent pollution and contamination of ground water	Positive	Positive	Positive+
W3: To prevent development on lands which pose - or are likely to pose in the future – a significant flood risk	Positive	Positive	Positive++
Comment: Whilst all alternatives show consistency with these Water SEOs, Alternative 3 has allowed for full integration of strategic flood risk assessment again at a larger scale and encompasses a flood risk area particularly around the north east area of the lands. This option also allows for a meaningful consideration of integration of blue and green infrastructure principles.			
Soil and Geology			
S1: To maximise the sustainable re- use of brownfield lands, and the existing built environment, rather than developing greenfield lands	Negative	Positive	Positive++
S2: To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices. (S2, an SEO with an objective to reduce contamination and safeguard quantity and quality of soils was excluded because of the absence of adequate information in the County)	Neutral	Neutral	Neutral
Comment: Alternatives 2 and 3 -the area for mixed use/residential is consistent with S1. For the other SEO, sustainable waste management can more appropriately be addressed through development management and relevant policies/objectives in the plan. Alternative 1 does not maximise the sustainable reuse of these brownfield lands.			

Strategic Environmental Objectives	Alternative 1: Retention of existing landuse	Alternative 2.Partial rezoning to Regeneration	Alternative 3 Full rezoning to Regeneration
Material Assets			
M1: To maintain and improve quality of drinking water supplies	Positive	Positive	Positive
M2: To serve new development under the Variation with appropriate wastewater treatment	Positive	Positive	Positive
M3: To reduce car dependency within the Variation 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.	Positive	Positive	Positive ++
M3: To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices.	Neutral	Neutral	Neutral
Comment: The Variation lands are well served by the Luas Red line and bus links. Maximising this public transport option and potentially increasing public use of the existing Greenway along the Grand Canal offers positive effects on material assets around transport in particular. Alternative 3 is supported through Transport Infrastructure Ireland statement and national policy as it represents a more efficient use of land and stronger integration of landuse and transport planning. **Wastewater treatment will be provided in line with requirements of the South Dublin CDP and Irish Water Plans including upgrading of Ringsend WWTP. Sustainable waste management can more appropriately be addressed through development management and relevant policies/objectives in the CDP. All alternatives are identified as being consistent with these SEOs.**			

Strategic Environmental Objectives	Alternative 1: Retention of existing landuse	Alternative 2.Partial rezoning to Regeneration	Alternative 3 Full rezoning to Regeneration
Climate and Air Quality			
C1: To minimise increases in travel related greenhouse emissions to air	Positive	Positive	Positive++
C2: To reduce car dependency within the Variation 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	Negative	Positive	Positive++
C3: Ensure that the Variation proposals are adaptive to expected climate change patterns.	Neutral	Neutral	Neutral
Comment:Flood risk assessment and green infrastructures are embedded in the plan preparation process and supported by numerous objectives in the South Dublin CDP; however Alternative 1 does not represent the best and efficient use of land in this context so is identified for negative effects for C2. Again,Alternative 3 emerges as the most positive as it allows for a larger scale, strategic use of these lands to also support mixed use and residential; taking advantage of existing public transport provisions and allowing more detailed consideration of potential climate change effects and adaptation to same.			
Cultural Heritage			
CH1: To protect the archaeological 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	Positive	Positive	Positive
CH2: To preserve and protect the special interest and character of architectural heritage with regard to entries to the Record of Protected Structures, Architectural Conservation Areas, and their context within the surrounding landscape where relevant	Positive	Positive	Positive

Strategic Environmental Objectives	Alternative 1: Retention of existing landuse	Alternative 2.Partial rezoning to Regeneration	Alternative 3 Full rezoning to Regeneration
Comment: There are no known archaeological or protected structure within the variation lands and existing objectives from the South Dublin CDP2016-2022 will apply.			
Landscape			
L1: 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 Dublin Mountains Area, and the Liffey and Dodder Valleys	Neutral	Positive	Positive++
Comment: The potential for public realm enhancement and green infrastructure and open space strategies could be envisaged through the rezoning of these lands to residential and mixed use under Regeneration and facilitate greater consistency with L1.			

6.5 Preferred Alternative

In terms of all SEOs, Alternative 3 is identified as creating most positive interactions. This alternative maximises existing brownfield land, allows for greater residential function within the M50 corridor; offers better integration of landuse and transport as well as allowing for greater consideration and enhancement over time of the public realm, green and blue infrastructure and climate change adaptation.

7 Assessment of Significant Environmental Effects

7.1 Introduction

The purpose of this section of the Environmental Report is to predict and evaluate as far as possible the environmental effects of the Variation No.3 to the South Dublin County Council CDP 2016-2022.

SEA is an iterative process and the Variation has taken consideration of environmental issues raised during the SEA process to date. These issues have been incorporated into the Variation and the principal purpose of this chapter is to discuss the evaluation of these. The discussion of likely impacts is grouped around each of the following environmental parameters as described in Chapter Five.

- Population & Human Health
- Biodiversity, Flora & Fauna
- Water Resources including flooding
- Soil & Geology
- Climatic Factors and Climate change
- Cultural Assets
- Material Assets
- Landscape
- In-combination and cumulative effects.

7.2 Approach to Assessment

Having established the environmental baseline and the key environmental sensitivities for the Plan area in Chapter 5, and the Strategic Environmental Objectives in Chapter 6, an assessment for any potential environmental effects from implementing the Variation to the South Dublin CDP 2016-2022 can be undertaken.

An assessment of cumulative and in-combination effects is also presented in the concluding section of this chapter.

7.2.1 Population and Human Health-Significant effects

Land use planning impacts on the everyday lives of people and can either hinder or help promote healthy sustainable environments and communities. For example the provision of safe walking routes, cycle-ways, parks, playgrounds, safe routes to school, public transport facilities, etc. result in direct and indirect health benefits and allow for healthier transportation choices to be made by communities above private motor car.

As the Ballymount area currently supports very low residential use, the proposed rezoning will facilitate over time, an increase in residential land use and mixed landuse activities.

Reflecting key objectives in the South Dublin CDP 2016-2022 the variation will represent greater, more efficient landuse that promotes integrated transport and landuse, particularly around public transport for all uses.

By rezoning the lands as Regeneration the Variation can facilitate key principles around public realm, green corridors and overall enhancing the existing urban form which is low density, overrepresented by light industrial and enterprise landuses that ultimately do not provide for the most efficient use of these lands, situated as they are close to the M50, Grand Canal and within the Luas Red Line transport. Maximising densities closer to the existing Luas Stops represents stronger landuse and transport integration. Combined with enhanced green infrastructure measures (including Grand Canal, Camac and potential other open space) these measures, over time, will enhance the local character and public realm, increase permeability and allow for residential living closer and within the brownfield lands. The amendment to CS6 SLO 1 promotes green and blue infrastructure, integrated landuse and transport in a plan led manner.

Seveso sites are those which store significant amounts of dangerous or harmful substances and proximity to these sites could represent a potential impact to human health. They are regulated under the COMAH regulations (Control of Major Accident Hazards Involving Dangerous Substances, S.I. 476 of 2000). The presence of three Seveso Sites within the Variation lands will also require appropriate planning and consideration as required under these regulations.

The air and noise effects associated with intensive road use within and adjacent to this area will require careful consideration, particularly with the likely increase over time of residential and other community based landuse activities.

Transport considerations and assessment will also require careful consideration as the need to encourage use of walking, cycling and public transport will be critical to avoid exacerbating existing private transport problems on existing roads such as the Naas Road and M50. If unaddressed, this could increase both greenhouse gas emissions, air and noise emissions with adverse, long term effects on population, human health and quality of life.

The promotion of sustainable development by balancing complex sets of environmental, social and economic goals in planning decisions can deliver positive effects for population and human health. The Variation, by promoting a Regeneration zoning, support brownfield development, integrated transport and land use, environmental enhancement measures through Green Infrastructure and provides for adaptation to climate change plus energy efficiency and innovation. Overall, the Variation is likely to improve the status of the SEO's on population and human health.

7.2.2 Biodiversity, Flora and Fauna- Significant Effects

The promotion of a compact, densities, reuse of brownfield sites, integrating land use and transport, green and blue infrastructure and ecological corridors all strengthen overall protection of biodiversity resources and the Biodiversity SEOS.

The Variation lands do not support varied or robust ecological resources; and the opportunity to enhance these through the Regeneration zoning and amended objective CS6 SLO 1, in the first instance could allow for greater consideration of enhancing ecological resources such as

the Grand Canal and Camac River. Moreover, planning for blue and green infrastructure measures by integrating surface water management considerations, further biodiversity measures are possible over time.

Indirect and cumulative impacts are identified for biodiversity in the event of damage to soil and water resources associated with development activities. Water pollution or surface water run off could give rise to negative effects on water quality and streams/ rivers within the lands with subsequent adverse effects on biodiversity. This could equally apply where soils may be contaminated due to historic landuse and will require remediation prior to development commencing. Infrastructure does have the potential to generate adverse impacts on biodiversity, with key potential impacts relating to disturbance, disruption, fragmentation and loss of habitats. However, given the largely urban form, this is not considered a significant environmental effect.

Therefore, a number of mitigation measures are recommended for the above.

7.2.3 Water - Significant Effects

Potential effects on water resources (and frequently biodiversity) in the absence of mitigation include:

- A reduction in water quality in groundwater, springs and watercourses associated with the construction phase of new developments (short to medium term impacts);
- Surface water runoff from impermeable surfaces leading to reduced water quality in groundwater springs or surface waters affecting qualifying habitats and species downstream(impacts can range from short to long term);
- Changes in the flow rate of watercourses arising from an increased footprint of impermeable surfaces within the Plan area - increasing the extent of impermeable surfaces will result in a decrease in infiltration and an increase in runoff;
- Generally, land use practices can result in water quality impacts and whilst surface water impacts may be identified quickly, impacts to groundwater can take much longer to ascertain due to the slow recharge rate of this water resource;
- Water quality impacts can also have human health impacts in the case where bacterial or chemical contamination arises.

The South Dublin CDP 2016-2022 already includes a range of provisions and measures to address and minimise the above effects, including measures around green infrastructure, flood risk management and proposals relating to the Camac and Grand Canal. By encouraging brownfield development, the potential for increased greenfield land requirements are reduced and largely avoided in the case of the Ballymount Variation lands.

The comments from the NIR listed in Section 7.2.1 above, apply also for Water Resources.

7.2.4 Soil and Geology - Significant Effects

Soil quality and function may be enhanced through particular measures associated with water quality and land use and achieving the Water Framework Directive Objectives. The

quality of groundwater is directly related to soil quality and land use, and abstraction of geological and soil resources can also affect the water table over time.

The most significant potential soil and geology effect identified relates to potential soil contamination, risk of accidental spread of invasive species associated with new development. Soil sealing and increased risk of surface run off are addressed largely by brownfield regeneration areas. There may be potential reuse of existing buildings at project level which promotes reuse of existing structures, with positive effects for soil and geology SEOs.

7.2.5 Air Quality and Climate

Overall the Variation will contribute positively to climate change adaptation through the following:

- Integration of land use and transport (such as increased residential and mixed use densities)
- Blue and green infrastructure giving rise to increased surface water storage and potential carbon sequestration
- Focus on energy efficiency and innovation as seen through exiting objectives in the South Dublin CDP 2016-22.
- Chapter Six Climate Change Adaptation and mitigation (for example Section 6.4 Energy policy).

However, as stated above in Population and Human health, transport considerations will be critical and require careful assessment to ensure a move away from reliance on private cars and fossil fuel sources. In the absence of this, increased emissions from transport could become a significant issue, creating adverse effects on air quality and climate.

7.2.6 Cultural Assets - Significant Effects

There is no known archaeological sites within the Variation lands, and although adjacent to the plan area, the built heritage of the Grand Canal is significant. Moreover, although there may be no Protected Structures, smaller features may remain that contribute and enhance local character.

The application of existing place making policies from the CDP and the preparation of a Masterplan should enhance overall the public realm and contribute to local cultural assets over time.

Overall the impacts of the Variation are potentially long term and positive in relation to place making, through public realm planning, green infrastructure and creation of communities; though this will be at a later stage than that currently being considered as part of this variation.

7.2.7 Material Assets - Significant Impacts

Key to the creation of longer term positive effects on the material assets SEOs will be assessing, managing and designing the Variation lands with a view to integrated landuse and planning; in particular ensuring application of relevant guidelines that promote pedestrians

and cyclists above the private car, whilst encourage public transport options. By rezoning the lands to Regeneration, this will allow for increased residential development and mixed use and aligning these with a sustainable transport approach will be essential.

Waste management will be more sufficiently addressed through project level; though the potential reuse of some buildings could enhance the circular economy.

Water supply and wastewater capacity and demands are addressed in conjunction with Irish Water. The key element in relation to this is ensuring the implementation of the Variation to the South Dublin CDP is in line with capacity to treat wastewater and water supply services. Policies and objectives in the South Dublin CDP 2016-2022 are of particular relevant in this regard.

Application of Flood Risk guidelines is consistent with SEOs and avoids potential adverse effects arising from in appropriate development and land use activities.

7.2.8 LANDSCAPE - SIGNIFICANT EFFECTS

Currently much of the Variation lands comprise low density retail/industrial/light industry units and relatively low residential development. Whilst key landscape elements include the Grand Canal, views to the Dublin Mountains and potentially the River Camac, the area lacks a cohesive identity and suffers from ad hoc historical development reflecting the industrial and enterprise landuse. Long term positive effects are identified for the Variation, due to the rezoning of this area and application of policies/objectives in the South Dublin CDP 2016-2022 in the first instance and with the development of a Masterplan for the lands that would provide an overarching design framework for the lands.

An increase in open space, green infrastructure, public realm and permeability would all create long term positive effects for the Landscape SEOs.

7.3 IN-COMBINATION AND CUMULATIVE SIGNIFICANT EFFECTS

This section of the Environmental Report provides an outline of the potential cumulative effects on the environment as a result of implementation of the Variation. The figure presented the overall environmental sensitivity mapping for the Variation Lands in the context of South Dublin.

Cumulative effects are referred to in a number of SEA Guidance documents and are defined in the EPA SEA Process Checklist as "*effects on the environment that result from incremental changes caused by the strategic action together with other past, present and reasonably foreseeable future actions. These effects can result from individually minor but collectively significant actions taking place over time or space*" [10] These effects can be insignificant individually but cumulatively over time and from a number of sources can result in the degradation of sensitive environmental resources. The assessment of cumulative effects is a requirement of the SEA Directive (2001/42/EC).

The 2004 Guidelines produced by the DECLG outlines that the SEA process is in a good position to address cumulative effects for which the Environmental Impact Assessment process is not

[10] (EPA SEA Process Checklist (2011)).

equipped to deal with. Due to the strategic nature of the SEA process a forum is provided in which cumulative effects can be addressed.

The EPA Strive Report 2007-2013 on 'Integrated Biodiversity Impact Assessment' describes cumulative effects as incremental effects resulting from a combination of two or more individual effects, or from an interaction between individual effects – which may lead to a synergistic effect (i.e. greater than the sum of the individual effects), or any progressive effect likely to emerge over time.

The SEA ER of the South Dublin County Development Plan provided a cumulative assessment of national level plans and programmes as they relate to the CDP; as these are more appropriately assessed at County level, they are not included within this cumulative impact assessment; rather the focus in on regional/locals plans and projects, as these are considered to be the most appropriate scale and potential relevance to the plan area and zone of influence.

7.3.1 Potential cumulative effects from other plans and projects

Table 9 Potential cumulative and in combination effects

Plan	Comment	Cumulative effects
National Planning Framework	The purpose of the NPF is to provide a focal point for spatial plans throughout the planning hierarchy. It will provide a framework for the new Regional Spatial and Economic Strategies (RSESs) by the three Regional Assemblies and the associated enhancement of the economic development focus of local authorities as per the Local Government Reform Act 2014. The draft NPF will co- ordinate the strategic planning of urban and rural areas in a regional development context to secure overall proper planning and development as well as co-ordination of the RSES's and city/ county development plans in addition to local economic and community plans and local area plans and other local development.	
Regional Spatial & Economic Strategy (Draft)	The RSES is a strategic plan which identifies regional assets, opportunities and pressures and provides appropriate policy responses in the form of Regional Policy Objectives. At this strategic level it provides a framework for investment to better manage spatial planning and economic development throughout the Region	The SEA Scoping Report is available for the draft Strategy. No in combination effects are identified
The Transport Strategy for the Greater Dublin Area, 2016-2035	This Strategy sets out how transport will be developed across the region, covering Dublin, Meath, Wicklow and Kildare, over the period of the strategy and was subject to SEA and AA.	No in combination effects are identified.
Water Services Strategic Plan	Ireland's first integrated national plan for the delivery of water services, the Water Services Strategic Plan (WSSP) addresses six key themes and was adopted in 2015. It was subject to full SEA and AA and concluded that Overall, the assessment has identified that the implementation of the draft WSSP is likely to have positive effects on the majority of the SEOs that have been used in the assessment to help characterise the environmental effects of	No in-combination impacts were predicted as a result of implementation of the Plans

	the WSSP and no significant negative effects were identified.	
Neighbouring County Development Plans	These plans were subject to full SEA and AA and concluded that subject to full adherence and implementation of measures likely significant effects were not identified.	No in-combination impacts were predicted as a result of implementation of the Plans
River Basin District Management Plans.	The National River Basin District Management Plan is now published (2018). The second cycle River Basin Management Plan aims to build on the progress made during the first cycle with a greater emphasis on ensuring the evidence base is available and the administration supports are fully in place to support key measures. The approach to the plan development involves characterisation of Ireland's water bodies in order to develop a tailored programme of measures to allow for the protection of good status or the restoration of good status for all water bodies. The outcomes are then monitored in order to feed into further characterisation and measures setting as the cycle moves forward. The plan was subject to SEA and Appropriate Assessment.	No in-combination impacts are predicted as a result of implementation of the Plans
CFRAMS Study	The Eastern CFRAM study has been commissioned in order to meet the requirements of the Floods Directive, as well as to deliver on core components of the 2004 National Flood Policy, in the Eastern district.	No in-combination impacts are predicted as a result of implementation of the Plans.
Naas Road Development Framework Study 2010	The following overarching objectives were set for the plan: • Link the plan area with the surrounding environment to assist in enhancing a living community in and around the area • Create connectivity throughout the plan area – removing barriers to movement and opening up attractive links between key areas • Use existing and proposed infrastructure to establish a strong and interactive relationship with Dublin city and the wider environment • Establish new and appropriate landuses that assist in creating relationships between one another, and support a growing mixed use community • Seek innovative design responses for key sites (collectively and individually) that	This was subject to SEA and will help inform the spatial dimension as identified in CS6 SLO1 of this Variation. Positive in combination effects are identified for this.

	respond to the environmental, social, cultural and economic issues and demands facing the plan area • Provide publicly accessible open spaces and green infrastructure which contribute to the amenities of the area and the green network • Promote and facilitate the development of the Naas Road/Rail Innovation corridor • To create a new identity for the area • To provide for a limited range of mid-rise buildings, to complement proposals for a new KDC, with a sustainable mix of employment, residential, retail and community uses supporting the surrounding area • To develop a significant node at the junction of Naas Road, Walkinstown Road and Kylemore Road which would acknowledge the strategic nature of the site as a Key District Centre and gateway to the city. • To create a landmark destination within the city for combined facilities of a community, recreational, leisure and sports nature	
Projects		
Greater Dublin Drainage	Irish Water made a planning application for strategic infrastructure development to An Bord Pleanála for the Greater Dublin Drainage Project in June 2018. The GDD project proposes a new regional wastewater treatment facility to be located in the townland of Clonshaugh in north county Dublin, an underground orbital sewer from Blanchardstown to Clonshaugh, a new pumping station at Abbotsown, a partial diversion of the north fringe sewer, and an outfall pipeline to return the treated water to the Irish Sea. The project also includes a regional sludge treatment centre at the new GDD facility and an associated biosolids storage facility at Newtown near Kilshane Cross.	Chapter 23 of the EIAR was reviewed with a focus on the cumulative impacts, No in-combination impacts are predicted as a result of implementation of the Project

The Greater Dublin Transport Strategy 2016-2035	The Transport Strategy for the Greater Dublin Area, 2016-2035 has been prepared and published by the National Transport Authority. It sets out how transport will be developed across the region, covering Dublin, Meath, Wicklow and Kildare, over the period of the strategy and has been approved by the Minister for Transport, Tourism and Sport in accordance with the relevant legislation. Luas, heavy rail and orbital bus routes are of particular relevance to the elements of this Strategy and the Variation.	Positive effects in relation to the prioritisation of public transport modes above private transport.
Ballymount Road Extension	*New link road though Robinhood from Ballymount Avenue to Longmile Road. To provide improved access to the Ballymount and Robinhood employment area*	*Identified in the South Dublin CDP 2016-2022 Table 6.5 this is subject to funding over a six year programme. No details are available yet.*
Greenhill Road upgrade and links	*Upgrade of Greenhills Road from Airton Road to Walkinstown Roundabout with new links to Ballymount Avenue, Limekiln Road and Calmount Road. To provide improved access to/between employment lands within Tallaght, Ballymount and Robinhood and to provide improved access to and from the Greenpark, Limekiln and Greenhills area.*	*Identified in the South Dublin CDP 2016-2022 Table 6.5 this is subject to funding over a six year programme. No details are available yet.*
Ballymount Industrial Estates Street Network	*Various streets within the Ballymount employment area. Formation of a strategic street network within the Ballymount and Robinhood employment areas.*	*Identified as a Medium to long term objective in Table 6.6 of the South Dublin CDP 2016-2022. No additional details currently available.*
Oak Road Extension	*New road linking Oak Road to Robinhood Road. To provide improved access between the Ballymount, Robinhood and Fox and Geese employment areas.*	*Identified as a Medium to long term objective in Table 6.6 of the South Dublin CDP 2016-2022. No additional details currently available.*

South Dublin Heritage Plan	Key objectives as follows: Objective 1: Establish the existing resource information in the County Objective 2: Gather heritage information Objective 3: Provide better access to information	Positive interactions with SEOs in relation to this plan; no adverse cumulative effects identified.

8 MITIGATION

8.1 INTRODUCTION

Section (g) of Schedule 2(B) of the SEA Regulations (Annex 1(g) of the SEA Directive) requires the Environmental Report to describe the measures envisaged to prevent, reduce and/or offset as fully as possible any significant adverse effects on the environment from implementation of the Variation to the South Dublin County Development Plan 2016-2022. 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 preparation of the Variation has facilitated the integration of environmental considerations into the plan. In addition, potential positive effects of implementing the Variation 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 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 including the Strategic Flood Risk Assessment. Proposals for development which are deemed contrary to the environmental objectives contained in South Dublin CDP 2016-2022 will not normally be permitted, and if permitted, will be developed with specific mitigation measures.

The following sections present the principal environmental protection measures already included in the South Dublin CDP 2016-2022 that will apply; please note this is not an exhaustive list. As the Variation relates primarily to rezoning these lands, it is considered that the existing environmental protection measures in the South Dublin CDP 2016-2022 are appropriate at this juncture. The Natura Impact Report has identified a number of additional measures and these are presented in Section 8.3. It is noted that a Specific Local Objective, included as part of the Variation, provides for the preparation of a Masterplan on foot of the Variation, additional measures may be recommended during that process.

8.2 Environmental Protection Measures in the South Dublin CDP 2016- 2022.

The Variation has been prepared having regard to the policies and objectives outlined within the South Dublin County Development Plan 2016-2022. The particular environmental protection measures for the CDP 2016-2022 are as follows:

TABLE 10 ENVIRONMENTAL PROTECTION MEASURES IN SOUTH DUBLIN CDP 2016-2022

CDP Policy/Objective	Text
Population and Human health	
Housing (h) Policy 12	Public Open Space It is the policy of the Council to ensure that all residential development is served by a clear hierarchy and network of high quality public open spaces that provides for active and passive recreation and enhances the visual character, identity and amenity of the area.
Policy C1	It is the policy of the Council to ensure that all communities have access to multifunctional community centres that provide a focal point for community activities.
Policy C8 (a)	It is the policy of the Council to support and facilitate the provision of good quality and accessible childcare facilities at suitable locations in the County
Policy C8 (b	It is the policy of the Council to require the provision of new childcare facilities in tandem with the delivery of new communities.
Policy 13	It is the policy of the Council to promote the highest levels of universal accessibility in all community facilities
Policy 12.	It is the policy of the Council that a hierarchical network of high quality open space is available to those who live, work and visit the County, providing for both passive and active recreation, and that the resource offered by public open spaces, parks and playing fields is maximised through effective management
Biodiversity, Flora and Fauna	
Heritage, conservation and landscapes (HCL) policy 12 natura 2000 sites	It is the policy of the Council to support the conservation and improvement of Natura 2000 Sites and to protect the Natura 2000 network from any plans and projects that are likely to have a significant effect on the coherence or integrity of a Natura 2000 Site

CDP Policy/Objective	Text
Heritage, conservation and landscapes (HCL) policy 13	Natural Heritage Areas It is the policy of the Council to protect the ecological, visual, recreational, environmental and amenity value of the County's proposed Natural Heritage Areas and associated habitats.
HCL13 objective 1:	To ensure that any proposal for development within or adjacent to a proposed Natural Heritage Area (pNHA) is designed and sited to minimise its impact on the biodiversity, ecological, geological and landscape value of the pNHA particularly plant and animal species listed under the Wildlife Acts and the Habitats and Birds Directive including their habitats.
HCL13 objective 2:	To restrict development within a proposed Natural Heritage Area to development that is directly related to the area's amenity potential subject to the protection and enhancement of natural heritage and visual amenities including biodiversity and landscapes
Heritage, conservation and landscapes (HCL) policy 15	Non-Designated Areas It is the policy of the Council to protect and promote the conservation of biodiversity outside of designated areas and to ensure that species and habitats that are protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979 and the Habitats Directive 1992 are adequately protected
HCL15 objective 1	To ensure that development does not have a significant adverse impact on rare and threatened species, including those protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979 and the Habitats Directive 1992.
HCL15 objective 2:	To ensure that, where evidence of species that are protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979 and the Habitats Directive 1992 exists, appropriate avoidance and mitigation measures are incorporated into development proposals as part of any ecological impact assessment.
HCL15 objective 3	To protect existing trees, hedgerows, and woodlands which are of amenity or biodiversity value and/ or contribute to landscape character and ensure that proper provision is made for their protection and management in accordance with Living with Trees: South Dublin County Council's Tree Management Policy 2015-2020.
Material Assets -Transport	
Transport and mobility (tm) policy 1	Overarching It is the policy of the Council to promote the sustainable development of the County through the creation of an integrated transport network that services the needs of communities and businesses

CDP Policy/Objective	Text
Transport and mobility (tm) policy 2	Public Transport It is the policy of the Council to promote the sustainable development of the County by supporting and guiding national agencies in delivering major improvements to the public transport network and to ensure existing and planned public transport services provide an attractive and convenient alternative to the car.
Transport and Mobility (TM) Policy 3	Walking and Cycling It is the policy of the Council to re-balance movement priorities towards more sustainable modes of transportation by prioritising the development of walking and cycling facilities within a safe and traffic calmed street environment.
Transport and mobility (tm) policy 6	Road and Street Design It is the policy of Council to ensure that streets and roads within the County are designed to balance the needs of place and movement, to provide a safe traffic-calmed street environment, particularly in sensitive areas and where vulnerable users are present
Material Assets –Water and Wastewater	
Infrastructure & environmental quality (IE) policy 1 water & Wastewater	It is the policy of the Council to work in conjunction with Irish Water to protect existing water and drainage infrastructure and to promote investment in the water and drainage network to support environmental protection and facilitate the sustainable growth of the County.
IE1 objective 1	To work in conjunction with Irish Water to protect, manage and optimise water supply and foul drainage networks in the County.
IE1 objective 2:	To work in conjunction with Irish Water to facilitate the timely delivery of ongoing upgrades and the expansion of water supply and wastewater services to meet the future needs of the County and the Region
Water Resources including Flood Risk	
IE2 policy	It is the policy of the Council to manage surface water and to protect and enhance ground and surface water quality to meet the requirements of the EU Water Framework Directive
IE2 objective 1	To maintain, improve and enhance the environmental and ecological quality of our surface waters and groundwater by implementing the programme of measures set out in the Eastern River Basin District River Basin Management Plan

CDP Policy/Objective	Text
IE2 objective 2	To protect the regionally and locally important aquifers within the County from risk of pollution and ensure the satisfactory implementation of the South Dublin Groundwater Protection Scheme 2011, and groundwater source protection zones, where data has been made available by the Geological Survey of Ireland
IE2 objective 3	To maintain and enhance existing surface water drainage systems in the County and promote and facilitate the development of Sustainable Urban Drainage Systems (SUDS), including integrated constructed wetlands, at a local, district and County level, to control surface water outfall and protect water quality.
IE2 objective 4	To incorporate Sustainable Drainage at a site and/or district scale, including the potential for wetland facilities
IE2 objective 5	To limit surface water run-off from new developments through the use of Sustainable Urban Drainage Systems (SUDS) and avoid the use of underground attenuation and storage tanks
IE2 objective 6	To promote and support the retrofitting of Sustainable Urban Drainage Systems (SUDS) in established urban areas, including integrated constructed wetlands
Water Resources and Biodiversity, Flora and Fauna	
IE2 objective 8	To protect salmonid water courses, such as the Liffey and Dodder Rivers catchments (including Bohernabreena Reservoir), which are recognised to be exceptional in supporting salmonid fish species.
IE2 objective 9:	To protect water bodies and watercourses, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains, within the County from inappropriate development. This will include protection buffers in riverine and wetland areas as appropriate. (see also Objective G3 Objective 2 – Biodiversity Protection Zone)
IE2 Objective 10:	To require adequate and appropriate investigations to be carried out into the nature and extent of any soil and groundwater contamination and the risks associated with site development work, in particular for brownfield development.
IE2 objective 11	To protect surface water quality by assessing the impact of domestic and industrial misconnections to the drainage network in the County and the associated impact on surface water quality, and by implementing measures to address same.
Infrastructure & environmental quality (IE) policy 3	Flood Risk It is the policy of the Council to continue to incorporate Flood Risk Management into the spatial planning of the County, to meet the requirements of the EU Floods Directive and the EU Water Framework Directive
Material Assets –Waste Management	

CDP Policy/Objective	Text
Infrastructure & environmental quality (IE) policy 5	Waste Management It is the policy of the Council to implement European Union, National and Regional waste and related environmental policy, legislation, guidance and codes of practice to improve management of material resources and wastes
IE5 objective 1	To support the implementation of the Eastern–Midlands Region Waste Management Plan 2015-2021 by adhering to overarching performance targets, policies and policy actions
IE5 objective 2	To support waste prevention through behavioural change activities to de-couple economic growth and resource use.
IE5 objective 3	To encourage the transition from a waste management economy to a green circular economy to enhance employment and increase the value recovery and recirculation of resources
IE5 objective 4	To provide, promote and facilitate high quality sustainable waste recovery and disposal infrastructure/ technology in keeping with the EU waste hierarchy and to adequately cater for a growing residential population and business sector
IE5 objective 5	To provide for and maintain the network of bring infrastructure (e.g. civic amenity facilities, bring banks) in the County to facilitate the recycling and recovery of hazardous and non-hazardous municipal wastes
IE5 objective 6	To seek the provision of adequately sized public recycling facilities in association with new commercial developments and in tandem with significant change of use/extensions of existing commercial developments where appropriate
IE5 objective 7	To develop a countywide network of green waste centres in suitable locations to expand the collection system for compostable waste
IE5 objective 8:	To secure appropriate provision for the sustainable management of waste within developments, including the provision of facilities for the storage, separation and collection of such waste
Soil and Geology	
IE2 objective 10	To require adequate and appropriate investigations to be carried out into the nature and extent of any soil and groundwater contamination and the risks associated with site development work, in particular for brownfield development
Heritage, conservation and landscapes (HCL) policy 19	Geological Sites It is the policy of the Council to maintain the conservation value and seek the sustainable management of the County's geological heritage resource.

CDP Policy/Objective	Text
HCL19 Objective 1:	To protect designated County Geological Sites from inappropriate development and to promote the importance of such sites through the County's Heritage Plan.
Air Quality, Noise, Population and Human health	
Infrastructure & environmental quality (IE) policy 7	Environmental Quality It is the policy of the Council to have regard to European Union, National and Regional policy relating to air quality, light pollution and noise pollution and to seek to take appropriate steps to reduce the effects of air, noise and light pollution on environmental quality and residential amenity.
IE7 objective 1	To implement the provisions of EU and National legislation on air, light and noise control and other relevant legislative requirements, as appropriate, in conjunction with all relevant stakeholders
IE7 objective	To implement the recommendations of the Dublin Regional Air Quality Management Plan to protect people from the harmful health effects associated with air pollution, to preserve good air quality where it exists and to improve air quality where it is unsatisfactory
IE7 objective 3:	To implement the relevant spatial planning recommendations and actions of the Dublin Agglomeration Environmental Noise Action Plan 2013 – 2018
IE7 objective 4	To ensure that future developments are designed and constructed to minimise noise disturbance and take into account the multi-functional uses of streets including movement and recreation as detailed in the Urban Design Manual (2009) and the Design Manual for Urban Roads and Streets (2013).
IE7 objective 5	To ensure external lighting schemes minimise light spillage or pollution in the immediate surrounding environment and do not adversely impact on residential or visual amenity and biodiversity in the surrounding areas.
Green Infrastructure, Biodiversity, Flora and Fauna, Water, Landscape, Population and Human health	
Green infrastructure (g) policy 1	Overarching It is the policy of the Council to protect, enhance and further develop a multifunctional Green Infrastructure network by building an interconnected network of parks, open spaces, hedgerows, grasslands, protected areas, and rivers and streams that provide a shared space for amenity and recreation, biodiversity protection, flood management and adaptation to climate change.
G1 objective 1	To establish a coherent, integrated and evolving Green Infrastructure network across South Dublin County with parks, open spaces, hedgerows, grasslands, protected areas, and rivers and streams forming the strategic links and to integrate the

CDP Policy/Objective	Text
	objectives of the Green Infrastructure Strategy throughout all relevant Council plans, such as Local Area Plans and other approved plans
Green infrastructure (G) policy 2 green infrastructure network	It is the policy of the Council to promote and develop a coherent, integrated and evolving Green Infrastructure network in South Dublin County that can connect to the regional network, secure and enhance biodiversity, provide readily accessible parks, open spaces and recreational facilities
G2 objective 1	To reduce fragmentation of the Green Infrastructure network and strengthen ecological links between urban areas, Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional Green Infrastructure network
G2 objective 2	To protect and enhance the biodiversity value and ecological function of the Green Infrastructure network.
G2 objective 3	To restrict development that would fragment or prejudice the Green Infrastructure network.
G2 objective 4	To repair habitat fragmentation and provide for regeneration of flora and fauna where weaknesses are identified in the network
G2 objective 5:	To integrate Green Infrastructure as an essential component of all new developments
G2 objective 8	To provide for the incorporation of Eco-ducts and/or Green Bridges at ecologically sensitive locations on the County's road and rail corridors that will facilitate the free movement of people and species through the urban and rural environment.
G2 objective 9	To preserve, protect and augment trees, groups of trees, woodlands and hedgerows within the County by increasing tree canopy coverage using locally native species and by incorporating them within design proposals and supporting their integration into the Green Infrastructure network.
G2 objective 10	To promote a network of paths and cycle tracks to enhance accessibility to the Green Infrastructure network, while ensuring that the design and operation of the routes responds to the ecological needs of each site.
G2 objective 11	To incorporate appropriate elements of Green Infrastructure e.g. new tree planting, grass verges, planters etc. into existing areas of hard infrastructure wherever possible, thereby integrating these areas of existing urban environment into the overall Green Infrastructure network
G2 objective 12	To seek to control and manage non-native invasive species and to develop strategies with relevant stakeholders to assist in the control of these species throughout the County

CDP Policy/Objective	Text
Green infrastructure (g) policy 3	Watercourses Network It is the policy of the Council to promote the natural, historical and amenity value of the County's watercourses; to address the long term management and protection of these corridors and to strengthen links at a regional level
G3 objective 1	To promote the natural, historical and amenity value of the County's watercourses and address the long term management and protection of these corridors in the South Dublin Green Infrastructure Strategy.
G3 objective 3	To ensure the protection, improvement or restoration of riverine floodplains and to promote strategic measures to accommodate flooding at appropriate locations, to protect ground and surface water quality and build resilience to climate change.
G3 objective 4	To uncover existing culverts and restore the watercourse to acceptable ecological standards and for the passage of fish, where possible.
G3 objective 5	To restrict the encroachment of development on watercourses, and provide for protection measures to watercourses and their banks, including but not limited to: the prevention of pollution of the watercourse, the protection of the river bank from erosion, the retention and/or provision of wildlife corridors and the protection from light spill in sensitive locations, including during construction of permitted development.
G4 objective 1	To support and facilitate the provision of a network of high quality, well located and multifunctional public parks and open spaces throughout the County and to protect and enhance the environmental capacity and ecological function of these spaces
G4 objective 2	To connect parks and areas of open space with ecological and recreational corridors to aid the movement of biodiversity and people and to strengthen the overall Green Infrastructure network
G4 objective 3	To enhance and diversify the outdoor recreational potential of public open spaces and parks, subject to the protection of the natural environment
G4 objective 4	To minimise the environmental impact of external lighting at sensitive locations within the Green Infrastructure network to achieve a sustainable balance between the recreational needs of an area, the safety of walking and cycling routes and the protection of light sensitive species such as bats.
G4 objective 5	To promote the planting of woodlands, forestry, community gardens, allotments and parkland meadows within the County's open spaces and parks

CDP Policy/Objective	Text
G4 objective 6	To take steps, in conjunction with communities and businesses, to plant existing areas of grassed open space to promote the development of multifunctional amenity areas with enhanced biodiversity value
G4 objective	To avoid the cumulative fragmentation and loss of ecologically sensitive areas of the Green Infrastructure network to artificial surfaces and to position recreational facilities that incorporate artificial surfaces at appropriate community-based locations
Green infrastructure (G) policy 5	Sustainable Urban Drainage Systems It is the policy of the Council to promote and support the development of Sustainable Urban Drainage Systems (SUDS) in the County and to maximise the amenity and biodiversity value of these systems.
Green infrastructure (G) policy 6	New Development in Urban Areas It is the policy of the Council to support the protection and enhancement of Green Infrastructure in all new development in urban areas, to strengthen Green Infrastructure linkage across the wider urban network and to achieve the highest standards of living and working environments
G6 objective 1	To protect and enhance existing ecological features including tree stands, woodlands, hedgerows and watercourses in all new developments as an essential part of the design process
G6 objective 2	To require new development to provide links into the wider Green Infrastructure network, in particular where similar features exist on adjoining sites
G6 objective 3	To require multifunctional open space provision within all new developments that includes provision for ecology and sustainable water management
Biodiversity and Cultural Assets	
Heritage, conservation and landscapes (HCL) policy 1	Overarching It is the policy of the Council to protect, conserve and enhance natural, built and cultural heritage features, and to support the objectives and actions of the County Heritage Plan
HCL1 objective 1	To protect, conserve and enhance natural, built and cultural heritage features and restrict development that would have a significant negative impact on these assets
HCL1 objective 2	To support the objectives and actions of the County Heritage Plan, including the preparation of a County Biodiversity Plan
Cultural Assets	

CDP Policy/Objective	Text
Heritage, conservation and landscapes (HCL) policy 2	Archaeological Heritage It is the policy of the Council to manage development in a manner that protects and conserves the Archaeological Heritage of the County and avoids adverse impacts on sites, monuments, features or objects of significant historical or archaeological interest.
Heritage, conservation and landscapes (HCL) policy 3	Protected Structures It is the policy of the Council to conserve and protect buildings, structures and sites contained in the Record of Protected Structures and to carefully consider any proposals for development that would affect the special character or appearance of a Protected Structure including its historic curtilage, both directly and indirectly.
HCL2 Objective 2	To ensure that development is designed to avoid impacting on archaeological heritage that is of significant interest including previously unknown sites, features and objects.
HCL3 objective 3	To address dereliction and encourage the rehabilitation, renovation, appropriate use and re-use of Protected Structures.
Heritage, conservation and landscapes (HCL) policy 5	Older Buildings, Estates and Streetscapes It is the policy of the Council to encourage the preservation of older features, buildings, and groups of structures that are of historic character including 19th Century and early to mid 20th Century houses, housing estates and streetscapes.
Heritage, conservation and landscapes (HCL) policy 6	Features of Interest It is the policy of the Council to secure the identification, protection and conservation of historic items and features of interest throughout the County including street furniture, surface finishes, roadside installations, items of industrial heritage and other standalone features of interest.
Landscapes	
Heritage, conservation and landscapes (HCL) policy 7	Landscapes It is the policy of the Council to preserve and enhance the character of the County's landscapes particularly areas that have been deemed to have a medium to high Landscape Value or medium to high Landscape Sensitivity and to ensure that landscape considerations are an important factor in the management of development
HCL7 objective 1	To protect and enhance the landscape character of the County by ensuring that development retains, protects and, where necessary, enhances the appearance and character of the landscape, taking full cognisance of the Landscape Character Assessment of South Dublin County (2015).

CDP Policy/Objective	Text
Cultural Assets	
Heritage, conservation and landscapes (HCL) policy 18	Cultural Heritage It is the policy of the Council to promote the County's cultural heritage.
HCL18 objective 1	To work towards establishing an environment for promoting cross cultural understanding, racial harmony, mutual understanding and appreciation of all religious and ethnic traditions through the County.
HCL18 objective 2	To promote the Irish Language and favour its use in the promotion of the Villages Initiative
HCL18 objective 3	To promote local heritage, the naming of any new residential development will reflect the local and historical context of its siting, and should include the use of the Irish language
Climate Change and energy	
Energy (E) policy 1	Responding to European and National Energy Policy & Legislation It is the policy of the Council to respond to the European and National Energy Programme through the County Development Plan – with policies and objectives that promote energy conservation, increased efficiency and the growth of locally based renewable energy alternatives, in an environmentally acceptable and sustainable manner.
Energy (E) policy 2	South Dublin Spatial Energy Demand Analysis It is the policy of the Council to implement the recommendations of the South Dublin Spatial Energy Demand Analysis (SEDA) in conjunction with all relevant stakeholders, promoting energy efficiency and renewable energy measures across the County
Energy (E) policy 3	Energy Performance in Existing Buildings It is the policy of the Council to promote high levels of energy conservation, energy efficiency and the use of renewable energy sources in existing buildings
E3 objective 1	To ensure that medium to large scale residential and commercial developments are designed to take account of the impacts of climate change, including the installation of rainwater harvesting systems and that energy efficiency and renewable energy measures are incorporated in accordance with national building regulations, policy and guidelines.
Energy (E) policy 4	Energy Performance in New Buildings

CDP Policy/Objective	Text
	It is the policy of the Council to ensure that new development is designed to take account of the impacts of climate change, and that energy efficiency and renewable energy measures are considered in accordance with national building regulations, policy and guidelines.
Energy (E) policy 6	Low Carbon District Heating Networks (a) It is the policy of the Council to support the development of low carbon district heating networks across the County based on technologies such as combined heat and power (CHP), large scale heat pumps, and renewable energy opportunities including geothermal energy, energy from waste, biomass and bio-gas. (b) It is the policy of the Council to support the development of both deep and shallow geothermal energy sources throughout the County. Deep geothermal projects are particularly suited to areas demonstrating high heat densities
Energy (E) policy 7	Solar It is the policy of the Council to promote the development of solar energy infrastructure in the County, in particular for on-site energy use, including solar PV, solar thermal and seasonal storage technologies. Such projects will be considered subject to environmental safeguards and the protection of natural or built heritage features, biodiversity and views and prospects.
Energy (E) policy 10	Small to Medium Scale Wind Energy Schemes It is the policy of the Council to encourage small to medium scale wind energy developments within industrial or business parks, and support small community-based proposals in urban areas provided they do not negatively impact upon the environmental quality, and visual or residential amenities of the area
11.8.1 Environmental Impact Assessment	The Planning and Development Regulations 2001 specify mandatory thresholds above which Environmental Impact Statements (EIS) are required, setting out the types and scale of development proposals that require EIS. Where it appears to the Planning Authority that a development proposal that falls below the thresholds set out in the Planning and Development Regulations would be likely to have a significant environmental effect, a subthreshold/discretionary EIS can be requested by the Planning Authority.
11.8.2 Appropriate Assessment	Under Article 6 of the Habitats Directive there is a requirement to establish whether, in relation to plans and projects, Appropriate Assessment (AA) is required. If, following screening, it is considered that AA is required then the proponent of the plan or project must prepare a Natura Impact Statement. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and a Stage 2 Appropriate Assessment where necessary, that:

CDP Policy/Objective	Text
	The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any Natura 2000 site (either individually or in combination with other plans or projects), or The plan or project will have significant adverse effects on the integrity of any Natura 2000 (that does not host a priority natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest – including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of a Natura 2000 site/network, or The plan or project will have a significant adverse effect on the integrity of any Natura 2000 site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest - restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of a Natura 2000 site/network
11.2.4 Regeneration	Development in Regeneration zones will be assessed against the relevant criteria within the Urban Design Manual, the Design Manual for Urban Roads and Streets and/or the Retail Design Manual as appropriate. A Design Statement (see Section 11.2.1 Design Statements) accompanying development proposals in Regeneration (REGEN) zones should also address the following criteria: Demonstrate a clear transition towards a more urban form of development and a traditional street network. Address connectivity and linkages in the area and demonstrate that the development of the site would not give rise to isolated piecemeal pockets of residential development that are disconnected from shops, amenities and/or other residences. Residential development should not be introduced at ground floor level adjacent to busy roads, and/or roads that are subject to significant movements by Heavy Goods Vehicles (HGVs). Given the transitional nature of Regeneration zones, precautions will be taken to ensure that the potential for noise pollution, air pollution or other nuisance from established industrial uses will not exceed acceptable environmental standards. The Planning Authority may seek a report from a suitably qualified person to identify and quantify sources of noise pollution, air pollution, or nuisance, assess the potential impacts on the proposed development and provide a series of

CDP Policy/Objective	Text
	recommendations to mitigate the impacts of any pollutants insofar as possible (e.g. orientation and layout of dwellings, positioning of openings and insulation). It may be necessary to consider improvements to the surrounding road and street network in conjunction with the Planning Authority, to calm traffic and improve pedestrian and cyclist access

8.3 Measures identified in the Natura Impact Report

Any future developments within Regeneration zones that have been identified as having the potential to result in a deterioration to surface or groundwater quality will be required to undertake an assessment to determine the effect of the development on surface water and groundwater quality. Such an assessment will be required to identify the materials and activities associated with the development that could result in pollution to surface waters, the pathways that could convey surface water from the development site to European Sites and the qualifying features of interest of European Sites that could be at risk of experiencing adverse effects in the event of the release of polluted surface water from the development site.

During the construction phase of developments facilitated by the Variation, where applicable all relevant best practice guidelines shall be adhered to. Examples of these guidelines include:

- Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters (Inland Fisheries Ireland, 2016);
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (National Roads Authority, 2008);
- CIRIAC648: Control of water pollution from linear construction projects: Technical Guidance
- CIRIAC649: Control of water pollution from linear construction projects: Site guide

A Pollution Prevention Plan (PPP) and Construction and Environmental Plan (CEMP) will be required to accompany future Regeneration developments in zones that have been identified as presenting a risk of likely significant effects to European Sites.

Measures will be required to be included in the design of a proposed development that will safeguard water quality from operation phase surface water emissions and wastewater emissions. These design elements will include the inclusion of adequate wastewater treatment facilities/connection to wastewater treatment plants, the implementation of surface water management measures such as swales, interceptors, hydrobrakes and attenuation tanks etc.

With regard to wastewater discharges it is noted that developments within the Variation lands will ultimately be serviced by the municipal wastewater treatment plant at Ringsend. Irish Water confirms that there is generally sufficient capacity in the public water services networks in the vicinity of the Variation lands to connect developer-provided water service infrastructure to their networks (subject to the signing of individual connection agreements with Irish Water). The Core Strategy figures in the CDP have been taken into account in Irish Water's long-term planning for water services capacity in the Greater Dublin Area. . It is considered that the proposed variation will increase the amount of REGEN zoning and thus provide further brownfield regeneration opportunities for the market However, it is not anticipated that the REGEN lands will have a significant impact on the assigned housing land capacity in the Core Strategy of the Development Plan. A number of major

infrastructure projects are being progressed to provide long term capacity to service projected demand into the future through Irish Water's multi annual Investment Programmes.

The proposed scheme is expected to result in an increase in foul loadings being discharged from site of c. 20,000 P.E. Foul water comprising sewage and industrial effluent (and some surface water run-off) from the Dublin area has historically, and will continue to be treated at Ringsend WWTW prior to discharge to Dublin Bay. Ringsend WWTW has historically operated at or above capacity, with a total load of 2.19 million P.E. on average, with significant fluctuations from day to day. Loading has increased in recent years with the rise in population recorded in the Dublin local authorities between 2011 and 2016 of approximately 4-6%[11]. The latest information from Irish Water indicates that the plant is currently operating above its capacity of 1.64 million P.E. (Irish Water, 2017), with a current operational loading of 2.19 million P.E.

In 2017 the plant was non-compliant with several parameters as set under the EPA discharge license. Any existing or proposed projects discharging to the plant have the potential to act cumulatively to reduce water quality in Dublin Bay, affecting European Sites therein. Despite Ringsend WWTW historically operating at or above capacity, no significant effects from discharge arising from the proposed scheme are predicted due to the following:

Irish Water has submitted a planning application for strategic infrastructure development to An Bord Pleanála for a number of upgrade works to Ringsend WWTP. These works are proposed to ensure the plant operates with the highest possible environmental standards into the future. The application seeks permission for works required to facilitate the use of Aerobic Granular Sludge (AGS) technology, to omit the previously permitted long sea outfall tunnel and to upgrade the sludge treatment facilities at Ringsend and to provide for a Regional Biosolids Storage Facility in Newtown, Dublin 11[12]. Aerobic Granular Sludge (AGS) technology allows for faster breakdown of pollutants in water. The upgrade works are planned to proceed in stages to deliver a compliant effluent, at projected increased loads, with the full capacity of 2.4 m population equivalent completed by 2023. There are also plans to construct a new WWTW to the north of Dublin City which will permit flows to be diverted from the Ringsend catchment, thus ensuring that the capacity of Ringsend will be adequate to cater for growth in that catchment well into the future.

[11] According to 2016 Census figures available from the Central Statistics Office www.cso.ie (Accessed 25/06/2018)

[12] https://www.water.ie/projects-plans/ringsend/

9 MONITORING

9.1 INTRODUCTION

It is proposed, in accordance with Article 10 of the SEA Directive, to base monitoring on a series of indicators which measure changes in the environment, especially changes which are critical in terms of environmental quality, for example water pollution levels. Monitoring will focus on the aspects of the environment that are likely to be significantly impacted upon by the implementation of the Variation No 3.

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. This monitoring programme will guide one of the key mitigation measures contained within the Environmental Management Plan presented in Chapter Eight.

9.2 FREQUENCY OF MONITORING AND REPORTING

Should new data or the following occur, additional monitoring will be required:

- pollution events associated with construction;
- boil notices on drinking water;
- fish kills;
- court cases taken by the DHPLG regarding impacts upon archaeological heritage including entries to the Record of Monuments and Places; and,
- complaints received from statutory consultees regarding avoidable impacts resulting from development which is granted permission under the Variation to the South Dublin County Development Plan 2015-2022.

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 Variation 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 Variation; and

- Identifying any cumulative effects.

It is recommended that the monitoring report be made available to the public upon its completion. Table 11 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 Variation, 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 Variation to the CDP and when the next plan is being prepared.

Table 11 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 Variation	No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the Variation	Designated ecological sites mapping, CORINE Mapping, National Parks and Wildlife Service Records & Development Management Process in SDCC.
	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	No 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	Designated ecological sites mapping, Development Management Process in SDCC Council & Consultation with the National Parks and Wildlife Service Primary ecological corridors mapping, CORINE mapping and Development

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
		implementation of the Variation	implementation of the Variation	Management Process in SDCC.
	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 resulting from development provided for in the Variation	No ecological connectivity provided by the area' s primary ecological corridors to be lost without mitigation as a result of implementation of the variation. No significant ecological networks or parts thereof which provide functional connectivity to be lost without remediation resulting from development provided for in the Variation	
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 Variation lands[13]. Number of complaints from the Variation 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

[13] Currently air quality monitoring closest station is at Tallaght.

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
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 Variation	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 Framework Directive, by 2027. To improve biotic quality ratings, where possible, to Q5.	Environmental Protection Agency. Environmental Protection Agency As noted under Section 2.3.1, data may not 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	Implementation and monitoring of Strategic Flood Risk Assessment for Variation	No significant flood events associated with development activities on Variation.	Development Management Process in South Dublin County Council

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	significant flood risk			
Soil and Geology	To conserve soil resources where possible.	Area of greenfield land developed. Number of contaminated sites identified and remediated. Volume of waste recycled and volume of waste sent to landfill.	S1ii: To reduce the amount of Greenfield lands developed subject to Variation Objectives 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
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 variation with appropriate waste water treatment	Phasing Programme of Variation	All new developments to require appropriate waste water systems.	SDCC Irish Water EPA
	To reduce car dependency within the Variation by way of, inter alia, encouraging modal change from car to	Extent of developments built within the Variation lands of high quality public transport accessibility.	An increase in the percentage of the population within the County travelling to work or school	SDCC CSO Census

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	more sustainable forms of public transport and encouraging development which will not be dependent on private transport.	Percentage of population within the Variation lands travelling to work or school by public transport or non-mechanical means	by public transport or non-mechanical means. A decrease in the average distance travelled to work or school by the population of the County.	
	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 Heritage	To protect the archaeological 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.	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 Number of archaeological surveys required	Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and their context of the above within the surrounding landscape where relevant)	SDCC Development Control

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
		as part of planning applications Conditions attached to permissions on archaeological monitoring during excavations.	Protect unknown archaeological resources within Variation area.	
	To preserve and protect the special interest and character of the variation lands architectural heritage with regard to entries to the Record of Protected Structures, the Architectural Conservation Area and their context within the surrounding landscape where relevant.	Percentage of entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant) protected. Number of architectural condition surveys attached to planning applications.	Protect entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant) Renovate and reuse architectural heritage structures and features	SDCC
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 Variation. Number of development	Creation of sense of place with all phases of development associated with Variation	SDCC

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
		applications with landscape and habitat plans and Design Statements. Amount of land allocated to temporary greening measures.		
Climate Change and energy	To integrate climate change adaptation to the Variation process	Number of SUDs measures included and developed as part of Variation Number/extent of additional tree planting as part of applications.	Integrated blue and green infrastructure through the Variation	***SDCC***
Green Infrastructure	To support green infrastructure measures through the Variation lands where possible.	Extent of new/ replacement hedge and tree planting per development. Number of Blue infrastructure features included in development.	Integration of blue and green infrastructure measures including in approved planning applications within Variation	***SDCC***

9.3 Conclusion

This SEA Environmental Report demonstrates how environmental parameters have been addressed in the plan preparation process. Consultation has been undertaken for the Scoping of this Environmental Report and further opportunity to comment on the Variation will be possible over the forthcoming weeks.

The SEA and Appropriate Assessment processes have been undertaken in line with the Planning and Development (Strategic Environmental Assessment) Regulations 2004 to 2011 (as amended). Subject to the full and proper implementation of the mitigation measures outlined in this SEA Environmental Report and the Proposed Variation No 3 to the South Dublin County Council Development Plan 2016-2022 including developed design at masterplanning and planning application stage, it is considered that significant adverse impacts on the environment will be avoided.

Annex A Review of Plans, Policies and Programmes

International Level

Title	Summary
Sustainable Development	
EU Environmental Action Programme to 2020	The 7th EU Environmental Action Programme is more strategic in nature and identifies three main areas to guide EU environmental policy and research. The three thematic priority objectives are intended to: • Protect nature and strengthen ecological resilience • Boost sustainable resource-efficient low-carbon growth, and • Effectively address environment-related threats to health.
Environmental Assessment	
SEA Directive - Assessment of the effects of certain plans and programmes on the Environment, (2001/42/EC) 2001	This Directive requires plan-makers to carry out an assessment of the likely significant environmental effects of implementing a plan or programme before the plan or programme is adopted.
Environmental Impact Assessment Directive (85/337/EEC) .	The EIA Directive (85/337/EEC) came into force in 1985 and applies to a wide range of defined public and private projects, which are defined in Annexes I and II of the Directive. This has been amended with Directive 2011/92/EU and the 2014 Directive (see below).
Environmental Impact Assessment Directive (2014/52/EC)	It is necessary to amend Directive 2011/92/EU in order to strengthen the quality of the environmental impact assessment procedure, align that procedure with the principles of smart regulation and enhance coherence and synergies with other Union legislation and policies, as well as strategies and policies developed by Member States in areas of national competence. The Directive now applies from May 2017.
Biodiversity, Flora and Fauna	
UN Convention of Biological Diversity, 1992	The Convention on Biological Diversity (CBD) entered into force in December 1993. It has 3 main objectives: 1. The conservation of biological diversity. 2. The sustainable use of the components of biological diversity. 3. The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.
The Convention on Wetlands of International	Protection and conservation of wetlands and habitats of importance to waterfowl

Title	Summary
Importance (The Ramsar Convention) 1971 and subsequent amendments	
EU Biodiversity Strategy to 2020	In 2011 the European Commission adopted a new strategy to halt the loss of biodiversity and ecosystem services in the EU by 2020. There are six main targets, and 20 actions to help Europe reach its goal. The six targets cover: · Full implementation of EU nature legislation to protect biodiversity. · Better protection for ecosystems, and more use of green infrastructure. · More sustainable agriculture and forestry. · Better management of fish stocks. · Tighter controls on invasive alien species. · A bigger EU contribution to averting global biodiversity loss.
EU Directive on the Conservation of Wild Birds, (2009/147/EC) 1979. Known as the Birds Directive	This Directive ensures far-reaching protection for all of Europe's wild birds, identifying 194 species and sub-species among them as particularly threatened and in need of special conservation measures. Member States are required to designate Special Protection Areas (SPAs) for 194 particularly threatened species and all migratory bird species. SPAs are scientifically identified areas critical for the survival of the targeted species, such as wetlands. They are part of the Natura 2000 ecological network established under the Habitats Directive 92/43/EEC.
EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, (92/43/EEC), 1992 known as the Habitats Directive	The main goal of the Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain, protect or restore natural habitats, animal and plant species to a favourable conservation status, introducing robust protection for those habitats and species of European importance. For Ireland, these habitats include raised bogs, active blanket bogs, turloughs, sand dunes, machair (flat sandy plains on the north and west coasts), heaths, lakes, rivers, woodlands, estuaries and sea inlets. The Directive provides for a network of protected sites known as The Natura 2000 network, which limits the extent and nature of development which may have a detrimental effect on the flora or fauna identified therein.
European Communities (Birds and Natural Habitats) Regulations 2011	These regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats)(Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in the CJEU judgements. Articles 6(1) and (2) of the Regulations require Member States to take appropriate conservation measures to maintain and restore habitats and species, for which a site has been designated, to a favourable conservation status. Furthermore the Regulations require Member States to avoid damaging activities that could significantly disturb these species or deteriorate the habitats of the protected species or habitat types. Under these regulations any plan or project likely to have a significant effect on a Natura 2000 site, either individually or in combination with

Title	Summary
	other plans or projects, shall undergo an Appropriate Assessment to determine its implications for the site. The competent authorities can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site concerned. In exceptional circumstances, a plan or project may still be allowed to go ahead, in spite of a negative assessment, provided there are no alternative solutions and the plan or project is considered to be of overriding public interest.
Green Infrastructure Strategy	The European Commission in May 2013 adopted a Green Infrastructure Strategy, '*to promote the deployment of green infrastructure in the EU in urban and rural areas'.* This is a key step in implementing the EU 2020 Biodiversity Strategy and specifically Target 2 that requires that 'by 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15% of degraded ecosystems'. Green Infrastructure (GI) is contributing to all other targets of the EU Biodiversity strategy – in particular the full implementation of the Birds and Habitats Directive (target 1) – and to maintain and enhance biodiversity in the wider countryside and the marine environment (targets 3 and 4).
Population and Human Health	
The Stockholm Convention	The Stockholm Convention on Persistent Organic Pollutants is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have adverse effects to human health or to the environment.
Several environmental parameters interact and impact on human health including water quality, infrastructure, air quality, soil, cultural heritage and landscape; the plans, policies and programmes associated with these are presented under thematic headings as appropriate.	
Geology and Soil	
EU Soil Thematic Strategy	In September 2006, the European Commission published the final Thematic Strategy for Soil Protection (COM(2006)231 final) and a proposal for a Directive establishing a framework for the protection of soil across the EU (COM(2006)232). The objective of the strategy is to protect and ensure the sustainable use of soil, based on the guiding principles of preserving soil functions, preventing further degradation and restoring degraded soils to a level of functionality consistent with current and intended use. Once adopted the European Soil Thematic Strategy will guide and frame Ireland's approach to developing its own soil protection strategy.
Water Resources	
Water Framework Directive (2000/60/EC) as amended	The Water Framework Directive (WFD) was adopted in 2000 in an effort to establish a framework for the protection of waterbodies within the EU including: inland surface waters; groundwater; transitional waters; and coastal waters.

Title	Summary
	The key aims of the WFD are: expanding the scope of water protection to all waters, surface waters and groundwater; achieving "good status" for all waters by a set deadline water management based on river basins; "combined approach" of emission limit values and quality standards. getting the prices right; getting the citizen involved more closely, and streamlining legislation. Its ultimate objective is to achieve “good ecological and chemical status” for all Community waters by 2015.
Floods Directive (2007/60/EC)	The Directive aims to establish a common framework for assessing and reducing the risk that floods within the European Union pose to human health, the environment, property and economic activity.
The Drinking Water Directive (DWD), (98/83/EC) 1998	This Directive is intended to protect human health by laying down healthiness and purity requirements which must be met by drinking water within the Community.
Groundwater Directive, (2006/118/EC) 2006	This directive establishes a regime which sets underground water quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater.
EC Bathing Water Quality Directive, (2006/7/EC) 2006	This Directive strengthens the rules guaranteeing bathing water quality It supplements Directive 2000/60/EC on water protection and management. Each year, the Member States are required to identify the bathing waters in their territory and define the length of the bathing season. They shall establish monitoring at the location most used by bathers or where the risk of pollution is greatest.
Climate and Air Quality	
Kyoto Protocol	The Protocol was initially adopted on 11 December 1997 in Kyoto, Japan, and entered into force on 16 February 2005. To date 191 states have signed and ratified the protocol. Following the Conference of Parties to the Climate Change Convention (COP) meeting in Copenhagen 2009, the EU revised its commitment to reducing greenhouse gases by increasing the target to 20% reduction on 1990 levels by 2020.
The Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive	The EU objective in relation to air quality is ‘to achieve levels of air quality that do not result in unacceptable impacts on, and risks to, human health and the environment’.
Material Assets	

Title	Summary
EU Directive on Waste, (2006/12/EC), 2006	This Directive requires EU States to publish waste management plans. It requires a system of permits and registrations to be put in place to authorise all waste management infrastructure, as well as setting down the basic requirements that need to be satisfied for these statutory authorisations to be issued.
EU Directive on Waste (2008/98/EC), 2008	This Directive establishes a legal framework for the treatment of waste within the Community. It aims at protecting the environment and human health through the prevention of the harmful effects of waste generation and waste management. The Directive requires Member States to take measures for the treatment of their waste in line with the following hierarchy which is listed in order of priority:· prevention;· preparing for reuse;· recycling;· other recovery, notably energy recovery;· disposal.
EU Urban Waste Water Treatment Directive (91/271/EEC), 1991	The aim of the Urban Waste Water Directive is to protect inland surface waters from the adverse effects of discharges of urban wastewater and discharge of certain biodegradable industrial waste water (particularly from the agro-food industry).
Directive 2009/28/EC on the promotion of the use of energy from renewable sources	Directive 2009/28/EC on the promotion of the use of energy from renewable sources establishes the basis for the achievement of the EU's 20% renewable energy target by 2020. Under the terms of the Directive, each Member State is set an individually binding renewable energy target, which will contribute to the achievement of the overall EU goal. Each Member State is required to adopt a national renewable energy action plan.
Cultural Heritage Archaeology and Built Heritage	
The World Heritage Convention	The World Heritage Convention was adopted by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) in November 1972. The World Heritage Convention aims to promote cooperation among nations to protect heritage around the world that is of such outstanding universal value that its conservation is important for current and future generations.. The following sites are on the tentative list for World Heritage Site Designation in the county: Inis Cealtra and the Burren.
European Convention on the Protection of the Archaeological Heritage, 1992 (The Valletta Convention)	This Convention was ratified by Ireland in 1997 and as such the Planning Authority is legally bound by it. The aim of the Convention is to 'protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study'. It requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process.
Convention for the Protection of the Architectural Heritage of	Ratified by Ireland in 1997, the 1985 Convention for the Protection of the Architectural Heritage of Europe is intended to reinforce and promote policies for the conservation and enhancement of Europe's heritage. The Convention is dual purpose, involving the promotion of architectural heritage policies while fostering European-wide co-operation measures. Covering monuments, groups of buildings and sites of

Title	Summary
Europe, 1985 (Granada Convention)	importance, the Convention requires a national inventory of architectural heritage to be developed. Legal protection measures must be established, with a system of formal authorisation required for works affecting protected sites and structures. Architectural heritage conservation considerations are required to feature in the Convention signatories' town and Regional planning processes.
Landscape	
The European Landscape Convention 2000	The 2000 European Landscape Convention, adopted in Florence (and was ratified by Ireland in 2002), requires a commitment to introduce policies on landscape protection and management. It promotes the protection, management and planning of EU landscapes as a response to European-wide concerns that the quality and diversity of landscapes were deteriorating. The underlying purpose of the Convention is to encourage public authorities to adopt policies and measures at local, Regional, National and International level to protect and manage landscapes throughout Europe.
Other relevant conventions, plans, policies and programmes	
The Aarhus Convention	The Aarhus Convention establishes a number of rights of the public (individuals and their associations) with regard to the environment. The Parties to the Convention are required to make the necessary provisions so that public authorities (at national, regional or local level) will contribute to these rights to become effective.
Environmental Liability Directive 2004/35/EC	The overall objective of the Directive and the Regulations is to prevent and remedy environmental damage by holding operators whose activities have caused environmental damage financially liable for remedying the damage. The Environmental Liability Regulations 2008 define environmental damage under three categories: Damage to natural habitats and protected species - any damage that has significant adverse effects on reaching or maintaining the favourable conservation status of European designated habitats or species (i.e. those covered by the Habitats Directive (92/43/EEC) and Birds Directive (79/409/EEC)). Water damage - damage which significantly adversely affects the ecological, chemical and/or quantitative status and/or ecological potential of waters covered in the Water Framework Directive (2000/60/EC). Land damage - any contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction in or under the land of substances, preparations, organisms or micro-organisms.

National Level

Title	Summary
Sustainable Development	

Title	Summary
Our Sustainable Future A framework for sustainable development in Ireland	Our Sustainable Future timeframe is to 2020 to tie in with other national and international frameworks, but a longer-term horizon to 2050 is also taken where appropriate, to provide a framework for guiding and reporting on long-term broad development trends such as on climate change.
The National Planning Framework 2040	Is a national document that will guide at a high-level strategic planning and development for the country over the next 20+ years, so that as the population grows, that growth is sustainable (in economic, social and environmental terms). Finalisation of the NPF alongside the ten-year National Development Plan will put together one plan to guide strategic development and infrastructure investment at national level. The NPF with the National Development Plan will also set the context for each of Ireland's three regional assemblies to develop their Regional Spatial and Economic Strategies taking account of and co-ordinating local authority County and City Development Plans in a manner that will ensure national, regional and local plans align.
Biodiversity, Flora and Fauna	
Actions for Biodiversity 2017 – 2021, Ireland's 3rd National Biodiversity Plan	The National Biodiversity Plan is intended to play a central part in Ireland's efforts to halt biodiversity loss and was developed as in line with the EU and International Biodiversity strategies and policies. It sets out the strategic objectives of the government in relation to biodiversity They include: 1. mainstreaming biodiversity across the decision making process in the State; 2. strengthening the knowledge base underpinning work on biodiversity issues; 3. increasing public awareness and participation; 4. ensuring conservation of biodiversity in the wider countryside; 5. ensuring conservation of biodiversity in the marine environment; 6. expanding and improving on the management of protected areas and protected species; 7. enhancing the contribution to international biodiversity issues.
Wildlife (Amendment) Act 2000	The Wildlife Act is Ireland's primary national legislation for the protection of wildlife. It covers a broad range of issues, from the designation of nature reserves, the protection of species, regulation of hunting and controls in wildlife trading. It is implemented by a series of regulations. The Act provides strict protection for nearly all birds, 22 other animal species, and 86 plant species. These species are protected from injury, or from disturbance / damage to their breeding or resting place wherever these occur. The 2000 Act was amended in 2010.

Title	Summary
National Heritage Plan (2002)	The Department of Arts Heritage Gaeltacht and the Islands published the National Heritage Plan in April 2002. The plan sets out a vision for the management of the heritage of Ireland. A key element of the process of formulating the National Heritage Plan is the requirement to prepare Local Heritage Plans at County and City level.
Population and Human Health	
Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) (2009)	The aim of these guidelines is to set out the key planning principles which should be reflected in development plans and local area plans, and which should guide the preparation and assessment of planning applications for residential development in urban areas.
Geology and Soil	
Geological Heritage Sites Designation (under the Wildlife Amendment Act 2000)	The Wildlife (Amendment) Act 2000 provides for designation of Natural Heritage Areas (NHAs) which will include geological sites. Until actually designated, there is no real protection for any important sites identified by GSI and recommended for NHA status. However, a number of geological features are protected because they are the underlying reason for a biological or ecological site protected as a National Nature Reserve, National Park or as a Special Area of Conservation (SAC). In addition many local authorities have scheduled County Geological Sites within their County Development Plans.
Water Resources	
National River Basin District Management Plan 2018	The National River Basin District Management Plan is now published (2018). The second cycle River Basin Management Plan aims to build on the progress made during the first cycle with a greater emphasis on ensuring the evidence base is available and the administration supports are fully in place to support key measures. The approach to the plan development involves characterisation of Ireland's water bodies in order to develop a tailored programme of measures to allow for the protection of good status or the restoration of good status for all water bodies. The outcomes are then monitored in order to feed into further characterisation and measures setting as the cycle moves forward. The plan was subject to SEA and Appropriate Asssesment.
Water Services Act (2007)	The Act sets down a comprehensive modern legislative code governing functions, standards, obligations and practice in relation to the planning, management, and delivery of water supply and waste water collection and treatment services. The Act focuses on management of water "in the pipe", as distinct from broader water resources issues such as river water quality, etc.
Water Services (Amendment) Act (2012)	The 2012 Act amends the 2007 Water Services Act in order to comply with a European Court of Justice ruling against Ireland in October 2009. The Court found that Ireland had failed to fulfil its obligations under the Waste Directive (75/442/EEC) regarding domestic waste waters disposed of through septic tanks and other individual waste water treatment systems. The new Part 4A requires each water services authority to establish and maintain a register of domestic waste water treatment systems situated within their functional area.

Title	Summary
Irish Water Services Strategic Plan SEA and AA	The 25 year plan for strategic delivery of water services is currently being prepared and the SEA Scoping report was issued for consultation with a deadline in September 2014.
The Planning System and Flood Risk Management Guidelines (and Technical Appendices) for Planning Authorities (DoEHLG, OPW), 2009	In relation to planning at the County level the guidelines require planning authorities to: • introduce flood risk assessment as an integral and leading element of their development planning functions at the earliest practicable opportunity. • Align strategic flood risk assessment (SFRA)with the SEA process. • Establish flood risk assessment requirements as part of the preparation of the County Development Plan. • Assess planning applications against the guidance set out in the Guidelines. • Ensure development is not permitted in areas of flood risk except where there are no suitable alternative sites.
Climate and Air Quality	
National Adaptation Framework 2018	Ireland's first statutory National Adaptation Framework (NAF) was published in 2018. The NAF sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The NAF was developed under the Climate Action and Low Carbon Development Act 2015. The NAF builds on the work already carried out under the National Climate Change Adaptation Framework (NCCAF, 2012). The NAF outlines a whole of government and society approach to climate adaptation in Ireland. Under the NAF a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for. Work on these plans will begin in 2018. Local authorities are required to prepare local adaptation strategies The NAF will be reviewed at least once every five years. The NAF also aims to improve the enabling environment for adaptation through ongoing engagement with civil society, the private sector and the research community.
National Climate Change Strategy (2007-2012)	The National Climate Change Strategy 2007 - 2012 sets out a range of measures, building on those already in place under the first National Climate Change Strategy (2000) to ensure Ireland reaches its target under the Kyoto Protocol. The Strategy provides a framework for action to reduce Ireland's greenhouse gas emissions
Review of Ireland's climate change policy and Climate Action and Low Carbon Bill 2013	The National Economic and Social Council submitted a review of Ireland's climate change policy to the Minister of Environment in late 2012. The review includes the development of potential policies and measures to reduce greenhouse gas emissions in agriculture, transport, heat in buildings and renewable energy supply and a basis for a national transition to a low-carbon future by 2050.

Title	Summary
Material Assets	
Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020	Smarter Travel is the transport policy for Ireland that sets out how the vision of a sustainable travel and transport system can be achieved.
Design Manual for Urban Roads and Streets 2013	Design Manual for Urban Roads and Streets incorporates good planning and design practice to support and encourage more sustainable travel patterns in urban areas.
Spatial Planning and National Roads Guidelines 2012	These guidelines set out planning policy considerations relating to development affecting national primary and secondary roads, including motorways and associated junctions, outside the 50-60 kmh speed limit zones for cities, towns and villages.
National Transport Strategy for Greater Dublin Area 2016-2023	The Transport Strategy for the Greater Dublin Area, 2016-2035 has been prepared and published by the National Transport Authority in accordance with Section 12 of the Dublin Transport Authority Act, 2008. It sets out how transport will be developed across the region, covering Dublin, Meath, Wicklow and Kildare, over the period of the strategy and has been approved by the Minister for Transport, Tourism and Sport in accordance with the relevant legislation
Cultural Heritage Archaeology and Built Heritage	
National Monuments Act 1930 with subsequent amendments	This is the primary legal protection to archaeology in Ireland and has been amended a number of times, most recently 2004.
Architectural Heritage Protection - Guidelines for Planning Authorities (2011)	The 2004 guidelines were reissued in 2011 following the transfer of architectural heritage protection functions to the Department of Arts, Heritage and the Gaeltacht. Part IV of the Planning and Development Acts 2000 – 2011 sets out the legislative provisions for the protection and conservation of our architectural heritage
National Inventory of Architectural Heritage (NIAH)	The National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the Department of Arts, Heritage and the Gaeltacht. The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. NIAH surveys provide the basis for the recommendations of the Minister to the planning authorities for the inclusion of particular structures in their Record of Protected Structures (RPS).
Landscape	

Title	Summary
A National Landscape Strategy for Ireland –2015	The Department of Arts, Heritage and the Gaeltacht has issued A National Landscape Strategy for Ireland which sets out objectives and principles in the context of a proposed National Landscape Strategy for Ireland.
Draft Landscape and Landscape Assessment Guidelines, (2000)	These Guidelines attempt to approach landscape appraisal in a systematic manner and recommend Landscape Character Assessment (LCA) as the method for assessment. LCA involves the characterisation of landscape based primarily on landcover (trees, vegetation, water etc.) and secondly on the value (i.e. historical, cultural, etc.). LCA is intended to aid the development management process as it gives indicators of development types which would be suited to certain locations using certain design criteria and consequently the character of the landscape remains intact.
Planning and Development Act 2000 (as amended). **This Act consolidated all planning legislation from 1963 to 1999 and remains the basis for the Irish planning code, setting out the detail of regional planning guidelines, development plans and local area plans as well as the basic framework of the development management and consent system. Among other things, it provides the statutory basis for protecting our natural and architectural heritage, the carrying out of Environmental Impact Statements and the provision of social and affordable housing.** **There have been a number of changes to the legislation since 2000, the most significant of which are set out in The Planning and Development (Amendment) Act 2002 and the Housing (Miscellaneous Provisions) Act 2004, which made substantial changes to Part V of the Act.** **In addition, a suite of new planning policies are being prepared most notably the National Planning Framework due to be finalised first quarter of 2017 which will replace the National Spatial Strategy. Prior to this a non-statutory Planning Policy Statement was issued in 2015 establishing then key principles including the following:** **- No. 8. Planning will conserve and enhance the rich qualities of natural and cultural heritage of Ireland –** **- No. 9. Planning will support the protection and enhancement of environmental quality .**	

County level

Title	Summary
Regional Planning Guidelines 2010-2020- to be replaced by Regional Economic and Spatial Strategies	The aim of the Regional Planning Guidelines (RPGs) is to provide a framework for long term strategic development of the Greater Dublin Region for the period 2010 – 2022 which is consistent with the National Spatial Strategy (NSS) 2002 – 2020 and which ensures the successful implementation of the NSS at regional, county and local level. A key aspect of the RPGs is integrating sustainable economic development with the protection and enhancement of the environment. The RPGs are influenced by a wide range of international, national and regional level plans, programmes and legislation and also establish a framework for other lower level plans and programmes.

Naas Road Framework Plan 2010 **Naas Road Lands Local Area Plan 2013-2019**	The following overarching objectives were set for the plan: • Link the plan area with the surrounding environment to assist in enhancing a living community in and around the area • Create connectivity throughout the plan area – removing barriers to movement and opening up attractive links between key areas • Use existing and proposed infrastructure to establish a strong and interactive relationship with Dublin city and the wider environment • Establish new and appropriate landuses that assist in creating relationships between one another, and support a growing mixed use community • Seek innovative design responses for key sites (collectively and individually) that respond to the environmental, social, cultural and economic issues and demands facing the plan area • Provide publicly accessible open spaces and green infrastructure which contribute to the amenities of the area and the green network • Promote and facilitate the development of the Naas Road/Rail Innovation corridor • To create a new identity for the area • To provide for a limited range of mid-rise buildings, to complement proposals for a new KDC, with a sustainable mix of employment, residential, retail and community uses supporting the surrounding area • To develop a significant node at the junction of Naas Road, Walkinstown Road and Kylemore Road which would acknowledge the strategic nature of the site as a Key District Centre and gateway to the city. • To create a landmark destination within the city for combined facilities of a community, recreational, leisure and sports nature
South Dublin County Development Plan 2016-2022	This plan sets out on a statutory basis the development framework for South Dublin County. The main sections relate to core strategy, housing, community infrastructure, economic development, urban centres and retailing, transport and mobility, infrastructure and environmental quality, green infrastructure, heritage, conservation and landscapes, energy and implementation.
South Dublin Local Economic and Community Plan 2016	The socio-economic framework centres around 6 key themes and goals which underpin the LECP. These themes and goals contribute to realising the overall vision. They include Infrastructure, Enterprise and Employment Health and Well being Environment Poverty and Inclusion Education and Training Citizenship and Participation
South Dublin Heritage Plan 2010-2015	South Dublin County Council intends to review and update the current County Heritage Plan 2010-2015. In tandem with this review, SDCC is also in the process of preparing the County's first Biodiversity Action Plan.

	To advance these two strategic plans, a joint consultation process was held in **2016.** The result of this joint process will be two separate plans, an updated County Heritage Plan 2016-2022 and the County's first County Biodiversity Plan 2016-20122.