South Dublin County Council
Development Plan
2016 – 2022

Proposed Variation No.3

Zoning Objective Amendment on Lands at Ballymount / Naas Road

Strategic Environmental Assessment (SEA)
Non Technical Summary

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CONTENTS

1 NON TECHNICAL SUMMARY

1.1 INTRODUCTION

This is the Non- Technical Summary of the environmental report for the Strategic Environmental Assessment (SEA) of the Proposed Variation No.3 (the Variation) to the South Dublin County Development Plan 2016-2022. The purpose of the SEA is to formally and systematically assess the likely significant effects of implementing a plan or programme, in this instance, the Variation.

The Environmental Report identifies the significant environmental effects of the plan on the environment and where significant effects are identified, recommends appropriate measures to avoid or reduce such effects. As the plan is being prepared the SEA identifies and influences proposals, particularly through avoiding areas of greatest environmental sensitivity. This Environmental Report forms part of the SEA process, documents the SEA process and is the key consultation document in the SEA process as it facilitates interested parties to comment on the environmental issues associated with the Proposed Variation No.3 itself. This Environmental Report has been prepared under the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I 436 of 2004).

1.2 BACKGROUND AND CONTEXT

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 Variation will also amend the Core Strategy land figures but not the overall housing capacity for the County in the life time of the Development Plan and will also amend Objective CS6 SLO1 as follows:

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).

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

FIGURE 1 CONTEXT OF THE VARIATION LANDS

2 Contents of SEA Environmental Report

2.1 Approach to the SEA.

The SEA has been carried out alongside the plan preparation. Table 1 below sets out the stages in the SEA process and how these relate to the plan preparation so far.

Table 1 Stages in the SEA and Plan preparation process

Stage of SEA	Plan
Stage 1 Screening	Screening is the first stage of SEA to determine if the plan requires full SEA. A Screening report was prepared and it was determined, given the scale of the lands proposed and proposed change in landuses that full SEA was required. This was also supported by the screening for appropriate assessment that determined full Appropriate Assessment was required.
Stage 2 Scoping	The purpose of this stage is to work out what environmental topics and issues should be included in the SEA. The Scoping report was issued to statutory bodies including the Environmental Protection Agency and National Parks and Wildlife Service to discuss the potential environmental issues, baseline information, and approach to the SEA.
Stage3 Environmental Report-Current Stage	*This is the current stage of the SEA and the draft Variation. The Environmental Report tells the story of the plan and how environmental considerations have been addressed and included during the draft plan preparation process.* *The appropriate assessment is also discussed in the Environmental Report.* *This report is the main consultation document of the SEA process and hence is on display alongside the plan along with supporting reports.* *Following the public display period there may be changes to the plan and the SEA will also assess these and update the Environmental Report as required.*
Stage 4 **SEA Statement**	This stage is the final output of the SEA process and tells the story of the SEA process. It is prepared once the plan is finalised and adopted.

2.2 Relationship to other relevant plans and programmes.

Under the SEA Directive, the relationship between the Variation and other relevant plans and programmes must be taken into account. A review of the relevant plans and programmes can be found in Annex A of the SEA ER and a list of same is presented in Chapter 3 of the SEA ER.

The preparation of the 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 Variation will operate.

The Variation has been prepared having regard to the environmental protection objectives contained within the South Dublin County Development Plan 2016-2022. In addition, the plan has been designed and developed with the aim of sustainable development so during the plan preparation process areas of particular environmental sensitivity have been avoided where possible. The plan also contains a number of provisions and environmental protection and enhancement measures that will also apply during implementation.

2.2 Current Environmental Baseline.

Baseline information was gathered during the preparation of the plan. An overview of the key environmental baseline is presented below whilst Chapter 4 of the SEA ER provides greater detail and figures for this information.

2.2.1 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

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 2.

Table 2 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 House holds 2016
Clondalkin-Monastry	11,316	0.47	0.04	12.03	13.61	3,793

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

2.2.2 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.

The Grand Canal runs along the northern border of the Variation Lands and is a very important ecological corridor providing essential connections and links to the wider landscape and habitats.

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

2.2.3 WATER RESOURCES 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. 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. The Camac River flows through the Variation lands; it is the second largest of three main tributaries of the River Liffey.

A Strategic Flood Risk Assessment (SFRA)[1] was prepared for the Variation in accordance with the requirements of the DoEHLG and OPW Planning Guidelines, *The Planning System and Flood Risk Management.* It is important to note at the outset that the SFRA cannot at this stage make any 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 and /or Local Area Plan.

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

EXISTING 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.

2.2.4 SOIL AND GEOLOGY

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

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. The underlying bedrock comprises limestone.

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

EXISTING ISSUES: SOIL AND GEOLOGY

- 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

2.2.5 CULTURAL HERITAGE

Archaeological heritage is defined as including structures, places, caves, sites, features or other objects, whether on land, underwater or in inter-tidal zones. Built heritage can include buildings or features associated with industrial heritage, for example, locks associated with the Grand Canal. There are no recorded archaeological features or structures listed on the Record of Protected Structures in the Variation lands.

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.

2.2.6 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.

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.

2.2.7 AIR QUALITY AND CLIMATE

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. As of 13th October 2018 air quality at the nearest monitoring station to the Variation landsis good.

Adaption to climate change 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.

EXISTING ISSUES: AIR QUALITY AND CLIMATE CHANGE

- 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

2.2.8 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.

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 Wastewater

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. Water

Water supply: 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. It is anticipated that Dublin will need a new major water source by 2025, based on projection of growth in the Greater Dublin Area.

Waste: 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

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. 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 located within the Variation Lands.

EXISTING ISSUES: MATERIAL ASSETS

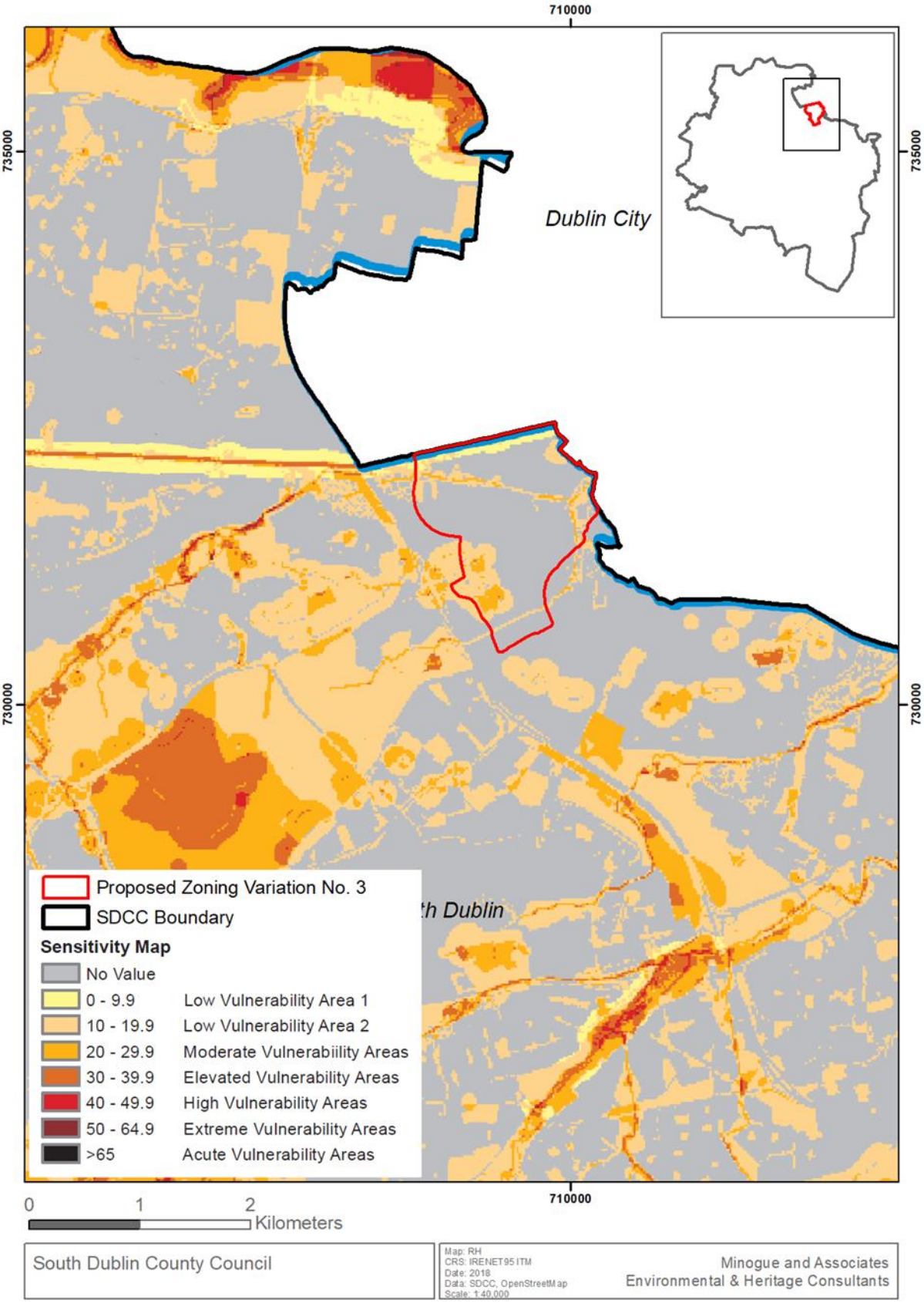
Key issues to consider for material assets include:

- 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.

2.2.9 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. Figure 2 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.

FIGURE 2 ENVIRONMENTAL SENSITIVITY MAPPING –VARIATION LANDS AND SURROUNDING AREA OF SOUTH DUBLIN



3 STRATEGIC ENVIRONMENTAL OBJECTIVES

3.1 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. The Table below presents these objectives used to assess the Variation in terms of its sustainability.

Table 3 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

4 CONSIDERATION OF ALTERNATIVES

4.1 INTRODUCTION

One of the critical roles of the SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative development scenarios, in this case the 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

4.2 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.

In terms of all SEOs, *Alternative 3 Full Rezoning of the Variation Lands to REGEN*, was 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.

5 LIKELY SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE VARIATION

5.1 POPULATION AND HUMAN HEALTH-SIGNIFICANT EFFECTS

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. 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

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. 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.

5.2 Biodiversity, Flora and Fauna- Significant Effects

The promotion of a compact, densities, reuse of brownfield sites, integrating land use and transport, green 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, in the first instance could allow for greater consideration of enhancing ecological resources such as the Grand Canal and Camac River. Moreover, by considering 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. This could equally apply where soils may be contaminated due to historic landuse and will require remediation prior to development commencing.

The Natura Impact Report identifies a number of potential effects on biodiversity in the absence of mitigation including potential adverse effects on water quality, the potential effects from foul water in relation to the Ringsend Wastewater Treatment Plant and potential effects in relation to invasive species.

5.3 Water - Significant Effects

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

- 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);
- 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 same potential effects summarised above for Biodiversity, apply in relation to potential effects on water quality.

5.4 Soil and Geology - Significant Effects

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.

5.5 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.

5.6 Cultural Assets - Significant Effects

There are 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.

5.7 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 relevance 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.

5.8 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 of rezoning this area and application of policies/objectives in the South Dublin CDP 2016-2022 in the first instance and potentially 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.

5.10 In-combination and cumulative significant effects

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. No cumulative or in combination effects were identified at this stage; through a number of potential transport schemes listed in the CDP were identified for the Ballymount area but no data is known about them and they are subject to funding.

6. MITIGATION MEASURES

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.

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. 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. The Natura Impact Report which accompanies the Variation has recommended a small number of mitigation measures to protect groundwater and surface waters, these are included in Section 8 of the SEA ER.

7 MONITORING MEASURES

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.

The targets and indicators are derived from the Strategic Environmental Objectives (SEOs) discussed in Section 3. 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.

Table 4 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.

TABLE 4 MONITORING TABLE

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	Number of significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining	No significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their	Designated ecological sites mapping, Development Management Process in SDCC Council & Consultation with the National Parks

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	designated ecological sites by development within or adjacent to these sites.	resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the Variation	sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the Variation	and Wildlife Service Primary ecological corridors mapping, CORINE mapping and Development 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	Number of occasions that PM^{10} limits have been exceeded in at Air Monitoring stations closest	Reduce number of people exposed to traffic noise and air quality levels which endanger health and quality of life.	South Dublin County Council, EPA

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	particular noise and light pollution.	to Variation lands[2]. Number of complaints from the Variation re; noise, light and air quality.		
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	SDCC Irish Water EPA

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

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
			Values under Directive 2006/118/EC.	
	To prevent development on lands which pose - or are likely to pose in the future – a significant flood risk	Implementation and monitoring of Strategic Flood Risk Assessment for Variation	No significant flood events associated with development activities on Variation.	Development Management Process in South Dublin County Council
Soil and Geology	To conserve soil resources where possible.	Area of greenfield land developed. Number of contaminated sites identified and 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	Phasing Programme of Variation	All new developments to require appropriate waste water systems.	SDCC Irish Water EPA

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	waste water treatment			
	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.	Extent of developments built within the Variation lands of high quality public transport accessibility. Percentage of population within the Variation lands travelling to work or school by public transport or non-mechanical means	An increase in the percentage of the population within the County travelling to work or school by public transport or non-mechanical means. A decrease in the average distance travelled to work or school by the population of the County.	SDCC CSO Census
	To minimise waste production and reduce the volume of waste to landfill and to operate sustainable waste management practices	Volume of waste recycled and volume of waste sent to landfill	To meet national and EU targets on the recycling of municipal waste and its diversion from landfill	Development Management Process in SDCC As above Environmental Services Dept. SDCC Annual Waste Arisings Report from Environmental Services Dept. SDCC
Cultural Heritage	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places -	Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of	Protect entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and their context of	SDCC Development Control

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	including Zones of Archaeological Potential - and the context of the above within the surrounding landscape where relevant.	the above within the surrounding landscape where relevant) - protected Number of archaeological surveys required as part of planning applications Conditions attached to permissions on archaeological monitoring during excavations.	the above within the surrounding landscape where relevant) 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	The creation of a sense of place and coherence/ appreciation for	Creation of sense of place with all phases of development	SDCC

SEA Topic	Strategic Environmental Objectives	Indicator	Target	Data Source
	landscape, landscape features and designated scenic routes; especially with regard to areas of high amenity.	the overall setting and context of the Variation. Number of development applications with landscape and habitat plans and Design Statements. Amount of land allocated to temporary greening measures.	associated with Variation	
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***

8 CONCLUSION

The 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 Proposed Variation No.3 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.