

**Strategic Environmental Assessment Statement**  
**For the**  
**North Lotts & Grand Canal Dock Planning Scheme**



**Prepared by**  
**Planning and Economic Development Department**  
**Dublin City Council**  
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## **1.0 Introduction - Terms of Reference**

This document is the Strategic Environmental Assessment (SEA) Statement, of the North Lotts & Grand Canal Dock Strategic Development Zone (SDZ) Planning Scheme, Strategic Environmental Assessment (SEA). The main purpose of the SEA Statement is to identify how the SEA process was taken into account and influenced the plan making process.

The Planning Scheme, the SEA Environmental Report(ER) the Appropriate Assessment (AA) and SEA Statement are available for download on the Dublin City Council website. ([www.dublincity.ie](http://www.dublincity.ie))

### **1.1 SEA Definition**

Strategic Environmental Assessment (SEA) is the process by which environmental considerations are required to be fully integrated into the preparation of Plans and Programmes and prior to their final adoption. The objectives of the SEA process are to provide for a high level of protection of the environment and to promote sustainable development by contributing to the integration of environmental considerations into the preparation and adoption of specified Plans and Programmes.

### **1.2 Legislative Context**

The SEA was carried out to comply with the provisions of the SEA Directive (Directive 2001/42/EC) of the European Parliament and of the Council, of 27<sup>th</sup> June 2001, on the Assessment of Certain Plans and Programmes on the environment, referred to hereafter as the SEA Directive.

The SEA Directive was transposed into Irish Law through:

- The European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004);
- The Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004);
- Planning and Development (Environmental Assessment of Certain Plans and Programmes) (S.I. No 200 of 2011) and
- Planning and Development (Strategic Environmental Assessment )(Amendment) Regulations 2011 (S.I. No. 201 of 2011).

The SEA Directive and the instruments transposing it into Irish Law require that after the making of a Planning Scheme, the plan or programme making authority is required to make a Statement available to the public and the competent environmental authorities.

This Statement is referred to as an SEA Statement.

### **1.3 Contents of the SEA Statement**

The main purpose of the SEA statement is to provide information on the decision-making process and to document how environmental considerations, the views of statutory consultees and other submissions received during consultation and the recommendations of the Environmental Report have been taken into account in the adopted plan and the arrangements put in place for monitoring. It illustrates how decisions were taken, making the process more transparent.

In accordance with Article 9 of the SEA Directive (2001/42/EC) an SEA Statement is required to include information summarising

- Summary of how environmental considerations have been integrated into the Planning Scheme (Refer to Section 2)

- Summary of how submission received during the consultation have been taken into account in the Plan.
- The reasons for choosing the recommended strategy , in the light of the other reasonable alternatives death with and
- The measures decided upon to monitor the significant environmental effects of implementation of the Planning Scheme.

#### **1.4 Implications of SEA for the Planning Scheme**

The findings of the Strategic Environmental Assessment (SEA) are presented in the Environmental Report (ER) which accompanied the Draft Planning Scheme on public display and was updated in order to take account of the recommendations in the submissions. The Environmental Report was also updated in order to take account of changes which were made to the original draft Planning Scheme that was placed on public display. The proposed amendments or Material alterations to the Draft Planning Scheme underwent SEA & AA and the findings were also placed on public display alongside the Material Alterations.

The purpose of this report is to provide a clear understanding of the likely environmental consequences of decisions regarding the future development of the SDZ lands over the life time of the plan. Amendments were made to the draft Planning Scheme at each stage of the process and are subject to SEA and AA screening. This evaluation was then presented to the elected members in the form of an SEA report on the manager's report or addenda. These reports assessed whether the proposed material alterations would require full SEA or Habits Directive Assessment and these were assessed against the Environmental Protections Objectives.

It was considered that significant adverse effects are not likely as a result of the proposed material alterations to the Planning Scheme. On adoption of the draft Planning Scheme these environmental screening reports or addenda will be used to update the original Environmental Report into a final Environmental Report which accompanies the adopted Plan. In the final ER additional text is included in bold and italic font.

At each stage of the consultation process the Elected Members were required by the legislation to take into account the Environmental Report - including the addenda (subsequent environmental reports that accompanied the managers reports) , before the adoption of the Planning Scheme.

## 2.0 How Environmental Considerations were integrated into the Planning Scheme

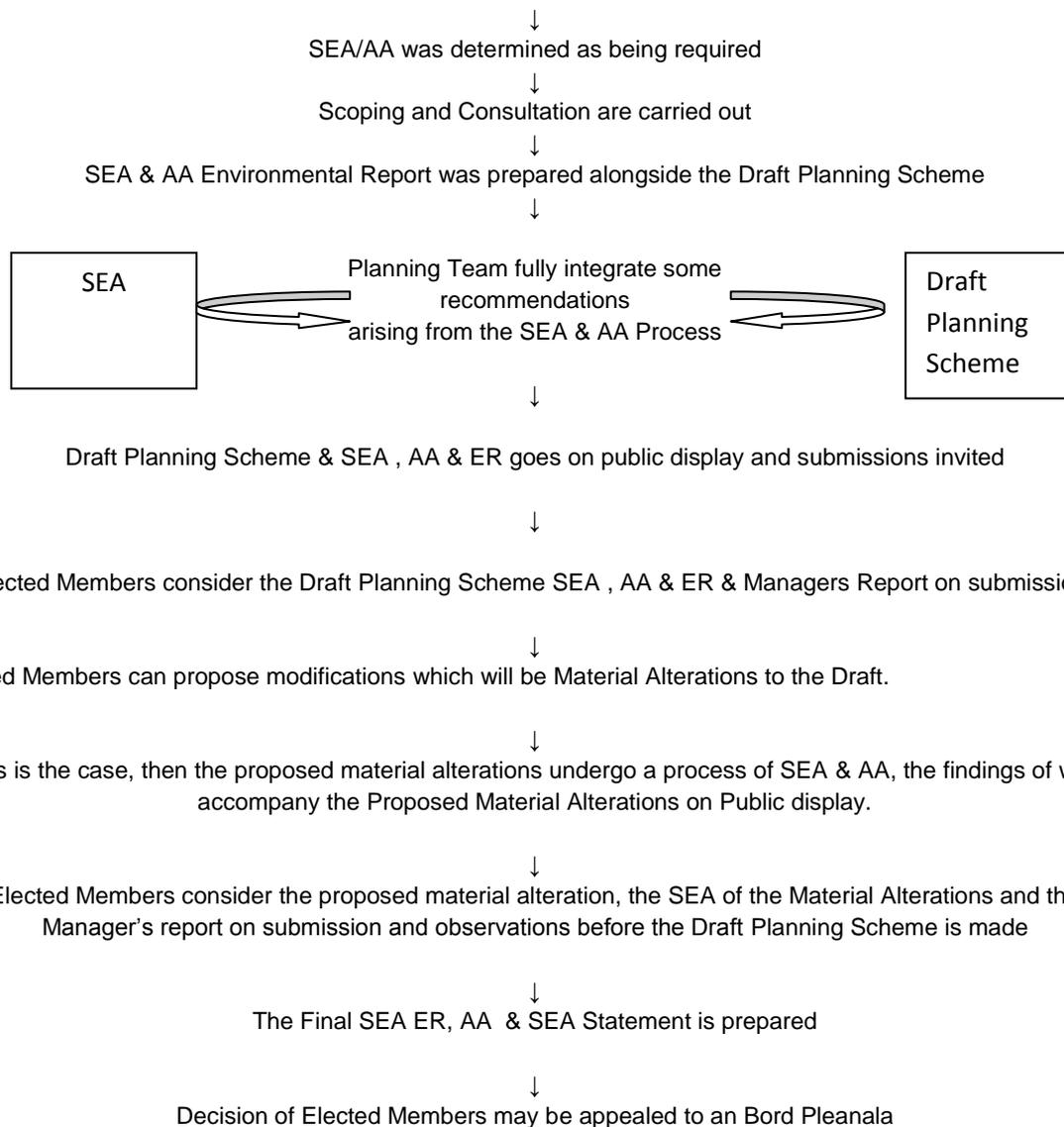
### 2.1 Introduction

Environmental considerations were integrated into the Planning Scheme throughout the SEA process. This can be broken down into a number of steps that run parallel to the drafting of the SDZ Planning Scheme. At each stage of the process all environmental impacts were assessed. The SEA process was also informed by the Appropriate Assessment which also ran in parallel with the drafting of the Planning Scheme.

The diagram below sets out how the SEA has been undertaken alongside the preparation of the Planning Scheme.

**Figure 1 - Stages in the Planning Scheme/SEA & AA Preparation Process**

Preparation of the North Lotts – Grand Canal Dock Planning Scheme Commences



The draft Planning Scheme was assessed during the following phases

- Pre Draft Consultation Period, including Scoping (consultation with the statutory consultees and non-statutory consultees)
- Evaluation of draft LAP objectives and policies (included in environmental report)
- Evaluation of submissions and observations to draft LAP
- Evaluation of proposed material alterations to draft LAP

## **2.2 Pre Draft Consultation Period, including Scoping (consultation with the statutory consultees and non-statutory consultees)**

In line with recommended best practice, the SEA process benefited from multi-disciplinary inputs across Dublin City Council's departments including waste management, Roads and Traffic Division for their input into Movement section. The City Archaeologist, Conservation, Heritage, Community and Arts Department for their input into built heritage, culture, community development & Tourism chapters. City Architects have played a pivotal role in the urban structure & design sections, public realm sections, and designing the City Blocks. Parks and landscape Division have been involved from the start in the Green Infrastructure and public realm sections. Housing Department and Economic Development Unit have also been consulted in relation to economic regeneration and housing sections of the Planning Scheme. Finally Drainage and Wastewater sections have been involved throughout the process and have provided guidance and advice throughout, and have also compiled a strategic overview of Flooding in the SDZ.

Over several few months individual meetings were held with a number of prescribed bodies and key stakeholders including: Enterprise Ireland, ESB, Bord Gais, ComReg, Eircom, Dublin Bus, Iarnrod Eireann, Waterways Ireland, Rail Procurement Agency, An Bord Pleanála, An Taisce, Office Public Works, Environmental Protection Agency, An Taisce, Office of Public Works, Environmental Protection Agency, National Parks and Wildlife Service, National Transport Authority, An Post, Department of Education, Schools planning/Spatial Policy Section, NAMA Representatives, Docklands Business Forum and Chamber of Commerce.

As part of the process Dublin City Council has been working closely with the Dublin Docklands Development Authority, in order to ensure a smooth transition.

The Planning Scheme has also been informed by a number of reports and mentoring from external consultants, in particular in relation to the AA and SEA, (Scott Cawley Ecological Consultancy Services) Soil contamination Issues (Flannery Nagel) and Design Input from Conor Norton (Loci)

As part of the pre draft stage of the Planning Scheme, a large number of consultations were carried out to inform the community, employers, landowners and statutory bodies of the process and to:

- Identify the issues arising in the potential SDZ Planning Scheme Area and the wider Docklands
- Identify the successful elements of this city-quarter that makes it attractive as a place to live, work and visit and
- Identify areas for improvement.

Consultation was carried out over several months and comprised of three Board Meetings, two Council meetings with Central and South Area Committees, consultation on an on-going basis with Community Liaison Committee and also five workshops on infrastructure, urban design, economic and social regeneration issues.

As part of the consultation process The Studio facilitated 'Street Conversations' which were carried out in November 2012 at the request of the Planning Department DCC, as a prelude to the formal consultations on the Docklands SDZ. In total 537 conversations were held over 7 days at the following locations within the Docklands

– Barrow Street, Grand Canal Square, Pearse Street, Ringsend, East Wall – Church Street, National College of Ireland (NCI) , North Quays, Sean O’Casey Centre East Wall, and Seville Place. The purpose of these conversations were to have an informal open and flexible process to encourage positive engagement and inclusive participation . Out of these conversations seven key themes emerged.

Finally as part of the consultation process a number of half day sessions were held from 19<sup>th</sup> October 2012 to 27<sup>th</sup> December 2012, 4 special sessions were also held to facilitate meetings with the senior forum, youth forum, youth care, and residents associations

### **2.2.1 Screening Stage for SEA.**

The Planning & Development (Strategic Environmental Assessment) Regulations 2004 and as amended by Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011, (S.I. 201 of 2011) make mention of the circumstances under which a proposed development must be accompanied by an Environmental Report. In the case of a Strategic Development Zone, the legislation automatically requires the provision of an Environmental Report in conjunction with the Draft Planning Scheme.

### **2.2.2 Scoping and Statutory Consultation**

Having established that SEA is mandatory for a Strategic Development Zone, the next step was scoping the contents of the Environmental Report (ER). Scoping is undertaken to ensure that the relevant environmental issues are identified allowing them to be addressed appropriately in the Environmental Report. Scoping is undertaken early in the process to ensure that all relevant issues are identified and dealt with.

Under Article 6 of the SEA Directive, the competent authority, in this case Dublin City Council, preparing the plan is required to consult with specific environmental authorities (statutory consultees) on the scope and level of detail of the information to be included in the Environmental Report. Under S.I. 436 of 2004 and as set out in the Planning and Development (Strategic Environmental Assessment) Regulations 2004 and S.I. 201 of 2011 amending the Planning and Development (Strategic Environmental Assessment) Regulations 2004 the statutory consultees have been established as being:

- (i)** Environmental Protection Agency (EPA),
- (ii)** the Department of Environment, Community and Local Government,(DECLG)
- (iii)** Department of Arts, Heritage and Gaeltacht Affairs (if potential significant impacts in relation to the architectural or archaeological heritage or to nature conservation)
- (iv)** Department of Agriculture, Fisheries and Food (if potential significant effect on marine environment / fisheries),
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- (v)** the Department of Communications, Energy and Natural Resources(DCENR) (if potential significant effect on marine environment / fisheries),
- (vi)** The adjoining planning authority to the plan area.(Fingal, South Dublin and Dun-Laoghaire Rathdown Co. Council)

In line with best practice, a Scoping Issues Paper was prepared by the planning authority to facilitate the consultation process. This was sent out to the statutory agencies on the 16th November 2012.

The report set out the background and context for the Planning Scheme land uses proposed, likely scale, nature and location of development and specific environmental considerations including:

- i. Population
- ii. Biodiversity, Flora and Fauna
- iii. Water
- iv. Air
- v. Climatic Factors
- vi. Material Assets
- vii. Cultural heritage
- viii. Landscape
- ix. Inter-relationships between the environmental receptors.

A submission was received from the EPA dated 11th December 2012. As part of the SEA submission a SEA Scoping Guidance Documents, SEA pack a Environmental Integration Checklist was submitted to assist in undertaking the Environmental assessment.

Summary of specific comments to be considered :

- Flood Risk Assessment (and associated CFRAMS)
- Protection/Improvement of Water Quality (in line with the Programme of Measures for the appropriate Water Unit in the Eastern River Basin Management Plan)
- Promoting the establishment of an integrated traffic management plan (and taking into consideration the recommendations of the Greater Dublin Area Draft Transport Strategy, as appropriate and relevant.
- Protection of areas of designated landscape character (including seascape, coast-scape, urban-scape) and integrating the Building Heights Strategy as appropriate
- Protection of designated national and international conservation areas(Natural Heritage Areas and Nature 2000 sites, including candidate & proposed sites)
- Promotion of a 'plan-lead' approach to integration, green infrastructure, and ecological corridors/linkages in the development of the Planning Scheme.
- Further comment will be provided by the Agency upon receipt of the Draft Environmental Report and Planning Scheme.
- Note should be taken of updated SEA Regulations/Circular, SI No.200 of 2011, and S.I No.201 of 2011, also DoEHLG Circular PSSP 6/2011 issued on 25th July 2011.
- Should refer to the recent European Communities (Birds and natural Habitats) Regulations 2011 (S.I No477 of 2011) .
- Environmental Authorities- reminded under the SEA Regulations to give notice to the stature Authorities

A submission was received from the Department of Arts Heritage and Gaeltacht on the 13th December 2012.

The main issues were as follows:

- The area of the SZD Planning Scheme contains an important wildlife corridor. The Royal and Grand Canals are both designated as proposed Natural Heritage Areas (pNHA) and both link up with the River Liffey in the Docklands area. They list a number of birds that use the general vicinity for nesting and feeding.
- Bats and otters both listed on the Habitats Directive for strict protection. Peregrine falcons also nest and hunt in the wider Docklands and are listed in annex 1.
- Note that our reference to Guillemots nesting in the area should be amended to Black Guillemots which are a different species, which nest in holes in the wall. Consideration should be given to their potential nesting places.
- Consideration should be given for providing nesting platforms for Peregrine Falcons on buildings of appropriate heights.
- The proposed SDZ area links into River Liffey where there are nesting terns within the South Dublin Bay and River Liffey Tolka Estuary SPA. Seals occur in the river Liffey occasionally, and also present in Dublin Bay.
- With regard to marine issues they refer to [www.npws.ie/marine](http://www.npws.ie/marine).
- They advise DCC to prepare an inventory of/and if necessary carry out a survey of the habitats and species present in the proposed area, before preparing the SDZ to fully inform the process.
- When carrying out the SEA it is recommended that the Biodiversity Strategic Environmental Objectives in the SEA cover habitats and species both within and outside of designated sites .

- It is recommended that Strategic Environmental Objective (SEOs) for biodiversity cover habitats and species both within and outside of designated sites as below where applicable.
- Natura 2000 sites, i.e. Special Areas of Conservation (SAC) designated under the EC Habitats Directive (Council Directive 92/43/EEC) and Special Protection Areas designated under the EC Birds Directive (Directive 2009/147 EC).
- Other designated sites, or sites proposed for designation, such as Natural Heritage Areas (NHAs), Nature:
  - Important that the needs of protected species such as salmon are considered.
  - Account should be taken of the Planning System and Flood Risk Management Guidelines, published in 2009. Important the ground and surface waters be protected from pollutants.
- Dublin City Council to ensure that adequate water supplies are present prior to development.
- SDZ should include a Natural Heritage Section and that all designated sites within the and nearby the SDZ should be mapped and listed.
 

Reference should be made to the National Biodiversity Plan and also the Dublin City Biodiversity Plan.
- Invasive species - a policy is needed to protect against introduction of such a species.
- Appropriate Assessment – The proposed draft SDZ should be screened for appropriate assessment. Important that the State 1 screening is in place in consultation with the teams working on the draft SDZ and SEA so that the draft SDZ will have no significant effects on any Natura 2000 site. Also recommended that DCC consult with other local authorities to determine if there are any other projects or plans which in combination with the proposed SDZ could impact on any Natura 2000 site.

### **2.2.3 Environmental Assessment and Preparation of Environmental Report**

The baseline information for the environmental report was gathered through a combination of GIS mapping of environmental sensitivities, existing reports, site visits, internal departments in Dublin City Council, who provided information on drainage, water, transport, conservation, archaeology, housing, flood risk issues, noise levels, etc

An Ecological Desktop Study was carried out by Scott Cawley Consultants in February 2013, which informed the baseline information for the Biodiversity section of the Environmental Report.

Information on flooding was obtained from Dublin City Council Drainage Section, Flood Resilience City Project and also a number of meetings were held with the Office of Public Works, and the EPA.

An internal study on Views and Prospects informed the Cultural Heritage section. The study identified a number of key views and landmark features.

A desktop study and qualitative risk assessment on soil contamination was carried out by Flannery Nagel Environmental Consultants, commissioned by Dublin City Council to inform the SDZ which indicated that some of the sites in the SDZ area have been contaminated by former industrial uses.

The protection of surface water and water bodies and improvement of water bodies and its interaction with the AA Natura 2000 sites in Dublin Bay was highlighted in the consultation process as a significant environmental sensitivity. Dublin City Council undertook an Investigative Monitoring programme for the River Liffey as part of the SDZ process. This was carried out over a 7 week period from October to November 2012, and six locations were monitored. This monitoring programme provided a snapshot of the quality of the water in the river, and highlighted the need for protection of the surface water over the wider catchment.

The importance of adequate sewage infrastructure was also highlighted as an environmental concern during the consultation process. The EPA granted the Greater Dublin Area Agglomeration Waste Water Discharge Licence D0034-01 in July 2010 which conditions the Local Authorities to address spills to the rivers and the sea. The Eastern River Basin District (ERBD) programme of measures will also influence development. Dublin City Council is currently advancing contracts to comply with the current legislation which include the upgrade of the Ringsend Sewerage Treatment Plant and the Preliminary Design of the City Centre Sewerage Scheme.

## **2.2.4 Preparation of the Environmental Report**

The preparation of the Environmental Report on the likely significant effects on the environment of the Proposed Planning Scheme included consideration of the following:

- baseline data relating to the current state of the environment; key environmental problems affecting the Plan area;
- links between the Plan and other relevant strategies, policies, plans, programmes and environmental protection objectives;
- the Plan's likely significant effects on the environment (positive and negative);
- measures envisaged for the prevention, reduction and mitigation of any significant adverse effects;
- an outline of the reasons for selecting the alternatives chosen; and
- monitoring measures to ensure that any unforeseen environmental effects will be identified allowing for appropriate remedial action to be taken

## **3.0 Evaluation of Draft Planning Scheme**

### **3.1 Introduction**

The Environmental Report evaluated the likely significant impacts of implementing the draft Planning Scheme on the environment using the baseline environmental data collected during the scoping process. As stated above the purpose of the Environmental Report was used to assess the likely significant effects of the Planning Scheme on the environment and to ensure that these significant impacts are considered during the preparation of the draft Planning Scheme. The Environmental Report also considered a number of alternatives to the Plan. These alternatives were assessed and a preferred strategy chosen.

The Environmental Report also outlined mitigation measures to remedy/reduce any potential significant impacts and a monitoring programme was developed to assess the impacts of the Plan on the environment. The monitoring programme is shown in set out in Appendix 1 of the SEA Statement.

Section (f) of the Schedule 2B of the SEA Regulations, as amended, requires an assessment of the likely significant effects of the Plan on the environment. The Plan objectives were assessed against the Environmental Protection Objectives (EPOs) in the Environmental Report prior to the display of the draft Planning Scheme. The Environmental Protection Objectives set out in Section 4 of the Environmental Report.

The environmental receptors were identified through the collaboration of the SEA team. These indicators acted as representative examples of environmental data and will facilitate the monitoring of the impacts of the Planning Scheme. Targets have been established for each of the objectives which set thresholds and limits for each environmental receptor. All objectives in the Planning Scheme were screened to see whether they had a negative, positive or no impacts on the environment.

Throughout the preparation of the Planning Scheme, environmental considerations were communicated to the Planning Team at the weekly SDZ workshops. This allowed the planning team to integrate and issues that arose into the Planning Scheme. As a result there have been various iterations of the Planning Scheme and Development Code each of which has been informed by the SEA and other processes such as the AA.

- a) The green infrastructure map has been informed by various sensitivities, such as, water ecological and visual considerations which will contribute towards the protection and management of these sensitivities.

- b) Building heights and frontages have been informed by visual considerations and also the existing built heritage and fabric already existing in the area, and will contribute towards the mitigation of visual effects.
- c) Protected Structure Designations have been identified across the sites, and will contribute towards the protection of architectural heritage.
- d) A green infrastructure use has been provided through the SDZ area which will enhance the GI potential in the area, and link up existing and surrounding areas.
- e) Higher density commercial and residential has been located along existing public transport routes. Also residential elements have been avoided in certain areas such as around Point Village due to noise related issues.
- f) The land use mix throughout the SDZ has been informed by sustainable mobility considerations which will contribute towards the achievement of sustainable mobility patterns.

### **3.2 Evaluation of Planning Scheme**

Section 7 of the Environmental Report sets out the evaluation methodology for assessing the Planning Scheme as chosen. The objectives of the of the draft Planning Scheme were tested against the Environmental Objectives developed earlier in the SEA process as outlined in section 4 of the Environmental Report. The results were put in Appendix 1 of the Environmental Report.

#### **3.2.1 Potential Impacts on Population and Human Health.**

Overall the objectives and high level themes contained in the Planning Scheme for the SDZ have been found to have overall significant positive/very positive long term impacts on population and human health. The plan assists in the creation of a sustainable, compact, quality, green, smart, clean and connected city as per the core strategy of the Dublin City Development Plan 2011 -2017. Regenerating these lands as with sustainable mixed uses connected to the city centre by way of good public transport links and green cycling and walking routes will have overwhelming positive impacts on both the existing and future inhabitants of the plan area and its environs.

#### **3.2.2 Potential Impact on Biodiversity, Flora and Fauna**

The Planning Scheme was found to have mostly significant beneficial impacts on the biodiversity, flora and fauna of the plan area. The Planning Scheme promotes the regeneration of this largely reclaimed former port area comprising of mainly Brownfield sites into a thriving mixed use community in the Docklands. The plan assists in the creation of a compact, quality, green, clean and connected mixed use area as per the core strategy of the Dublin City Development Plan 2011 - 2017. Objectives contained in the Sustainable Infrastructure, Green Infrastructure and Public Realm sections offer significant beneficial impacts on a long term basis.

While the majority of objectives will serve to have significant positive impacts on biodiversity, those objectives that encourage greater use by people of natural and man-made recreational assets and promote the development of walking and cycle routes through, or alongside them, may have the potential to have adverse impacts on biodiversity through the disturbance and/or destruction and/or fragmentation of habitats, and also potential spread of invasive species. Mitigation was considered necessary in order to offset any potential adverse impacts of implementing the Planning Scheme.

The Dublin region's wastewater treatment plant at Ringsend is currently operating beyond design capacity. Without an upgrade of infrastructure for wastewater the plan area's capacity to absorb additional population, economic growth and development without causing serious consequences for the quality of water bodies is seriously compromised. Deterioration of water bodies could potentially result in significant adverse impacts on a long-term basis for water based habitats and species. Mitigation was considered necessary in order to offset these potential negative impacts of development proposed under the Planning Scheme for the SDZ.

Short term construction works may have a negative impact on biodiversity. However it is considered that these potential impacts as a result of construction taking place are more appropriately dealt with at project stage, either by way of a planning application and/or an Environmental Impact Assessment (EIA) and/or an Appropriate Assessment (AA).

### **3.2.3 Potential Impacts on Water**

Water as an environmental receptor for the purposes of this SEA, refers to surface water bodies and the quality of same, and also includes flooding issues. The draft Planning Scheme places emphasis on high quality and sustainable densities to consolidate the area, population growth, economic growth and increase in development over the lifetime of the plan and beyond. The environmental assessment of the Planning Scheme has found that the scheme has the potential to have significant adverse impacts, as well as significantly beneficial impacts on water quality. Potential adverse impacts could come about particularly as a result of those objectives in the Planning Scheme advocating significant quantities of new mixed use development in the absence of adequate capacity in the wastewater infrastructure serving the Dublin region currently. Without the provision of upgraded and new wastewater infrastructure, the city's ability to absorb additional population, economic growth and development is seriously restricted. Objectives contained in the Planning Scheme that could have potential significant, long-term beneficial impacts on this environmental receptor include those that provide for the improvement of water quality in line with the ERDB, the implementation of tree planting and soft landscaping schemes, provision of new open spaces and pocket parks, the incorporation of green roofs in future developments, a green infrastructure and requirements for incorporation of SuDS measures in developments. While construction, demolition and operational phases may also have potential for negative impacts on water it is more appropriate that these potential impacts be dealt with at project stage, either by way of a planning application and/or an Environmental Impact Assessment.

New surface water pipes will need to be constructed on site so that surface water drainage from the site will be diverted from existing combined sewer systems to a separate surface water discharge outfall to the River Liffey, via a non return valve to prevent tidal ingress. Water contamination is likely to occur as a result of contaminants leaving affected sites either overland or subsurface flow into the existing drainage system. Removal of contaminated soils from sites and remediation of the site will lead to a long term positive impact on the groundwater and surface water bodies in the area.

In terms of flood risk management a leading policy for reducing flood risk in the area will be the use of Sustainable Urban Drainage Systems (SUDS). These have been mandatory in DCC since 2005, and will reduce run-off rates from newly paved area and hence reduce flood risk resulting from these new paved areas. The policy encourages the use of green roofs, rainwater recycling, soak ways/infiltration devices and other methodologies that reduce peak storm water run-off. Minimum floor levels for residential development in the docklands have been in place since 2005. This figure currently stands at 4.0m OD MH. Site specific flood risk assessments for individual development could result in a higher figure being used. Flood resilient construction is advised as a mitigation measure to address areas of known flood risk where floor levels cannot be changed.

### **3.2.4 Potential Impacts on Air & Noise**

The Planning Scheme for the SDZ was found to have potential for both significant beneficial and adverse effects on air quality and noise levels. It was found that there was potential for significant adverse effects from some objectives promoting significant amounts of new development in the plan area as in the Land-Use Strategy, the Economic Regeneration, Retail, Residential Neighbourhoods, and Community Development and also some of the City Blocks.

At a strategic level, the environmental assessment of the Planning Scheme for the SDZ area has been found to have potential for significant beneficial impacts on the SDZ area overall and into the long term. There is significant potential, by pursuing the strategy of the Planning Scheme to reduce air emissions by encouraging a modal change from travel using the private car to more sustainable forms of transport such as public transport, walking and cycling, by encouraging more green routes and by requiring sustainable and energy efficient housing. Promoting such a strategy is in keeping with the policy at national, regional and city planning policy. Some objectives have been found to have an insignificant impact or no impact on Air Quality and Noise, on the basis that a previous overarching objective advocates the actual quantum of development proposed in the Planning Scheme. Mitigation measures have been put in place for those overarching /objectives that have been found to have potentially significant adverse impacts on air and noise and therefore there is no need for duplication.

While construction, demolition and operational phases may also have potential for negative impacts it is more appropriate that these potential impacts be dealt with at project stage, either by way of a planning application and/or an Environmental Impact Assessment (EIA) and/or an Appropriate Assessment.

### **3.2.5 Potential Impacts on Climatic Factors (To minimise emissions of greenhouse gases)**

The Planning Scheme was found to have mostly significant beneficial impacts on the emission of greenhouse gases within the SDZ area. Overall the Planning Scheme promotes the regeneration of this largely industrial former port area comprised of many Brownfield sites into a high quality sustainable mixed-use urban area. The scheme assists in the creation of a compact, quality, green, clean and connected mixed use area as per the core strategy of the Dublin City Development Plan 2011 - 2017. Objectives contained in the Economic regeneration, Residential Neighbourhoods, Community Development, Movement, Sustainable Infrastructure, tourism, Urban Structure, Green Infrastructure, Public Realm, Sustainable Boiling Quality sections of the plan offer significant beneficial impacts on a long term basis.

Long term, the concentration of development in the area with a mix of uses and choice of public transport options, allied to attractive pedestrian and cycle options will reduce the potential greenhouse gas omissions. While construction, demolition and operational phases may also have potential for negative impacts in the short term as construction is undertaken of the various phases of the Development of the city blocks. It is more appropriate that these potential impacts be dealt with at project stage, either by way of a planning application and/or an Environmental Impact Assessment (EIA) and/or an Appropriate Assessment (AA).

### **3.2.6 Potential impacts on Material Assets.**

The Planning Scheme was found to have generally significant beneficial impacts on material assets, with no objectives found to have any significant adverse impacts on material assets, i.e transport and waste management. In general more beneficial impacts were found in relation to encouraging modal change from the car than for the environmental protection objective of reducing waste generation and adopting a sustainable approach to waste management.

Significant beneficial impacts were identified in the Planning Scheme relating to the creation of a mix of uses, higher densities, which benefit from good public transport in association with proposed new walking/cycling, new connections, new pedestrian bridges that will ultimately improve connectivity throughout the area. This is also reflected in the positive impacts identified with the development of City Blocks and the creations of new permeable routes through these blocks with new green routes. Because the area is already well serviced by a high quality public transport route connecting the city centre, the proposed new connections through the city blocks and the new pedestrian/public transport bridges would improve access to public transport and encourage walking and cycling in the area. This would have significant beneficial impacts for residents and workers in terms of their quality of life, and also benefits the wider Docklands areas as a whole, by improving connectivity. The opportunities available to switch to more sustainable modes of transport would be enhanced.

Significant beneficial impacts were noted from a number of objectives promoting sustainable waste management, in particular objectives which encourage the use of sustainable technology and building materials, and also encourage recycling facilities which reduce waste.

### **3.2.7 Potential impacts on Landscape & Soils.**

The environmental assessment found that the Planning Scheme overall will have significant beneficial impacts on landscape and soils. The redevelopment of these former Dublin Port Industrial lands, which would have a number of contaminated sites, into a mixed use area in the Docklands reinforces the principles of sustainable planning through the reuse of Brownfield sites, rather than developing Greenfield sites. The Planning Scheme includes many objectives which seek to use the existing landscape assets including the built heritage features and industrial heritage, the protected structures, maritime heritage to give character and a new identity to the area as a thriving maritime quarter. The objectives set out in the Planning Scheme promoting high quality sustainable urban design, with distinctive city blocks with key buildings and urban squares marking certain routes, this marked with a high quality built finish, and diversity of buildings, reuse and retention of Protected Structures,

creates a visually interesting environment that will inherently improve the quality of this former industrialised port lands. This together with the new green streets, parks plazas , tree planting and SuDS features will provide an attractive landscape to cater for the existing and future needs of the residents and workers in the community. Soil contamination in the Planning Scheme area needs to be addressed. Any identified contamination will require different levels of intervention. Any remediation measures may require a licence granted by the EPA under the Waste Management Act 1996 for treatment and or removal to disposal sites under strict international accepted standards. The Flannery Nagel Report gives an indication of the levels of remediation required (see [www.dublincity.ie](http://www.dublincity.ie))

### **3.2.8 Potential impacts on Cultural Heritage.**

The Planning Scheme was found to have either beneficial or else no/or insignificant impact on the cultural heritage of the SDZ area. Overall the Planning Scheme promotes cultural heritage in the plan area. The Planning Scheme promotes the regeneration of this largely former industrial port lands comprising many Brownfield sites into a mixed use urban quarter of the Docklands, and it frames the form of development around the existing and proposed new cultural assets so that they become the 'place making' elements of the newly developing and existing communities. The green infrastructure strategy feeds into each of the city blocks, and links the Key heritage assets within the SDZ area from the Campshires, linking the Royal Canal to the River Liffey to the Grand Canal Dock and River Dodder, with its related industrial heritage and Protected structure

### **3.3 Mitigation Measures**

Section 8 of the Environmental Report sets out the mitigation measures to prevent, reduce or offset any potential significant adverse effects of implementing the Planning Scheme.

Potential significant adverse impacts of implementing the Planning Scheme could potentially arise as a result of objectives to facilitate additional population and economic growth and development, increasing densities and generally facilitating intensification of the area, promoting increased access to recreational areas, opening up private recreational areas and promoting taller buildings in some locations of the city. While these policies are fully in line with national, regional and Dublin City Council policy as set out in the city development plan to consolidate the city overall and ensure a more compact urban form with greater intensity of uses and to ensure that the city's role as the economic engine of the state is strengthened there is potential for significant adverse impacts on the receiving environment unless mitigated against. Mitigation measures are the measures to prevent, reduce and as fully as possible offset any significant adverse environmental effects as a result of implementing a plan.

#### **3.3.1 Mitigation through consideration of alternatives**

A number of alternatives were considered at an early stage in the process and evaluated for their likely significant environmental effects (see section 6). Three options were considered varying the density of development ie. Low density development, medium density (Planning Scheme) and high density throughout the Planning Scheme area.

The environmental baseline data and the Strategic Environmental Objectives were used in order to predict and evaluate the environmental effects of implementing the alternatives and communication of the findings were made to the planning team who made an informed decision as to what option was to emerge as the Planning Scheme.

#### **3.3.2 Mitigation through integration of Environmental Considerations into the Planning Scheme and the City Block Layouts**

Environmental considerations were communicated to the planning team throughout the process of preparing the Planning Scheme. This allowed the team to integrate these considerations into the city block layouts

- The uses, densities, access and movement throughout the city blocks have been informed by sustainable mobility considerations and will contribute towards the achievement of sustainable mobility patterns.

- Green Infrastructure has been incorporated in some form or another in the city blocks with larger squares /parks being provided in the hubs. SuDS features have been incorporated into all new green infrastructures to mitigate against flooding and to improve water quality in the area.
- Building heights and frontages have been informed by visual considerations and sunlight/daylight analysis studies and will contribute towards the mitigation of visual effects
- Protected Structures have been identified in the Planning Scheme; these will contribute towards the protection of architectural heritage.
- Residential uses have as far as possible been located away from main street frontages along the Quays to reduce the impacts of noise.
- The Planning Scheme has been informed by the AA, and FRA carried out for the area

### 3.3.3 Mitigation referring to the Dublin City Development Plan 2011 – 2017

In addition to the mitigation measures that have been integrated into the Planning Scheme, where the Planning Scheme does not address an aspect of a development proposal the assessment will revert to the policies and objectives of the current Development Plan’.

As set out in Section 7 and detailed in Appendix A some objectives will serve to have potential adverse impacts on some environmental receptors, particularly water, landscape and biodiversity, flora and fauna. The mitigation measures are set out for each of the affected environmental receptors below

### 3.3.4 Mitigation by Inclusion of Additional Objectives

Table 8.1 of the Environmental Report links the key mitigation measures which have been integrated into the Planning Scheme to the likely effects of implementing the Planning Scheme if unmitigated. The integration of these measures into the Planning Scheme occurred over number of meetings and was informed by various communications and workshops throughout the SEA process. The measures generally benefit multiple environmental components.

**Table 8.1 – Mitigation Measures**

Likely Significant Effect, if unmitigated	Mitigation Measures reference from Planning Scheme and DCDP Policies , 2011 – 2017
<p>Ph1 –To protect and enhance people’s quality of life based on high quality residential, working, and recreational environment and on sustainable travel patterns.</p> <p><b><u>Likely Significant Effect if Unmitigated.</u></b></p> <p>Objectives set out in the Planning Scheme have mostly long term beneficial impacts. Policies and objectives set out in the DCDP 2011 – 2017 and the Planning Scheme objectives provide adequate mitigation for protect and enhance people’s quality of life based on high quality residential, working, and recreational environment and on sustainable travel patterns.</p> <p>Impacts of higher buildings in close proximity to existing residential communities, impacting adversely on their current amenity standards.</p>	<p>Dublin City Development Plan(DCDP) 2011 – 2017 Policies: SI53, SI54, QH1, QH3, QH4, QH5, QH8, QH9, QH10, QH15, QH16, QH17, QH18, QH25, NC1, NC2, NC4, NC6, NC7, SC3, SC1, SC4, SC5, SC13, SC14, SC17, SC18, SC19, SC20. SC28. SC29</p> <p>Most of the objectives in the Planning Scheme were shown to have largely beneficial impacts on the Environmental Protection Objective Population and Human Health.</p> <p>Specific objectives were included in the Planning Scheme to mitigate against any potential negative impacts of higher buildings on adjoining residential properties. These include:</p> <p>BH1, US13, US15 &amp; US16</p> <p>Adequate mitigation is in place. No further required.</p>
<p>BFF1 -To protect and enhance the diversity and range of habitats, species, natural heritage features and</p>	<p>DCDP 2011 – 2017 Policies GC1, GC3, GC4, GC5, GC6, , GC7, GC8, GC9, GC10, GC12, GC13, GC14,</p>

<p>wildlife corridors/green corridors</p> <p><b><u>Likely Significant Effect if Unmitigated.</u></b></p> <ul style="list-style-type: none"> <li>- Limitations in wastewater treatment capacity could lead to deterioration in water quality</li> <li>- Consequent adverse impacts on water based habitats, species and ecological habitats.</li> <li>- Potential adverse effects during construction and operation phases.</li> <li>- Some objectives which promote new roads, cycle ways etc through existing green areas, could potentially cause fragmentation and or loss or reduction of habitats and/or species.</li> <li>- Potential spread of Invasive species</li> </ul>	<p>GC15, GC16, GC17, GC18, GC19, GC0, GC21, GC22, GC23, GC24 GC25, GC26, GC27, GC28, GC29,GC30, GC31,</p> <p>Specific Objectives were included in the Planning Scheme to offset any potential negative impacts on the Environmental Protection Objective Biodiversity Flora and Fauna, including objectives for the protection of ground and surface water. These include:</p> <p>PS – GI1, GI2, GI4, GI5, GI8, GI9, GI10, GI11, GI2,, SI1, SI2, SI3, SI4, SI5, SI9, SI10,SI11, SI18, SI20, SI21, SI22.</p> <p>Adequate mitigation is in place. No further required.</p>
<p>W1- To comply with EU Water Framework Directive to ensure and maintain at least good ecological status of all receiving waters In the SDZ.</p> <p>W2- To reduce and manage the risk of Flooding</p> <p>W3 -To provide adequate waste water treatment, water distribution networks and drainage networks.</p> <p><b><u>Likely Significant Effect if Unmitigated.</u></b></p> <ul style="list-style-type: none"> <li>- Objectives that promote significant quantities of new development in the absence of adequate capacity in the wastewater infrastructure could potentially have significant adverse impacts on the environmental receptor water.</li> <li>- Increased risk of flood events in area due to climate change.</li> </ul>	<p>DCDP 2011– 2017 Policies: , SI35, SI36, SI37, SI39, SI40, SI41, SI42, , SI36, SI37, SI39, SI43,SI40,SI44, SI45, SI46, SI47,SI48, SI49, SI50, SI51, SI52,GC24,</p> <p>Specific objectives have been included in the Planning Scheme to offset any potential impact on water quality and to ensure good ecological status of all receiving waters in the SDZ. These include:</p> <p>SI1, SI3, SI3, SI4, SI5, SI9, SI10, SI11, SI18, SI20, SI21,SI22, GI4, GI8, GI9,GI11.</p> <p>Specific objectives have been included in the Planning Scheme to offset any mitigate against risks of flooding. These include</p> <p>GI1, GI4, GI8, GI9, SI1,SI2, SI3, SI4, SI5, SI6, SI7,SI8,SI10, SI11</p> <p>Specific objectives have been included in the Planning Scheme to ensure that adequate waste water treatment distribution networks and drainage networks are provided. These include:</p> <p>SI1, SI2, SI3, SI4.</p> <p>Adequate mitigation is in place. No further required.</p>
<p>AN1. To protect good air quality status and minimise outputs of Nitrogen Oxides (NO2) and Particulate matter (PM10)</p> <p>AN2. To maintain, and, where possible, improve the acoustic quality for the current and future residents of the plan area.</p>	<p>DCDP 2011 – 2017 Policies: SI53, SI54</p> <p>Specific objectives have been included in the Planning Scheme to offset any mitigate against and potential impacts on noise and air quality. These include:</p> <p>SI14, SI15</p>

<p><b><u>Likely Significant Effect if Unmitigated.</u></b></p> <p>Increasing the amount of development in the plan area will have potential for significant adverse impacts on the amount of road traffic, which would be one of the biggest threats to noise levels and also air quality, in terms of Nitrogen Oxides and Particulate Matter in the atmosphere. Overall however the plan I promotes a compact, mixed use area where residential, employment and retail will be provided alongside one another and in an area with good public transport links. Further public transport improvements are proposed. This will reduce the need for travel by private car, and encourage a modal change to more sustainable forms of transport such as public transport, walking and cycling.</p> <p>Short term impacts due to construction related impacts on noise.</p>	<p>Adequate mitigation is in place. No further required.</p>
<p>F1 – To minimise emissions of greenhouse gases</p> <p>CF2- To limit adverse impacts of climate change through the use of sustainable energy sources</p> <p><b><u>Likely Significant Effect if Unmitigated.</u></b></p> <p>Overall the Planning Scheme promotes the regeneration of this largely industrial former port area comprised of many Brownfield sites into a high quality sustainable mixed-use urban area. The plan assists in the creation of a compact, quality, green, clean and connected mixed use area as per the core strategy of the Dublin City Development Plan 2011 - 2017. Objectives contained in the Economic regeneration, Residential Neighbourhoods, Community Development , Movement, Sustainable Infrastructure, tourism, Urban Structure, Green Infrastructure, Public Realm, Sustainable Boiling Quality sections of the plan offer significant beneficial impacts on a long term basis.</p>	<p>DCDP 2011 – 2017 Policies: SI24, SI25, SI26, SI27, SI28, SI60,SI61, Si62, SI63, SI64.</p> <p>Specific objectives have been included in the Planning Scheme to offset any mitigate against and potential impacts on climatic factors. These include:</p> <p>ER15, MV1, MV2, MV3, MV4, MV5, MV6,MV7,MV8, MV9, MV10, MV13, MV14, MV15, MV16, SI14, SI15,SI16, Si17.</p> <p>Adequate mitigation is in place. No further required.</p>
<p>MA1- To encourage modal change from car to more sustainable modes of transport such as public transport, walking and cycling.</p>	<p>DCDP 2011 – 2017 Policies:SI21, SI20, SI14, SI15, SI16, SI17, SI18, SI11, SI9, SI10, SI18SWI3,SI4, SI2, SI1</p> <p>Specific objectives have been included in the Planning Scheme to encourage modal change from car to more sustainable modes of transport. Specific objectives include:</p> <p>MV1, MV2, MV3, MV4, MV5, MV6, MV7, MV8, MV9,MV10, MV11,MV12, MV13, MV14, MV15, MV16</p>

<p>MA2 – Too reduce the generation of waste and adopt amore sustainable approach to waste management</p> <p>MA3 –To promote sustainable water use and promote sustainable drainage systems.</p> <p><b><u>Likely Significant Effect if Unmitigated.</u></b></p> <p>Overall the Planning Scheme was found to have significant long term beneficial impacts on material assets, with no objectives found to have any significant adverse impacts.</p> <p>Increase in flood events. Contaminated water issues. Lack of funding to deliver adequate infrastructure Unsustainable approach to waste management</p> <p>Unsustainable modes of transport – over reliance on the car as the primary mode of transport.</p>	<p>DCDP 2011 – 2017 Policies:QH10</p> <p>Specific objectives have been included in the Planning Scheme to reduce the generation of waste and adopt a more sustainable approach to waste management. Specific objectives include</p> <p>SI19</p> <p>Specific objectives have been included in the Planning Scheme to promote sustainable water use and promote sustainable drainage systems. Specific objectives include:</p> <p>SI5, SI10, SI11, GI4, GI8, GI9, GI11</p> <p>Adequate mitigation is in place. No further required.</p>
<p>LS1 To conserve and enhance valued natural and historic landscapes and features within them.</p> <p>LS2 – To protect, improve and maintain the quality of soils in the SDZ area.</p> <p><b><u>Likely Significant Effect if Unmitigated.</u></b></p> <p>Negative impacts of taller buildings – uncertainty regarding interrelationship with taller buildings and adjoining residential areas.</p> <p>Potential Soil contamination Issues and ground and surface water contamination.</p>	<p>DCDP 2011 – 2017 Policies: FC26,FC27, FC28, FC20, FC30, FC31, FC32, FC33,FC34, FC35, FC36, FC37, FC38, FC40, FC48, FC46, FC58, FC68, SC7, SC8.SC17.SC18, SC19,SI41, SI42.</p> <p>Specific objectives have been included in the Planning Scheme to conserve and enhance valued natural and historic landscapes and also to mitigate against any potential impacts of taller buildings: These include:</p> <p>BH1, BH2, BH3, BH4, BH5, BH6, BH7, BH8, BH9, BH10, BH11, BH12. Specific objectives in relation to height include: US1, US3, US13, US15, US16, Specific objectives have been included in the Planning Scheme to protect, improve and maintain the quality of soils and protection of surface and ground water: These include:</p> <p>SI18, SI9, SI20, SI21, SI22.</p> <p>Adequate mitigation is in place. No further required.</p>
<p>CH1 – To protect and enhance the cultural heritage of the plan area including the built environment and settings and archaeological assets.</p> <p><b><u>Likely Significant Effect if Unmitigated.</u></b></p> <p>Loss of Protected Structures, and erosion of cultural</p>	<p>DCDP 2011 – 2017 Policies: FC63, FC64, FC66, FC67</p> <p>Specific objectives have been included in the Planning Scheme to protect and enhance the cultural heritage of the area including the built environment: These include:</p> <p>BH1, BH2, BH3, BH4, BH5,BH6, BH7, BH8, BH9,</p>

heritage in the area if unprotected.	BH10, BH11,& BH12.  Adequate mitigation is in place. No further required.
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After screening the Planning Scheme it was concluded that adequate mitigatory measures were in place in the form of objectives to offset any potential impacts on the environmental receptors were provided in the draft Planning Scheme. No additional mitigation measures were considered necessary in relation to any of the environmental receptors. Objectives with sustainability at their core allow them to act as mitigation measures to offset any potential adverse impacts on the environment as a result of implementing the plan. Mitigation in the form of objectives serves to formalise the mitigation measures and fully integrates them into the Planning Scheme process.

### 3.4 Public Display period of Draft Planning Scheme, AA & Environmental Report.

Dublin City Council placed the draft Planning Scheme on public display for a period of 6 weeks from Monday 25<sup>th</sup> March 2013 to Friday 10<sup>th</sup> May 2013 inclusive during which time submissions and observations were invited. A total of 120 submissions were received on the draft Planning Scheme including a number of submissions from the Environmental Authorities and other prescribed authorities. The submissions received were grouped under the general themes correlating to the chapter headings in the draft Planning Scheme and associated environmental reports. A managers report was prepared on the submissions received providing a response and recommendation on each proposed amendment on public display. Of the alterations proposed in the draft Planning Scheme, 17 new objectives were proposed, 13 objectives were alerted/amended and 3 objectives were deleted.

A number of submissions were received in relation to the SEA implications. A submission was received from the Environmental Protection Agency (EPA) setting out the procedural issues for the SEA process. They acknowledged in the plan the potential for contaminated lands/groundwater. They referred to the general guidelines set out for contaminated soil, material and subsequent removal off sites. They acknowledged the inclusion of objective SI17 in the draft Planning Scheme in relation to soil decontamination. They notes the Environmental Protection Objectives set out in chapter 4, the identification of alternatives set out in chapter 5, and the mitigation and monitoring measures set out in chapter 9, and . They also acknowledged the Flood Risk Assessment and that the plan takes into account the Dodder CFRAMS recommendation where relevant. They also refer to the commitment for enhanced SuDS in the plan area, and to ensure that surface water quality is protected. They stated that consideration should be given to including a summary of particular designated conservation sites (European and National) and protected habitats and species. Other submissions received referred to the fact that there was no shadow analysis or wind studies carried out and other submissions related to the lack of a centralised information point in DCC for environmental data. A number of the submissions referred also to the deficiencies in infrastructure and particularly in the South Docks.

In terms of the Flooding issues, 9 submissions were received including submissions from the OPW, the Department of the Environment Community and Local Government, and the EPA. A number of submissions were also received from residents in the area and local businesses concerned about flooding issues. The OPW in particular highlighted the need to the Justification Test to be highlighted at the beginning, and its application developed on an evidence basis. They also requested that additional flood maps be provided, and that a Stage 2 FRA be carried out as per the Guidelines. The DoECLG commented that a more detailed FRA should be prepared including a detailed Justification Test.

A number of the submissions were concerned about the increased risk of flooding from new developments. A managers report was done up on the submissions with the managers response and recommendations to submissions raised.

As per the recommendations from the EPA all amendments to the draft Planning Scheme including any new or reworded objectives were screened to assess their impact on the environment. As part of this process all new

and or amended objectives and significant text changes to the draft Planning Scheme were screened for SEA and AA, and a report was compiled which accompanied the managers report.

A number of the submissions from statutory bodies and also residents expressed concerns about the level of detail of the Flood Risk Assessment. In light of this it was recommended that Appendix 1 and Appendix F of the Environmental Report be amended to include a Stage 2 Flood Risk Assessment with more detailed maps, and the inclusion of an indicative flood zone map. It was also recommended that all existing and proposed flood defences be shown on the map.

A number of amendment to the text were incorporated in the text of the Planning Scheme as per the recommendation from the EPA including new text relating to contaminated lands was inserted into section 4.5 section 4.5.4.10. New text was added into chapter 4.11 under Environment and Open Space and Green Infrastructure outlining the Designated Areas for Nature Conservation. In terms of monitoring new text was added into Section 6.5 under Monitoring Progress that 'the Progress Report will also provide annual updates on the monitoring programme set out in Section 9 of the Environmental Report.

In terms of submissions and concerns regarding height new text was inserted into Section. 4.10.6 which stated that applications for high building shall be in accordance with Development Plan guidelines set out in Section 17.6 of the Dublin City Development Plan 2011-2017 . In this regard, applications for high buildings where proposed in the SDZ will be subjected to assessment under the development management probes including matters such as shadowing, amenity, microclimate, and Environmental Impact Assessment.

A new objective US16 was also inserted which required 'Applications for medium and high rise buildings shall be accompanied by a design statement of the Assessment Criteria for high buildings as set out in section 17.6.3 of the Dublin City Development Plan 2011-2017.

Additional objectives were added in light of submissions received to ensure the protection of surface and ground water quality.

SI19 To ensure that surface water quality is protected in the construction of enhanced drainage works to meet requirements of the Water Framework Directive.

SI20 To ensure the protection of surface and ground water quality in the plan area and surrounding areas and the protection of protected habitats and species including designated national and international conservation sites in implementing the plan.

SI21 To require the preparation of a soil remediation plan for each city block or adjacent blocks, including associated streets, prior to the commencement of any development within the city block(s) to ensure an integrated approach to soil decontamination is taken (see also paragraph 6.1.2 providing co-ordinated delivery , requirements for each city block.

In light of the submission from the EPA objective BH1 under built heritage was amended to include areas of significant streetscapes and urban landscapes. BH1 To ensure that the architectural and historical significance of the Docklands areas is protected, conserved and enhanced to include areas of significant streetscape and urban landscape.

Additional text was also included in section 4.6.4.2 which required that an architectural heritage impact assessment shall be submitted for development in the vicinity of protected structures to assist the planning authority in making an informed decision regarding the potential impact on architectural heritage.

### **3.4.1 Evaluation of Proposed Material Alterations to Draft Planning Scheme**

The manager's report was circulated to the Councillors with the SEA and AA (Report Number 234/2013). Following the Managers report on submissions, the council received a total of 131 motions from the elected members of the Council. A manager's report on the motions was prepared and submitted (Report no. 235.2013) with recommendations to the Elected Members for their considerations on the 22<sup>nd</sup> of July 2013. The manager's report was accompanied by an Environmental Report and an Appropriate Assessment screening. The Elected Members having considered the North Lotts & Grand Canal Dock Draft Planning Scheme (and the manager's reports numbers 234/2013 and 235/2013, of the Dublin City Managers), in accordance with Section 169 of the

Planning and Development Act 2000, as amended, resolved to agree the recommendations of the Managers Report on submission received, as amended and resolved to make, subject to variations and modifications to the Draft Planning Scheme. This was agreed at a special meeting of the Council held on 22<sup>nd</sup> July 2013 and it was agreed that the amendments be placed on a four week statutory public display period.

Of the alterations proposed 22 new objectives were proposed, 19 objectives were altered and 3 were deleted.

Dublin City Council places the proposed amendments to the draft Planning Scheme on public display for a period of four weeks from Tuesday the 13<sup>th</sup> August to Tuesday the 10<sup>th</sup> of September 2013 inclusive, during which time submission and observations were invited. A total of 59 submissions were received on the proposed amendments to the draft Planning Scheme including a number of submissions from statutory authorities. The submissions received were groups under the general themes correlating to the chapter headings in the draft Planning Scheme and associated environmental reports.

The main changes that had implications to the environment and the SEA, were the proposed amendments to the Flood Risk Assessment and recommendations on foot of submissions to the SEA. The EPA in their submission welcomed the inclusion of many of their points in their previous submission, including objectives in relation to protection of water quality, remediation of potential contaminated lands, and associated waste management, also the protection of designated biodiversity sites are in particular noted. They note the intention to prepare a Masterplan as referred to in section 1.2.4 and if this involved the zoning of lands then they pointed out the requirements of the Habitats and SEA directives. They noted the inclusion of objective TL9 which promotes the recreational use of water including rowing and boating clubs, and which seeks to ensure that any new infrastructure is provided in a manner which safeguards and protects these recreational uses. The EPA also notes that the Planning Scheme should ensure that the potential for disturbance to adjacent National and European sites is minimised. It should be noted that a number of objectives were included in the Planning Scheme to ensure the protection of designated National and European sites.

As part of the amendments a new appendix 4 an infrastructural schedule was proposed

As part of the proposed amendments a revised Flood Risk Assessment was submitted with additional text, on foot of the submission from the OPW. The major flood risk to the area comes from Coastal and pluvial flooding. Based on the Dublin Coastal flooding protection Study (April 2005) it has been determined that the dominant flooding mechanism is coastal to the Rory O'Moore Bridge on the Liffey. In the case of coastal flood risk the final report of the Eastern CFRAMS Liffey Study currently underway will determine the 1000 year extent and by doing so identify Zone B and Zone C. Previous studies identified the 200 year event, identifying Zone A. These particular flood maps are expected to be complete in January 2014. The CFRAM reports will ultimately be used to identify specific measures required in the area. In the interim the early warning systems and in conjunction with capital works such as the South Campshires Flood Protection Project (currently at advanced design stage) existing Spencer Dock Gate and existing flood defences along the Dodder provide alleviate to flood risk in the area. As it is proposed to completely protect the proposed SDZ area from coastal flooding and there is no risk of fluvial flooding to the 0.5% AEP level plus 50 years of forecast global warming there will be no depth, hazard or velocity maps for this area once protected. On foot of the comments from the OPW additional text was proposed to Appendix 1 & F (flood Risk Assessment).

Minor amendments were proposed on foot of submissions received on the amendments. These included two minor amendments to existing objectives and text amendments to the Planning Scheme.

On foot of the submission received from the Dart Underground Office, it was recommended that the City Block drawings be amended to show the accurate reservation strip for the Dart Underground Station and also the Zone of Influence of the Dart Underground. In this regard a new Appendix 7 was proposed which provided drawings showing the line of the proposed Dart Underground, the reservation strip and Zone of Influence. Minor text amendments were made to the land use mix and height ranges in the City blocks, but this was not considered to have any significant impact on the environment.

The managers No. 322/2013 on the submission received from the public display alongside the AA and SEA reports were circulate to the councillors for consideration on Monday the 7<sup>th</sup> of October. Two workshops were

held on Thursday the 10<sup>th</sup> of October with Councillors to discuss the managers report. The Councillors had up until Wednesday the 16<sup>th</sup> of October to submit motions. A total of 28 Motions were received.

The Managers report on Motions (Report 323.2013) further to Report No. 322/2013 was circulated to the Councillors prior to the Council meeting on the 5<sup>th</sup> of November.

Again only minor amendments were made to the draft Planning Scheme at this stage, and these were not considered to have any major impact on the environmental indicators.

### 3.4.2 Making of the Planning Scheme

At the Council meeting on the 5<sup>th</sup> November 2013, the Council by resolution agreed to make the North Lotts & Grand Canal Dock Planning Scheme, Strategic Development Zone.

### 3.5 Summary How Environmental Considerations have been taken into account in the Planning Scheme

SEA Objective	Environmental Considerations and findings from the Environmental Report	Integrated into the Plan (Yes/No?)	How has Environmental Consideration been Taken into Account and if not Why?
<p><b>PH1</b> To protect and enhance people's quality of life based on high-quality residential, working and recreational environments and on sustainable travel patterns.</p>	<p>Impacts of higher buildings in close proximity to existing residential communities, impacting adversely on their current amenity standards.</p>	<p><b>Yes</b></p>	<p>Most objectives in the Planning Scheme have long terms beneficial impacts on population and human health. A number of objectives set out in the planning that would significantly enhance peoples quality of life base on high quality residential, working and recreational environment and on sustainable travel patterns. The development code and Planning Scheme as adopted provides for a medium to high density development at sustainable densities. The Planning Scheme provides for higher densities and heights around the various Hub areas. A number of land mark buildings are also proposed at certain locations.( Point Square, local landmark building of up to 22 storeys and Britain Quay up to 22 storey commercial.)</p> <p>It was considered that potential significant adverse impacts could arise as a result of height and the resultant impact on shadow and daylight, and also microclimate factors.</p> <p>During the SEA process and over the course of the public display periods of the Planning Scheme, a number of submissions came in regarding height and the impact on the residential amenity of existing properties in the area.</p> <p>In relation to shadow analysis and wind tunnelling effect these issues were considered in the adopted Planning Scheme (see Chapter 5) The design rational for the city blocks is set out clearly in relation to height and set out in Chapter 5 under Nature and Extent of Proposed Development . Specific objectives have been included with regard to height see US13, US15 &amp; US16. The Planning Scheme has included a shadow analysis of the panning scheme see Appendix 6. It must be emphasised that these shadow diagrams are not of a designed building, as would be submitted at planning stage, but are indicative only. All planning application shall be assessed to ensure they comply with the proper planning and development of the area. Where the Planning Scheme does not specifically cover any aspect the standards set out in the DCDD will apply, in this regard refer to policies SC17, SC18 and SC19.</p> <p>Additional mitigation measures were put in the Planning Scheme in the text in section 5.4.5 requiring that all</p>

			proposals for local landmark buildings will or for buildings more than 2 storeys higher than those adjacent twill require a shadow and microclimate analysis to be submitted with every application.
<b>BFF1</b> To protect and enhance the diversity and range of habitats, species, natural heritage features and wildlife corridors / green corridors.	<p>Limitations in wastewater treatment capacity could lead to deterioration in water quality.</p> <p>Consequent adverse impacts on water based habitats species and ecological habitats</p> <p>Potential adverse effects during construction and operation phases</p> <p>Some objects which promote new roads, cycle ways through existing green area could cause fragmentation and or loss or reduction of habitats or species.</p>	<b>Yes</b>	<p>The adopted plan provides objective to ensure that adequate mitigation is put in place for implementation and phasing of infrastructure. An infrastructural schedule has been provide in the Plan see Appendix 4 which sets out the strategic infrastructure and services and implementation and funding responsibilities of same. A more detailed implementation schedule will be required for the City Block Roll out agreements and costing of same.</p> <p>The limitations in the Waste Water Treatment capacity is dealt with in section 4.5 of the Planning Scheme. The objectives set out in the adopted Planning Scheme seek to manage development so that new schemes are only permitted where capacities exist or will become available within a reasonable timeframe.</p> <p>The protection of both surface and ground water quality and water bodies was paramount in the Planning Scheme process. During the SEA process and taking on board submissions from Statutory bodies additional mitigation in the form of additional objectives were included to protect water quality and also habitats in the area. See objectives SI20 and SI21.</p> <p>Potential impacts could arise during the Planning Scheme during the short to medium terms from construction related impacts in terms of noise, air and water pollution, and also potential for soil contamination on certain sites. During the SEA process mitigation measures were included in the Planning Scheme in the main text of the document and also in the form of objectives' to protect the environment. Also large projects will be subject to Appropriate Assessment Screening and Environmental Assessment. This would include any large infrastructural projects such as new bridges etc.</p> <p>It is also noted that potential impacts arising from this scheme could cause fragmentation of habitats in the area and or reduction of habitats. Adequate mitigation was put in the adopted plan in the form of objectives. In this regard it should be noted that table 8.1 sets out the mitigation measures in the form of policies which are covered by the Dublin City Development Plan 2011-2017</p>
<p><b>W1:</b> To comply with EU Water Framework Directive to ensure and maintain at least good ecological status of all receiving waters in the SDZ area</p> <p><b>W2</b> To reduce and manage the risk of flooding</p> <p><b>W3</b> To provide adequate wastewater treatment, water</p>		<p><b>Yes</b></p> <p><b>Yes</b></p> <p><b>Yes</b></p>	<p>During the SEA process the SEA planning team took on board the various submissions including the submission from the EPA in relation to the protection of both ground and surface water. This was incorporated in the final adopted plan in a number of objectives. (SI20 &amp; SI21)</p> <p>Over the course of the Planning Scheme and SEA process and in light of various submissions received from residents in the area and Statutory consultees such as the EPA, DoECLG and the OPW, the Flood Risk Assessment was updated and amended to include a Stage 2 more detailed flood risk assessment with best available flood maps. The FRA is included in Appendix F of the ER and also Appendix 1 of the Adopted Plan.</p> <p>The limitations in the Waste Water Treatment capacity is dealt with in section 4.5 of the Planning Scheme. The objectives set out in the adopted Planning Scheme seek</p>

distribution networks and drainage networks			to manage development so that new schemes are only permitted where capacities exist or will become available within a reasonable timeframe. Appendix 4 was added, in light of submissions from the DECLG regarding the need for phasing of infrastructure. The roll out of infrastructure for the City Blocks will be dealt with in the City Block Roll Out Agreements..
<b>AN1:</b> To protect good air quality status and minimise output of Nitrogen Oxides (NO <sub>x</sub> ) and Particulate Matter (PM <sub>10</sub> ) <b>AN2:</b> To maintain and, where possible, improve the acoustic quality for the current and future residents of the plan area.		<b>Yes</b>  <b>Yes</b>	In relation to noise and air quality issues it is considered that these have been dealt within in the adopted Planning Scheme under Section 4.4.4.5 and also with the inclusion of objectives SD13 and SI14
<b>CF1:</b> To minimise emissions of greenhouse gases. <b>CF2:</b> To limit adverse impacts on climate through the use of sustainable energy sources		<b>Yes</b>	The development of the SDZ provided the opportunity to place particular emphasis on renewable energy solutions in terms of both supplied and efficiency initiatives such as the Green IFSC and the Sustainable Energy Community Programme allows businesses in the area to adopt a strategic approach to sustainable energy.
<b>MA1</b> To encourage modal change from car to more sustainable modes of transport such as public transport, walking & cycling  <b>MA2</b> To reduce the generation of waste and adopt a sustainable approach to waste management  <b>MA3</b> To promote sustainable water use and promote sustainable drainage systems		<b>Yes</b>  <b>Yes</b>  <b>Yes</b>	The adopted plan encourages sustainable modes of transport . With regard to pedestrian and cycle infrastructure, objective MV4 commits to the creation and support a well designed network of pedestrian/cycling along key desire lines, developing routes within the Docklands and linking the surrounding walking and cycling networks in Dublin City. In terms of proposals to increase more sustainable modes of transport, it should be noted that Phase 2 of the Dublin Bikes expansion will benefit the area with 14 docking stations located directly in or adjoining the area. Phase 2 of the scheme will see a total of 1,5000 bikes and an additional 58 new bike stations provided in the city.  The development of the SDZ provided the opportunity to place particular emphasis on renewable energy solutions in terms of both supplied and efficiency initiatives such as the Green IFSC and the Sustainable Energy Community Programme allows businesses in the area to adopt a strategic approach to sustainable energy.  The principles of SUDS are set out in the adopted Planning Scheme in Chapter 4.5 and also set out in Appendix 2 of the Planning Scheme. During the public display of the draft scheme, objective SI10 was amended to include that all planning applications be accompanied by a surface water drainage plan which will include proposals for the management of surface water within sites, protecting the quality of existing water bodies and ground water sources, and retrofitting best proactive SUDS techniques on sites, where possible.
<b>LS1</b> To conserve and enhance valued natural and historic landscapes and features within them.  <b>LS2</b> To protect,		<b>Yes</b>	Adequate mitigation has been included in the plan to protect the natural and historic landscape and features within them. See Section 4.6 of the adopted Planning Scheme and relevant objectives.

improve and maintain the quality of soils in the SDZ area.		Yes	The adopted plan contains adequate mitigation to protect and maintain the quality of soils in the area. During the SEA process, a submission was received from the EPA who acknowledged the potential for contaminated lands/groundwater in the area. They acknowledged the inclusion of Objective SI17 and referred to the general guidelines set out for contaminated soil material and subsequent removal off site. As a result of this submission additional mitigation as included in the plan. Objective SI17 was amended to include the sentence that Soil Remediation measures shall require a licence from the EPA under the Waste Management Act 1996. Also new objective SI22 was added which required the preparation of a soil remediation plan for each city block to ensure an integrated approach to soil decontamination.
<b>CH1</b> To protect and enhance the cultural heritage of the plan area including the built environment and settings and archaeological assets		Yes	Over the course of the Planning Scheme and SEA process a number of new objectives were to enhance and protect the cultural heritage of the plan area and protect the built environment. New text was inserted into section 4.6.4.2 requiring an architectural heritage assessment to be submitted for development in the vicinity of protected structures to assist the planning authority in making an informed decision regarding the potential impact on architectural heritage. Also the EPA made a submission at draft stage that consideration should be given to protecting areas of significant landscape/streetscape and urban -scape. In this regard objective BH1 was amended to include areas of significant streetscape and urban landscape.

#### 4.0 Reason for choosing the Planning Scheme, as adopted, over other Alternatives

##### 4.1 Introduction

This sections summarises Section 6 of the Environmental Report which evaluates the various Alternatives chosen and their impact on the Environmental Protection Objectives as set out in Section 4 of the Environmental Report.

Article 5 of the SEA Directive requires the plan-making authority to identify, describe and evaluate alternative ways of realising the objectives of the plan. As stated in the Directive an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified , described and evaluated.

Section 5 of the Environmental Report set out the various Planning Scheme alternatives. Three plan alternatives were examined by the SDZ team in the course of the preparation of the Planning Scheme, reflecting the need to realise the overall vision for the area and the high level themes.

The three alternatives assessed were:

- a) High Density Development
- b) Medium Density Development – Planning Scheme Option
- c) Low Density Development

##### 4.2 Environmental Assessment of Alternatives.

The alternatives are evaluated using compatibility criteria in order to determine how they would be likely to affect the status of the SEOs. The SEOs and the alternative scenarios are compared against each other to identify which interactions – if any- would cause effects specific components of the environment.

The various alternatives were tested against the set of environmental objectives as set out in section 4 of the Environmental Report (see table 6.3 of the Environmental Report Assessment of the Alternatives). The three

alternatives chosen were a) high density, b) medium and c) low density development. The do Nothing Scenario was not considered a reasonable alternative and therefore was not considered.

All three options proposed, although the quantum's of development will vary, will place increased pressure on the waste water infrastructure, which in turn could lead to a deterioration in water quality of receiving waters in the SDZ area with potentially significant adverse impacts upon water based habitats and species. Such impacts require mitigation. All three alternatives are all reliant on the waste water treatment infrastructure being upgraded as well as a new waste water treatment plant being proposed at regional level. The deficiency of adequate water supply is also an issue for all three alternatives. All three alternatives could also have potentially negative impacts in terms of noise, and climate factors largely due to construction related impacts, associated traffic movements, energy required for buildings to operate, increase in the numbers living working and recreating in the areas, increase in waste output etc.

The high density approach would have some positive impacts on population and human health of the plan area in terms of increase employment opportunities, and also on landscape in terms of reuse of Brownfield sites, and soil decontamination. This approach would also provide high levels of development levies which would provide the necessary infrastructure needed for the area. The existing urban structure in the area is based on the platform of the city blocks, and this in turn supports densities of 2.5 to 3.0. This works within the densities generally established by the European city tradition. Moving beyond this, as is the case in the high density option will require a different urban form, e.g. the use of multiple towers as in the high density 'Liffey Wharf & Island' version' combined with a dense lower level 4/5/6 storey street block approach. Driving higher density approaches on the sites remaining, will stress the capacity of urban design to create visual cohesiveness and legibility. The high density option makes it much more difficult to integrate protected buildings and heritage clusters into the urban structure

The low density scenario overall would have significant negative impacts on the environmental receptors. This approach would not be sustainable and would impact on the quality of life as commuting times would be increased, higher levels of congestion, increase noise, increased CO2 emissions, which will have negative impacts on air quality and noise. The critical mass required for the economic functioning of the SDZ area would not be possible, which would leave the area without the supporting retail, amenities and infrastructure. The less concentrated the population, the less benefits are reaped from investments in public transport and social infrastructure. It is also noted that low density development is more likely to encroach upon valuable habitats, leading to disturbance and fragmentation of habitats, and fewer opportunities would present themselves to allow for the identification of new habitats, or new green corridors etc. The preservation and enhancement of the overall landscape carbon sink through photosynthesis would be less likely to occur due to a more sprawling form of development which utilises a greater amount of the natural landscape than a more compact form of urban development.

All three options have some positive and negative impacts on the environmental indicators. However It is clear from the above table that Alternative B - Medium density option (the preferred Planning Scheme) has an overall positive outcome in terms of the environmental receptors carried out as part of this SEA

#### **4.3 The Preferred Alternative – The Planning Scheme**

The preferred option was chosen and developed for a number of reasons. The SDZ is not starting from scratch; there is a high level of build-out, especially when IFSC 1&2 are factored in. In this context it becomes more difficult to move coherently in a radically new direction, either in terms of much higher densities or lower ones. The urban structure is based on the platform of the city block, which in turn supports sustainable densities of between 2.5 to 3.0. This works within the densities generally established by the European city tradition.

The medium density model, the one adopted in the SDZ, successfully integrates the complex set of objectives under the High Level Themes, incorporates the Key Structuring Principles effectively into the urban structure, and devises a set of layouts for the City Blocks all of which responds to the core vision. This scheme is robust in terms of implementation and would prove resilient over time. It is not seriously dependent on complex phasing and can be responsive to an emerging process of collaboration. Above all, it has a robust practicality which

responds strongly to core strands of sustainability, while avoiding the risks associated with the high and low density options outlined above.

By complying with appropriate mitigation measures including those that have been integrated into the Planning Scheme along the process and as a result of public display, any potential adverse environmental effects which could arise as a result of implementing this scenario would be likely to be avoided, reduced or offset.

## **5.0 Section - Monitoring Measures and Reporting**

### **5.1 Introduction**

At the Council meeting on the 5<sup>th</sup> November 2013, the Council by resolution agreed to make the North Lotts & Grand Canal Dock Planning Scheme, Strategic Development Zone.

Article 10 of the SEA Directive requires that monitoring should be carried out in order to identify at an early stage any unforeseen adverse effects due to the implementation of the Plan, and to be able to take remedial action if required. Monitoring is carried out by reporting on a set of indicators which enable positive and negative impacts on the environment to be measured. Environmental targets and indicators were developed during the SEA process and were developed during the SEA and the preparation of the Plan, See section 4 of the Environmental Report. The monitoring is based on these indicators.

Section 9 of the Environmental Report,(Table 9.1) sets out the Monitoring Programme. The monitoring programme has been devised having regard to the existing monitoring systems in place and in use by Dublin City Council. Monitoring plays an important role in assessing whether the Planning Scheme is achieving its environmental objectives and targets, whether these need to be re-examined and whether the proposed mitigation measures are being implemented. It also enables at an early state, the identification of any unforeseen adverse effects and enables appropriate remedial action to be taken.

The monitoring programme is subject to review at each reporting stage to reflect new data. Should this identify significant adverse impacts (such as impacts on designated sites etc) early on in the implementation of the Planning Scheme, this should trigger a review of both the Planning Scheme and associated monitoring programme. All information gathered from planning applications and reports submitted which include information on any surveys carried out or environmental constraints mapping should be integrated into the monitoring programme.

### **5.2 Indicators and Targets**

This section sets out the proposed monitoring measures in accordance with Article 10 of the SEA Directive which requires that *“significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen effects, and to be able to undertake appropriate remedial action”*. A monitoring programme has been devised having regard to the existing monitoring systems in place and in use by Dublin City Council.

Monitoring places an important role in assessing whether the Docklands Planning Scheme 2013 is achieving its environmental objectives and targets, whether these need to be re-examined and whether the proposed mitigation measures are being implemented.

### **5.3 Data Sources**

Measurements for indicators generally come from existing monitoring sources, such as those maintained by the Dublin City Council and other relevant authorities, eg. The Environmental Protection Agency (EPA), the National Parks and Wildlife Service (NPWS) and the Central Statistics Office (CSO). The Development Management process in Dublin City Council will provide passive monitoring of various indicators and targets as applications come in. In the case where significant adverse effects, including positive, cumulative or indirect impacts have the potential to occur, i.e. in the case of entries to the RMP, or RPS or impact on ecological networks for example, as

a result of undertaking of individual projects, such instances should be identified and recorded and should feed into the monitoring process. Monitoring will focus on aspects of the environment that are likely to be significantly impacted by the Planning Scheme. Where possible indicators have been chosen based on the availability of the necessary information and the degree to which data will allow the target to be linked directly to the implementation of the plan.

#### **5.4 Monitoring**

For the purposes of the Strategic Environmental Assessment (SEA) of the North Lotts & Grand Canal Dock Planning Scheme, the SEA in-house team developed environmental protection Indicators (EPOs), targets and indicators early on in the SEA process, see section 4 of the Environmental Report. Monitoring of the indicators is essential in order to track the impacts of the proposed development on the environment. A monitoring programme setting out the environmental protection objectives, targets, indicators, frequency of reporting and department responsibility is included in the Environmental Report (see Table 9.1 Monitoring Programme)

#### **5.5 Reporting**

The City Council, as Development Agency, will be responsible for monitoring and reporting on feedback. The City Council will prepare an Annual Progress Report detailing planning permissions granted, development commenced and/or completed, progress on objectives and progress on sustainability indicators. The Report will be submitted to Dublin City Council, its relevant Area Committees and to any other formal consultative structure put in place to oversee regeneration in the wider Docklands Area.

In addition, a formal twice-annual consultative forum will be held in the Docklands, with representatives of business, community, environmental and other stakeholders in the area to engage in two-way communication and feedback on progress on the SDZ.

#### **5.6 Responsibility**

Dublin City Council, as Development Agency, will be responsible for gathering the monitored data, the preparation of the interim report and the implementation of corrective actions, if necessary.

#### **5.7 Thresholds at which corrective action will be taken**

- The occurrence of Flood events
- Court cases taken by the DoECLG 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 Planning Scheme
- boil notices on drinking water;
- fish kills;

#### **5.8 Conclusion**

The Strategic Environmental Assessment carried out during the preparation of the Planning Scheme for the North Lotts & Grand Canal Dock SDZ has ensured that any potential significant environmental impacts of the Plan have been identified and that they may have been given appropriate consideration. Consultation on the proposed plan and environmental report has further contributed to the development and finalisation of the adopted Planning Scheme. The SEA statement is not the final stage of the process as the plan will be monitored over its lifetime and reported on at regular intervals to assess its impact on the environment.

Appendix 1 Monitoring Programme

ENVIRONMENTAL RECEPTOR	ENVIRONMENTAL RECEPTOR	What to Monitor (INDICATOR)	TARGET	FREQUENCY OF REPORTING	DEPARTMENT RESPONSIBLE
Population / Human Health	<i>PH1 To protect and enhance people's quality of life based on high quality residential, community, working and recreational environments and on sustainable travel patterns</i>	Status of drinking water and drinking water sources	All Drinking Water and Drinking Water Sources to comply with the European Communities (Drinking Water) (No.2) Regulations, 2007 and European Communities (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1989.	Annually	Environment and Engineering Department (Water Division)
		Average density of new residential development	Sustainable densities achieved in new residential / mixed-use schemes	Annually	Development Management Process in DCC. Planning and Economic Development Department
		Numbers employed on site at construction and operations stage	Provide improved employment opportunities in the area both at construction and operational phases of development	Annually	Planning & Economic Development Department

ENVIRONMENTAL RECEPTOR	ENVIRONMENTAL RECEPTOR	What to Monitor (INDICATOR)	TARGET	FREQUENCY OF REPORTING	DEPARTMENT RESPONSIBLE
<b>Biodiversity/Flora &amp; Fauna</b>	<i>BFF1 To protect and enhance the diversity and range of habitats, species and wildlife corridors/green corridors</i>	Total area of designated sites (Natura 2000 and pNHA's)	No adverse impacts on designated nature areas / species / habitats	Annually	Culture, Recreation & Amenity Department and Planning & Economic Development Department
		Identification through planning applications on the presence of invasive species on sites (i.e Japanese Knotweed, Himalyan Balsam, Rhododendron, Nutall's pondweed, Giant hogweed and Zebra mussel, and to eradicate, monitor and control their spread and to avoid introduction of other invasive species	Removal of all alien species from the site and planting of only native species suitable to the Planning Scheme Area.	Every two years	Culture, Recreation & Amenity Department and Planning & Economic Development Department
		Identification of habitats of protected species and in particular bats and to minimise interference with these habitats.	Minimise interference with these habitats	Annually	Culture, Recreation & Amenity Department and Planning & Economic Development Department
		For Key buildings that are particularly suitable for bat roosting, applications for works to these buildings shall include a recent bat survey. The results of which will be included in the monitoring report as part of the implementation of the SEA	Identification and up to date information on all bat species within the Planning Scheme area. Where roosting sites are impacted on, alternative appropriate roosting sites such as bat boxes to be provided.	Annually	
		Identification of habitats of protected bird species and to minimise interference with these habitats. Nesting locations for wildlife to be incorporated into design of new buildings /developments.	All breeding sites for birds to be protected especially Black Guillemots, Peregrine Falcons for example	Ongoing	

ENVIRONMENTAL RECEPTOR	ENVIRONMENTAL RECEPTOR	What to Monitor (INDICATOR)	TARGET	FREQUENCY OF REPORTING	DEPARTMENT RESPONSIBLE
Water	<i>W1 To comply with EU Water Framework Directive to ensure and maintain good ecological status of all receiving water in the SDZ area</i>	Ecological status of surface water bodies in plan area	All water bodies to meet targets set in ERDB plan	On going	Data issued under the Water Framework Directive Monitoring Programme for Ireland (EPA 2006) Environment and Engineering Department (Water Division)
	<i>W2 To reduce and manage the risk of flooding</i>	Number of planning permissions incorporating flood risk assessment and conditions requiring appropriate flood resilient measures for new developments	Compliance with Floods Directive and with OPW/DoEHLG's Flood Risk Management Guidelines in the planning process  Flood Risk Assessment be carried out for all new developments  Identify Sustainable Drainage Systems (and features which are identified as having flood defence function) in all new developments	Annually	Environment and Engineering Department (Drainage Division) in association with the Planning and Economic Development Department
	<i>W3 To provide adequate wastewater treatment , water distribution networks and drawing networks</i>	Provision of new infrastructure in area and planning applications granted with capacity available in the system  Complete the relocation of the Grand Canal Surface Water Outfall from the Grand Canal Dock Basin to the River Liffey.	Provision of adequate wastewater treatment, water distribution networks and drainage networks to serve the proposed level of development  Establishment of appropriate surface water drainage systems for separate foul and surface water drainage.	Ongoing  Ongoing	Environment and Engineering Department (Drainage Division)  Environment and Engineering Department (Drainage Division)

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ENVIRONMENTAL RECEPTOR	ENVIRONMENTAL RECEPTOR	What to Monitor (INDICATOR)	TARGET	FREQUENCY OF REPORTING	DEPARTMENT RESPONSIBLE
<b>Air &amp; Noise</b>	<i>AN 1 To protect good air quality status and minimise output of Nitrogen Oxides (NO<sub>x</sub>) and Particulate Matter (PM<sub>10</sub>)</i>	Values of monitored pollutants in the air, including the levels of <i>Nitrogen Oxides (NO<sub>x</sub>) and Particulate Matter (PM<sub>10</sub>)</i>  Maintain good air quality values	Meet value targets for names pollutants in line with Air Quality Framework Directives	Annually	Roads & Traffic (Noise & Air Quality Unit)
	<i>AN2 To maintain and, where possible, improve the good acoustic quality for the current and future residents of the plan area</i>	% of residents exposed to high sound levels	Minimise noise pollution for the residents in the Planning Scheme area	Ongoing	Roads & Traffic (Noise & Air Quality Unit)
<b>Climatic Factors</b>	<i>CF1 To minimise emissions of greenhouse gases</i>	Average energy consumption of new residential housing stock Tonnes of CO <sub>2</sub> /Capita/Year	Decrease in greenhouse emissions	Annually	Environment and Engineering Department
	<i>CF2 To limit adverse impacts of climate change through the use of sustainable energy sources</i>	All proposed developments be district heating enabled in order to provide an environmentally sustainable source of heating & cooling	Optimum building energy ratings to be achieved for residential and non residential units.	Ongoing	Environment and Engineering Department
<b>Material Assets</b>	<i>MA1 To encourage modal change from car to more sustainable modes of transport such as public transport, walking &amp; cycling</i>	% change in modal split  Length of new cycling paths/lanes and walking routes developed	Extension and improvement of the cycling and walking network in the area	Ongoing	Roads and Traffic Department
	<i>MA2 To reduce the generation of waste and adopt a sustainable approach to waste management</i>	% of waste recycled  Tonnes of waste per capita per year.	Increased recycling (59% recycling target by 2013 – Regional Figure)	Annually	Environment & Engineering Department (Waste Management Division)
	<i>MA3 TO promote sustainable water use and promote sustainable drainage systems</i>	Compliance with SuDS Objectives detailed in Section 4.5 and 4.11 of the Planning Scheme	Provision for the reuse, recycling and conservation of water & implementation of SuDS (sustainable urban drainage systems).	Ongoing	Environment & Engineering Department (Waste Management Division)

ENVIRONMENTAL RECEPTOR	ENVIRONMENTAL RECEPTOR	What to Monitor (INDICATOR)	TARGET	FREQUENCY OF REPORTING	DEPARTMENT RESPONSIBLE
<b>Landscape &amp; Soils</b>	<i>LS1 To conserve and enhance valued natural and historic landscapes and the features within them</i>	<p>The protected of and enhancement of all views and panoramas to key local vantage points and civic buildings in the surrounding area, and within the Planning Scheme itself as identified in Section 4.6.7 of the Planning Scheme.</p> <p>Number of applications relating to protected structures</p> <p>Number of protected structures retained on site.</p>	<p>The protection and enhancement of all key views and prospects (see section 4.6.7 of the Planning Scheme)</p> <p>Preservation and integration of the Protected Structures, and ensuring they are reused , and contribute to the generation of space in terms of the physical layout and character</p> <p>No adverse impacts on protected structures</p>	On Going	Planning and Economic Development Department
	<i>LS2 To protect, improve and maintain the quality of soil in the SDZ area</i>	<p>All planning applications shall be accompanied by a report from a qualified expert consultant detailing compliance with the remediation measures specified in the Planning Scheme.(see appendix Flannery Nagel</p>	<p>Protection enhancement and improvement in the quality of soils in the area. Remediation of contaminated soil on former industrial Brownfield lands within the SDZ area.</p>	Annually	Planning and Economic Development Department
<b>Cultural Heritage</b>	<i>CH To protect and enhance the cultural heritage of the plan area including the built environment, settings and archaeological assets</i>	<p>Number of archaeological sites investigated &amp; recorded</p> <p>Number of archaeological sites identified, preserved and or recorded.</p>	<p>Ensure that cultural heritage of the Planning Scheme area is maintained and protected from damage or deterioration.</p>	Annually	Planning and Economic Development Department.

