

STRATEGIC ENVIRONMENTAL ASSESSMENT

DRAFT ENVIRONMENTAL REPORT | OCTOBER 2017

As part of the preparation of the Draft Planning
Scheme for the Waterford North Quays Strategic
Development Zone (S.I. No. 30 of 2016)

Waterford North Quays Strategic Development Zone Strategic Environmental Assessment of Draft Planning Scheme

Draft Environmental Report

TABLE OF CONTENTS

NON-TECHNICAL SUMMARY

| | |
|--|-----------|
| 1.0 INTRODUCTION | 1 |
| 1.1 Legislative Context | 1 |
| 1.2 Integration with Appropriate Assessment | 2 |
| 1.3 Integration with Strategic Flood Risk Assessment..... | 3 |
| 2.0 SEA PROCESS | 4 |
| 2.1 Introduction | 4 |
| 2.2 SEA Guidance | 5 |
| 2.3 Key Stages in the SEA Process | 5 |
| 2.4 Consultation | 7 |
| 2.5 Legislative Conformance | 8 |
| 3.0 THE NORTH QUAYS PLANNING SCHEME | 11 |
| 3.1 Statutory Context for the NQ SDZ | 11 |
| 3.2 Contents of the Draft Planning Scheme | 11 |
| 3.3 Principal Goals for the North Quays | 17 |
| 3.4 The Vision | 18 |
| 3.5 SDZ Location and Description | 19 |
| 4.0 RELATIONSHIP WITH OTHER RELEVANT PLANS | 21 |
| 4.1 Waterford City Development Plan 2013-2019 | 24 |
| 4.2 PLUTS Strategy 2004 | 24 |
| 4.3 Ferrybank- Bellview Local Area Plan | 25 |
| 5.0 BASELINE ENVIRONMENT | 26 |
| 5.1 Introduction | 26 |
| 5.2 Biodiversity, Flora and Fauna | 28 |
| 5.3 Population and Human Health | 44 |
| 5.4 Water Resources and Flooding | 52 |
| 5.5 Air and Climatic Factors | 57 |
| 5.6 Geology and Soils | 60 |
| 5.7 Material Assets | 61 |
| 5.8 Cultural Heritage | 64 |
| 5.9 Landscape | 66 |
| 5.10 Inter-relationships Between Environmental Receptors | 69 |

| | |
|---|------------|
| 6.0 ENVIRONMENTAL PROTECTION OBJECTIVES | 70 |
| 6.1 EPO's and the Assessment of the Draft Planning Scheme | 71 |
| 7.0 ASSESSMENT OF ALTERNATIVES..... | 72 |
| 7.1 Introduction..... | 72 |
| 7.2 Consideration of Alternatives During the SDZ Plan Making Process..... | 72 |
| 7.3 Assessment Methodology | 73 |
| 7.4 Description of Alternatives Assessed | 74 |
| 8.0 EVALUATION OF DRAFT PLANNING SCHEME PROVISIONS | 81 |
| 8.1 Introduction..... | 81 |
| 8.2 Strategic Environmental Assessment Methodology | 81 |
| 8.3 Assessment of Significance of Effects..... | 81 |
| 8.4 Summary of Assessment of Matrix – Likely Significant Effects..... | 102 |
| 9.0 MITIGATION AND MONITORING..... | 109 |
| 9.1 Monitoring Programme | 117 |
| 9.2 Potential Impact and Indicators | 118 |
| 9.3 Reporting | 118 |
| 10.0 CONCLUSION..... | 125 |
| 11.0 REFERENCES | 126 |

APPENDIX A Relationship with Policy, Plan, Programmes

APPENDIX B Responses Received from Environmental Authorities Following SEA Scoping Consultation

NON TECHNICAL SUMMARY

Waterford North Quays Strategic Development Zone

Strategic Environmental Assessment of Draft Planning Scheme

Draft Environmental Report Non Technical Summary

TABLE OF CONTENTS

| | |
|--|---------------|
| 1.0 INTRODUCTION | V |
| 1.1. Legislative Context | v |
| 1.2. Integration with Appropriate Assessment | vi |
| 1.3. Integration with Strategic Flood Risk Assessment..... | vi |
| 2.0 SEA PROCESS | VII |
| 3.0 THE NORTH QUAYS PLANNING SCHEME | XI |
| 3.1 Statutory Context for the NQ SDZ..... | xi |
| 3.2 Contents of the Draft Planning Scheme | xi |
| 3.3 SDZ Location and Description | xii |
| 4.0 RELATIONSHIP WITH OTHER PLANS | XIII |
| 4.1 Waterford City Development Plan 2013-2019 | xiii |
| 4.2 PLUTS Strategy 2004 | xiii |
| 4.3 Ferrybank – Bellview Local Area Plan..... | xiv |
| 5.0 BASELINE ENVIRONMENT | XV |
| 5.1 Introduction | xv |
| 5.2 Biodiversity (Flora and Fauna) | xvi |
| 5.3 Population and Human Health | xviii |
| 5.4 Water Resources and Flooding..... | xx |
| 5.5 Air and Climatic Factors | xxii |
| 5.6 Geology and Soils..... | xxiii |
| 5.7 Material Assets | xxiv |
| 5.8 Cultural Heritage..... | xxv |
| 5.9 Landscape | xxvi |
| 5.10 Inter-relationships Between Environmental Receptors | xxvi |
| 6.0 ENVIRONMENTAL PROTECTION OBJECTIVES | XXVIII |
| 7.0 ASSESSMENT OF ALTERNATIVES..... | XXIX |
| 7.1 Assessment Methodology | xxix |
| 8.0 EVALUATION OF PROPOSED DRAFT PLANNING SCHEME PROVISIONS | XXXII |
| 8.1 Methodology to Assess Significant Effects..... | xxxii |
| 8.2 Summary of Assessment of Matrix – Likely Significant Effects..... | xxxii |

| | | |
|-------------|--|--------------|
| 9.0 | MITIGATION AND MONITORING..... | XL |
| 9.1 | Biodiversity, Flora and Fauna | xl |
| 9.2 | Population and Human Health | xl |
| 9.3 | Water Resources | xli |
| 9.4 | Soils..... | xli |
| 9.5 | Air and Climate | xli |
| 9.6 | Cultural Heritage..... | xli |
| 9.7 | Landscapes | xli |
| 9.8 | Material Assets | xlii |
| 9.9 | Monitoring Programme & Reporting | xlii |
| 10.0 | CONCLUSION..... | XLIII |

1.0 INTRODUCTION

This is the Non Technical Summary (NTS) of the Strategic Environmental Assessment (SEA) Draft Environmental Report (ER) for the Waterford North Quays Strategic Development Zone (NQ SDZ) Planning Scheme. The Government designated lands at North Quays in Waterford City as a site for a Strategic Development Zone on 20th January 2016. Waterford City and County Council has been specified as the 'Development Agency' and is currently in the process of developing a Planning Scheme. Roughan & O'Donovan Consulting Engineers have been appointed by Waterford City and County Council to undertake engineering and environmental consultancy services including the Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) as part of the preparation of the Planning Scheme. The SEA process ensures that the preparation of the Planning Scheme is informed by environmental considerations from the outset.

The purpose of the SEA Environmental Report (ER) is to identify, describe and evaluate the likely significant effects on the environment of implementing the proposed NQ SDZ. The aim of the ER is to identify:

- Existing environmental issues in the proposed SDZ area;
- The likely significant effects on the environment resulting from implementation of the Planning Scheme;
- How the likely significant effects on the environment can be prevented or reduced; and,
- How environmental effects will be monitored over the lifetime of the SDZ Planning Scheme.

It should be noted that the Non Technical summary and the Environmental Report form only part of the SEA process. The SEA process also comprises a Scoping Report and at the final stage, an SEA Statement will be published. The purpose of the Non-Technical Summary is to provide a summary process using non-technical language, of the information in the SEA ER and of the process that has been followed in carrying out the SEA, including where relevant how the Draft Planning Scheme has subsequently been altered as a result of the identification of the likely significant environmental effects identified during the SEA process.

1.1. Legislative Context

The Directive on Strategic Environmental Assessment (SEA) (2001/42/EC) came into force in July 2001 requiring each Member State to assess and consider the 'likely significant environmental effects' of public plans prior to their adoption. All land-use plans in Ireland are subject to SEA procedures and environmental considerations must be assessed at an early stage in the decision-making process.

The Directive was transposed into Irish Law in 2004 by two sets of Regulations which were both amended in 2011, as follows:

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

and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).

This legislation requires mandatory Strategic Environmental Assessment as part of the preparation of a Planning Scheme for a Strategic Development Zone.

1.2. Integration with Appropriate Assessment

The SEA legislation and guidelines indicate that there should be complete integration between the preparation of the Planning Scheme, the SEA process and any Appropriate Assessments including Habitats Directive Assessment (HDA) which might be required.

Article 6(3) of the Habitats Directive (92/43/EEC) states that any plan or project not directly connected with or necessary to the management of a Natura 2000 site, *i.e.* Special Area of Conservation (SAC) or Special Protection Area (SPA), but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to an Appropriate Assessment (AA) of its implications for the site in view of the site's Conservation Objectives.

The HDA has been carried out in parallel with the Draft Planning Scheme and the SEA and is prepared as a separate document. The Assessment was carried out in two stages, the first, Appropriate Assessment (AA) Screening where the Draft Planning Scheme was assessed in principle and the likelihood of significant effects on Natura 2000 sites was determined as a result of its implementation, either individually or in combination with other plans or projects. The second, the Natura Impact Report (NIR) is where those effects identified during the screening exercise were examined in further detail to determine if any adverse impacts on the site integrity of any Natura 2000 sites are possible. The NIR evaluates the Draft Planning Scheme alone and in combination with existing objectives of other plans and projects.

Stage 1 of the HDA considered that there was potential for the Draft Planning Scheme to have a likely significant effect on certain Qualifying Interests of the Lower River Suir SAC, adjoining the site and the River Barrow and River Nore SAC located downstream of the SDZ. It was identified at Screening stage that these impacts would require mitigation at Stage 2 to ensure that the adoption of the Planning Scheme would not have a significant effect on the Lower River Suir SAC and the River Barrow and River Nore SAC. The completed Natura Impact Report (NIR) was prepared on this basis in respect of the implications of the Draft Planning Scheme for the Lower River Suir SAC and the River Barrow and River Nore SAC in view of their Conservation Objectives. The AA has informed the preparation of the Planning Scheme through an iterative process whereby the NIR has suggested additions to the Planning Scheme which has informed subsequent drafts.

The findings of the SEA ER and NIR have also informed each other to ensure no adverse impacts on the environment and, specifically, on Natura 2000 sites will occur.

1.3. Integration with Strategic Flood Risk Assessment

The integration with Strategic Flood Risk Assessment (SFRA) is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009). As with SEA, it is important to incorporate the SFRA into the development of the Planning Scheme and SEA process and provide a coherent and transparent approach as to how it has been considered in making spatial planning

decisions. The SFRA is prepared as a separate document that accompanies the Draft Planning Scheme.

2.0 SEA PROCESS

Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt the plan or programme. There are a number of clearly defined SEA stages. These are illustrated below in Figure 2.1 as they relate to the plan making process.

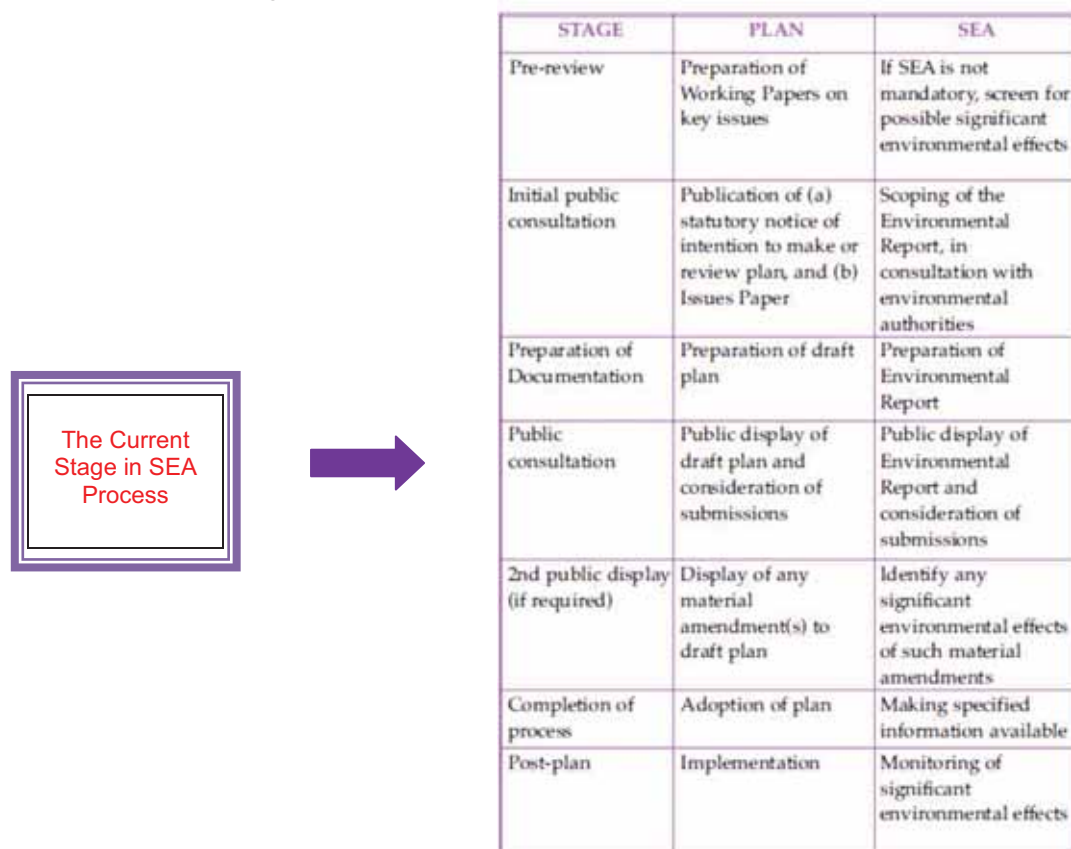


Figure 2.1 Generic Stages of SEA and the Plan-making Process (Government of Ireland, 2004)

The Guidelines for Regional Authorities and Planning Authorities (2004) state that SEA is intended to improve the quality of the plan making process. The purpose of the SEA is to systematically identify and evaluate the likely significant environmental effects on the plan area and its environs due to the implementation of the Planning Scheme. The SEA process informs Waterford City and County Council during the plan making process of the likely and significant environmental effects as a result of implementing the plan. The SEA process is recognised as a central mechanism in promoting sustainable development, in raising awareness of the significant environmental issues experienced by an area and ensuring that these issues are addressed within the capacity of the planning system.

SEA Guidance

The SEA Environmental Report has been prepared by Roughan O'Donovan having regard to a range of guidance documents by the Environmental Protection Agency and The Department of Environment, Community and Local Government.

Key Stages in the SEA Process

Key stages of the SEA process were undertaken alongside the preparation of the Planning Scheme as follows.

Screening – The Screening Stage was not required for this plan as SEA is a mandatory requirement during the preparation of a Planning Scheme for SDZ.

Scoping – A Scoping Report was sent to relevant environmental authorities for consultation and to draw an opinion on the scope and level and detail of environmental information to be included in the Environmental Report and as part of the Planning Scheme. The comments received have been fully taken into account during the SEA process. As required by the SEA Directive, the Scoping Report contained information on existing environmental problems which are relevant to the SDZ area.

Alternatives – The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment. Discussion on the alternatives considered is provided in the Environmental Report.

Environmental Report – The SEA Environmental (ER) is placed on public display alongside the Planning Scheme. The likely significant environmental effects of the Planning Scheme are identified and their significance evaluated with regard to the environmental baseline. The Environmental Report provides relevant information to the decision-makers, the members of the Council, who decide whether or not to accept the Planning Scheme, as well as to the public, providing a clear explanation of the likely significant environmental effects of the Planning Scheme. If any modifications to the Planning Scheme are made after this consultation period, the ER will be updated to assess those changes and any likely significant effects on the environmental topics as a result of those changes.

The process of SEA is an iterative one and has been used to inform the proposed Draft Planning Scheme including changes to maps and objectives and/ or wording of the Draft Planning Scheme. In order to address the certain issues and ensure sustainable development, changes are recommended by the SEA team.

The SEA Statement – If the Planning Scheme is passed by the Elected Members, a document referred to as the SEA Statement must be made available to the public. This is required to include information on:

- how environmental considerations have been integrated into the Planning Scheme - highlighting the main changes to the Planning Scheme which resulted from the SEA process;
- how the Environmental Report and consultations have been taken into account - summarising the key issues raised in consultations and in the Environmental Report, indicating what action, if any, was taken in response; and
- the reasons for choosing the Planning Scheme in the light of other reasonable alternatives.

Consultation

Waterford City and County Council undertook an initial public consultation in March 2016 which invited pre-draft submissions and observations regarding the development of the Planning Scheme. These public submissions have been considered as part of this SEA process and the preparation of the Draft Planning Scheme. Under Article 6 of the SEA Directive, the competent authority preparing the plan, in this case Waterford City and County Council, is required to consult with specific environmental authorities on the scope and level of detail of the information to be included in the Environmental Report.

Legislative Conformance

In accordance with Section 179C of the Planning and Development Act 2000-2016 (as amended), an environmental report for a Planning Scheme for a Strategic Development Zone shall identify, describe and evaluate the likely significant effects on the environment of implementing the planning scheme and reasonable alternatives taking account of the objectives and the geographical scope of the scheme. For this purpose, the SEA ER:-

- (a) Contains the information specified in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended;
- (b) Takes account of any submission or observation received in response to a Scoping Notice; and
- (c) Is of sufficient quality to meet the requirements of the Regulations.

The SEA ER complies with the provisions of the SEA Regulations and is written in accordance with Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended.

Table 2.2 is a reproduction of the checklist of information required to be contained in the Environmental Report (DEHLG, 2004) and includes the corresponding sections of this Report which deal with these requirements.

Table 2.2 Checklist of Information to be Contained in the Environmental Report (Schedule 2B - DEHLG, 2004)

| Information Required to be included in the Environmental Report | Corresponding Section of this Report |
|---|--------------------------------------|
| (A) Outline of the contents and main objectives of the Planning Scheme, and of its relationship with other relevant plans and programmes | 3 & 4 |
| (B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the Planning Scheme | 5 |
| (C) Description of the environmental characteristics of areas likely to be significantly affected | 5 |
| (D) Identification of any existing environmental problems which are relevant to the Planning Scheme, particularly those relating to European protected sites | 5 |
| (E) List environmental protection objectives (EPOs), established at international, EU or national level, which are relevant to the Planning Scheme and describe how those objectives and any environmental considerations have been taken into account when preparing the Planning Scheme | 4 & Appendix A |

| Information Required to be included in the Environmental Report | Corresponding Section of this Report |
|--|--|
| (F) Describe the likely significant effects on the environment | 8 |
| (G) Describe any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse environmental effects of implementing the Planning Scheme | 8 |
| (H) Give an outline of the reasons for selecting the alternatives considered, and a description of how the assessment was undertaken (including any difficulties) | 7 |
| (I) A description of proposed monitoring measures | 9 |
| (J) Conclusion – Overall findings of the assessment | 10 |
| (K) A non-technical summary of the above information | Non Technical Summary |
| (L) Interrelationships between each Environmental topic | Addressed as it arises within each Section |

3.0 THE NORTH QUAYS PLANNING SCHEME

3.1 Statutory Context for the NQ SDZ

The Government designated lands at North Quays in Waterford City as a site for a Strategic Development Zone (SDZ) on 20th January 2016. Part IX of the Planning and Development Act 2000-2011 provides for the designation of a Strategic Development Zone (SDZ) to facilitate development which in the opinion of the Government is of economic or social importance to the State. Waterford City and County Council are specified as the Development Agency (SI No 30 of 2016) for the purpose of developing a planning scheme for the North Quays strategic development zone (SDZ).

The Government designation for the site permits *“the establishment of a strategic development zone in accordance with the provisions of Part IX of the Act for a mixed use development which may include commercial activities including, office, hotel, leisure and retail facilities, residential development and the provision of educational facilities, supporting transport infrastructure, emergency services and the provision of community facilities as referred to in Part III of the First Schedule to the Act, including health and childcare services, as appropriate”*.

The SDZ has been designated taking into consideration existing planning policy. Once a Planning Scheme comes into effect, any development within it will require planning permission from Waterford City and County Council. If development proposals are consistent with the Planning Scheme they will be granted permission. No party may appeal to An Bord Pleanála the decision of Waterford City and County Council, on any application for permission in respect of a development within the area of the Planning Scheme.

3.2 Contents of the Draft Planning Scheme

The Draft Planning Scheme has been prepared by Waterford City & County Council as the development agency for the North Quays SDZ. It comprises a written document with figures for illustrative purposes. Separate documents that accompany it and that have informed the development of the Draft Planning Scheme include this Environmental Report (Strategic Environmental Assessment), the Natura Impact Report (Appropriate Assessment) and a Strategic Flood Risk Assessment.

The Draft Planning Scheme is comprised of six Chapters, as follows:

- Chapter 1: Introduction
- Chapter 2: Site Context
- Chapter 3: Physical & Social Infrastructure
- Chapter 4: Planning Strategy
- Chapter 5: Architectural Strategy
- Chapter 6: Actions & Implementation

The Draft Planning Scheme sets out the Vision and Principal Goals for the North Quays SDZ, which are supported by Specific Objectives throughout the document. The Draft Planning Scheme outlines how it will guide the future development of the area in terms of physical, social, economic and environmental protection and enhancement in accordance with the national, regional and local higher-level plans and policies. The Actions & Implementation chapter details the process of how future planning applications will be granted.

3.3 SDZ Location and Description

The designated NQ SDZ is an 8.23 hectare brownfield site located on the northern banks of the River Suir, 300m from Waterford City centre. The SDZ stretches from Rice Bridge, approximately 1km eastward to just before Abbey Church. With the exception of the Hennebique Building, all of the industrial buildings and storage sheds were demolished during 2015 and 2016. The SDZ comprises an assembly of wharves and the Rosslare to Waterford rail line traverses the site in an east west direction.

The site is bound to the south by the River Suir, and to the north by the Dock Road (R711) – a regional dual carriageway. The site has a very significant presence in Waterford City, forming as it does a nearly 1km frontage opposite the City Centre and being visible from the main northern approaches to the city as well as from the city centre and south quays. The site has a south facing aspect and has significant redevelopment capacity, already having contained buildings of seven or eight storey equivalence and having very few boundary constraints.

4.0 RELATIONSHIP WITH OTHER PLANS

The SEA of the proposed Waterford's NQ SDZ Draft Planning Scheme is informed and carried out in the context of a wide range of EU, National, Regional and local legislation and plans. In particular, the interaction of the proposed Draft Planning Scheme with the environmental protection objectives (EPOs) and standards included within the Waterford City Development Plan 2013-2019 and other plans and programmes must be considered.

A review of the relevant plans, policies and programmes relevant to the Draft Planning Scheme was carried out, focussing primarily on International, European, national and local plans. The purpose of this review is to take into consideration the policy framework within which the Draft Planning Scheme is being developed. In accordance with the legislative requirements an outline of the contents and main objectives of the plan and relationship with other relevant plans is provided in Appendix A of the Environmental Report.

Where it was identified that the Planning Scheme may have a negative impact on the EPOs of these individual plans and programmes, a means of addressing these issues is presented i.e. typically through the assessment by the Environmental Protection Objectives. The Environmental Protection Objectives (EPOs) are used to assess the likely significant effects of implementing the Plan. The EPOs have been adapted from the SEA process of the Waterford City Development Plan 2013-2019. The EPOs are used to assess the likely significant effects of implementing the Draft Planning Scheme. Where any significant adverse impacts are identified the ER includes mitigation measures to prevent, reduce and as fully as possible offset these effects on the environment.

From the review policy documents it is considered to be broadly consistent and supportive of these higher level policy documents.

4.1 Waterford City Development Plan 2013-2019

Waterford City Development Plan 2013-2019 supports the development of the north Quays SDZ which is zoned as part of a larger mixed use 'opportunity site'. The *Waterford North Quays - Urban Design Framework* plan prepared in 2008 set out a broad vision for this area comprising development concepts and urban design guidelines including infrastructure options to include a bridge crossing connecting the north quays. A range of mixed uses including retail, office and residential would be permissible on the site under this zoning.

The Draft Planning Scheme includes the objective PSS 1: All future planning applications shall comply with the relevant Waterford City Development Plan policies and objectives.

4.2 PLUTS Strategy 2004

The Waterford Planning, Land Use and Transportation Study 2004 (PLUTS) recognises the potential of the North Quays as an extension of the city centre and prioritised a new city centre pedestrian bridge and a new public transport interchange at the North Quays. The implementation of the Planning Scheme is deemed to support the PLUTS Strategy.

4.3 Ferrybank – Bellview Local Area Plan

At the time of writing the Ferrybank-Bellview Local Area Plan (LAP) 2009 is under review. The current LAP outlines a strategy for the proper planning and sustainable development of an area of land stretching from Grannagh to Belview and from the River Suir to the line of the Waterford bypass, adjacent to the SDZ area. The policies, objectives and zoning objectives for existing and future development of the Ferrybank area have been considered as part of the Planning Scheme proposals.

A summary of the other key planning and land-use policy documents relevant to the North Quays SDZ and how they relate to the Plan and assessment of likely cumulative impacts is provided in Appendix A of the SEA Environmental Report.

5.0 BASELINE ENVIRONMENT

5.1 Introduction

This section describes the environmental baseline of the North Quays SDZ. This baseline together with the Environmental Protection Objectives (EPOs) are used in order to identify, describe and evaluate the likely significant environmental effects of implementing the proposed SDZ in order to determine what if any mitigation and monitoring measures are required.

The baseline information forms the platform to identify existing environmental problems. From this, the highlighted environmental issues can then be used to establish the EPOs. In this case, as the process involves the Planning Scheme of the SDZ, the EPOs established as part of the Environmental Report of the Waterford City Development Plan 2013-2019 have been adapted for this assessment of the SDZ in order to ensure that any likely significant impacts on the SEA topics are addressed and can be included as part of future monitoring of the SDZ.

The environmental baseline is described in line with the legislative requirements outlined in Schedule 2B of the SEA Regulations 2004-2011, encompassing the required environmental receptors/topics and the interrelationship between these components.

5.1.1 Geographic Area of the SDZ

The designated NQ SDZ is an 8.23 hectare brownfield site located on the northern banks of the River Suir 300m from Waterford City centre as shown in Figure 5.1. The SDZ is bound to the south by the River Suir, and to the north by the Dock Road (R711). The SDZ stretches from Rice Bridge, 1.1 km eastward to just before Abbey Church. The Study area includes a wider area surrounding the North Quays and city centre and includes lands adjacent to the SDZ including the River Suir, Waterford City Centre and the Ferrybank area.

The site is contiguous to the Ferrybank Neighbourhood Centre in the administrative area of Kilkenny County Council. The SDZ has a very significant presence in Waterford City, forming as it does a nearly 1km frontage opposite the city centre and being visible from the main northern approaches to the city as well as from the city centre and south quays.

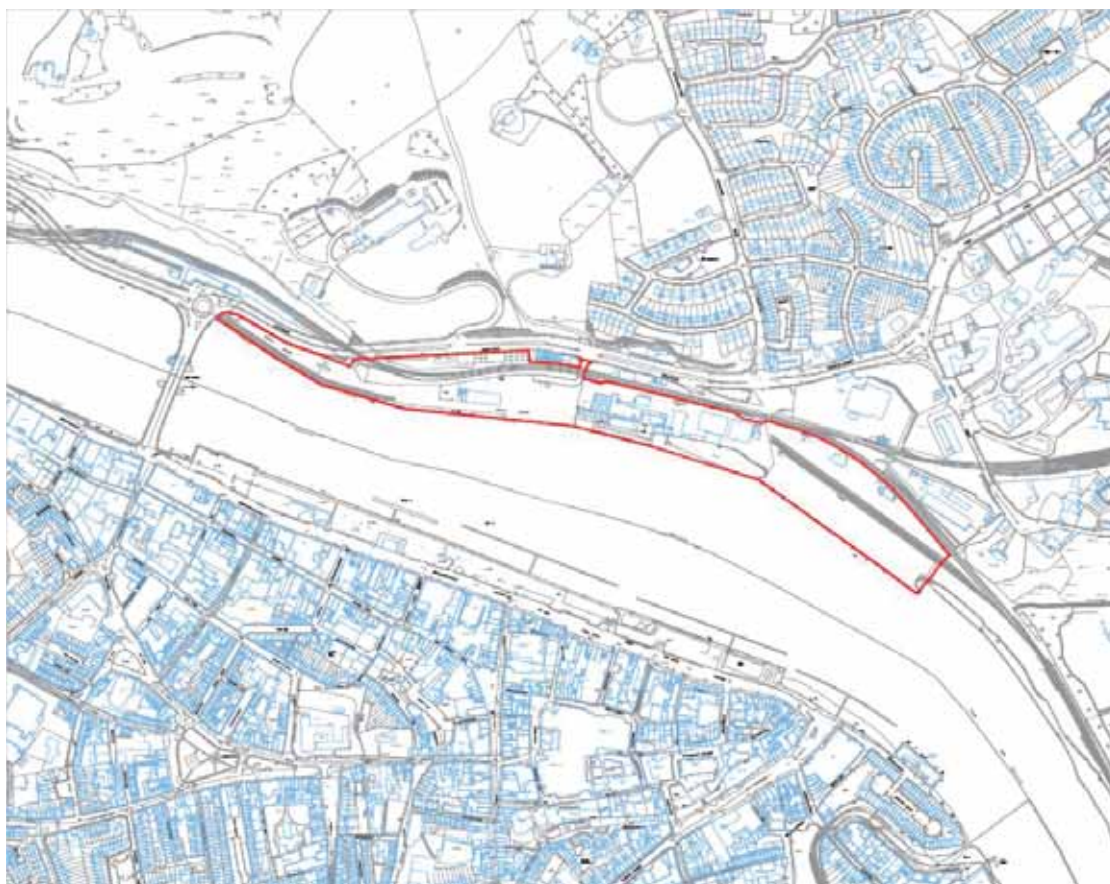


Figure 5.1 North Quays Strategic Development Zone Boundary (8.23ha)

5.1.2 Evolution of the Environment in the Absence of the Planning Scheme

The SEA Directive requires that the ER includes a description of the likely evolution of the environment in the absence of the SDZ. This will be considered under the “Do Nothing Scenario” in Section 7 of the ER.

5.1.3 Data Gaps and Limitations

This baseline description is not intended to be an exhaustive description of all baseline environmental data within the area that may be impacted upon by the Planning Scheme. Instead, it is focused on providing relevant baseline information at an appropriate scale and detail for the purposes of this Planning Scheme for the NQ SDZ. Overall it is considered that adequate baseline information was gathered to enable an assessment of the likely significant effects on the environment from the Draft Planning Scheme.

5.1.4 Environmental Topics Scoped Out

No environmental topics / receptors were scoped out at SEA Scoping stage.

5.2 Biodiversity (Flora and Fauna)

The 'likely zone of impact' of the Draft Planning Scheme was defined as a 15km buffer around lands encompassing the NQ SDZ to ensure all conceivable impacts had been captured in the assessment.

5.2.1 Natura 2000 Designated Sites

The Waterford North Quays Strategic Development Zone southern boundary comprises the Lower River Suir Special Area of Conservation (SAC) which is a very

large, multi-interest site covering more than 100km of the main river channel. An AA Screening and Natura Impact Report (NIR) were carried out in parallel to the Draft Planning Scheme to assess the potential effects on any Natura 2000 sites and inform the ER. The SEA ER provides information on the Natura 2000 Sites within the Likely Zone of Impact of the Draft Planning Scheme and Figure 5.2 of the SEA ER illustrates the map of the Natura 2000 sites.

5.2.2 Nationally Designated Sites

There are 34 nationally designated sites, including one Natural Heritage Area (NHA) and 33 Proposed Natural Heritage Areas (pNHA), located within the 15km 'likely zone of impact' of the plan, are identified in Table 5.3 and illustrated in Figure 5.3 of the SEA ER.

5.2.3 Existing Environmental Problems

The EPA State of the Environment (2016) report states the key pressures on Ireland's Habitats and Species include: Changing land use, direct impact and unsustainable exploitation pressures evident across different habitats. The EPA State that *"it is foreseeable that future land use changes will further threaten Ireland's habitats and species. The continuing deterioration of high quality rivers is of great concern, particularly as species such as salmon, trout and the declining freshwater pearl mussel require and depend on high quality water and river habitat (NPWS, 2013)."*

Invasive species have been identified on the North Quays SDZ site. Future redevelopment of the site will require management of these species if present, as they can have a negative impact on the economy, wildlife or habitats. The safe disposal of IAS material, including soil infested with seed, is problematic and needs to be further addressed.

5.2.4 Likely Effects on the Biodiversity of the Planning Scheme

- Arising from both construction and operation of development and associated infrastructure: loss of and / or damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance, fragmentation to biodiversity and flora and fauna.
- Potential loss or temporary loss of habitat due to construction on exposed mudflats (for which the SAC is not designated but is a listed Annex I habitat).
- Likely direct temporary adverse impacts on aquatic species during construction phases associated with the Planning Scheme on or close to the quay walls/ wharves and the construction of the sustainable transport bridge.
- Potential disturbance to species during construction and operation activities associated with the development of the Planning Scheme.
- Likely disturbance to otter commuting routes between resting sites and hunting grounds along the River Suir quay wall and mudflats.
- Potential impact on the aquatic species due to construction activities in the inter-tidal and/or river environment. Also there could be potential impact on the aquatic species due to increased human populations in the immediate area and with the introduction of lighting and sources of noise along the riverside as a result of riverside walkway.
- Potential impacts on Lower River Suir SAC and the River Barrow and Nore SAC arising from alterations in quality, flow and/or morphology with regard to

bridge piers in the River which is subject to separate planning application and EIA.

- Potential adverse impacts due to construction and operation activities on the achievement of good status of the South East River Basin Management Plan in accordance with the Water Framework Directive e.g. waste water and drainage.
- Potential introduction / spread of invasive species if unmitigated.
- It is not expected there will be significant impacts on bat fauna.

5.3 Population and Human Health

The proposed Draft Planning Scheme may lead to impacts on population and human health due land use changes, land-take, severance, possible noise, air, landscape and visual impacts. Population and Human Health are very much influenced by the presence and state of the other environmental receptors.

5.3.1 Population

The National Spatial Strategy (NSS) sought to develop Waterford City as a Gateway City and a primary driver of economic and population growth within the South East region. Ireland 2040 Our Plan – Draft National Planning Framework (NPF) continues to support this broad objective and is currently at draft stage. The NPF identifies Waterford as the principal urban centre in Ireland's south-east and is unique in having a network of large and strong regional urban centres in close proximity within each of the surrounding counties.

The NPF states that in terms of overall population and employment growth and new housing provision, the five cities of Dublin, Cork, Limerick, Galway and Waterford will be targeted to accommodate 50% of overall national growth between them.

The population of Waterford City and suburbs increased by 3.85% between 2011 and 2016, bringing the population to 53,504 persons in 2016. This increase is largely in line with the population growth of the state. The NQ SDZ is currently an uninhabited, city centre brownfield site. The site is located within the Ferrybank Electoral Division (ED) as shown in Figure 5.4. CSO 2016 population figures indicate a total population of 858 representing a decline of 53 persons or -5.8% since the last Census period.

5.3.2 Human Health

Human health impacts relevant to SEA are those which arise as a result of interactions with environmental receptors (i.e. from air pollution, odour, noise, contaminated land/soil, drinking water, etc) which have the potential to cause a threat to the health of populations and the wider environment. Hazards or nuisances to human health can also arise as a result of incompatible adjacent land uses. The Health Model developed by the EPA illustrates the potential impacts on health and well being from the range of environmental sources including the built and natural environment and consumption patterns. These 'harms' can impact on the six core service needs for our wellbeing: clean air, clean water, access to amenity, safe food, stable environment, and safe shelter. Waterford is a member of the World Heritage Organisation (WHO) European Network of Healthy Cities. This initiative aims to enhance the health of the City, its environment and the people of all groups.

5.3.3 Noise

Environmental noise is unwanted or harmful outdoor sound and is the second greatest environmental cause of health problems, after air quality. Waterford City and

County Noise Action Plan 2013-2018 (WCC, 2013) includes the Strategic noise maps and a noise action plan produced by Waterford City Council in 2013. The results of the noise mapping indicate that a relatively small number of the population within the functional area of Waterford City and County Council are being exposed to noise levels due to major road traffic sources.

The Noise Action Plan outlines general measures to prevent noise and reduce, avoid or relocate the various types of noise source. Future developments will be designed and constructed to incorporate these measures into future developments. New housing areas and in particular brown field developments will be planned from the outset in a way that ensures that at least the central area is quiet. These measures are required to be considered as part of future planning proposals of the SDZ.

5.3.4 Radon

Radon is a naturally occurring radioactive gas that originates from the decay of uranium in rocks and soils. It is colourless, odourless and tasteless and can only be measured using special equipment. The NQ SDZ is located in a high radon area. 'High Radon Area' is one in which more than 10% of homes are predicted to have radon levels in excess of the reference level of 200 Bq/m³. Radon rises up through the ground to disperse in the air and only becomes a health hazard when it is trapped in buildings. To prevent high-radon levels occurring in new buildings installation of passive preventive measures in all new buildings can be undertaken and radon levels can be monitored in all buildings. All new planning applications should integrate radon preventative measures and appropriate monitoring in new buildings in accordance with the Building Regulations.

5.3.5 Major Accident / Seveso Sites

Human health and the environment are at risk of serious injury due to major industrial accidents which involve dangerous substances. There is one site within close proximity of the study area which is designated as a Seveso II site under the Major Accident Seveso III (Directive 2012/18/EU). This site is the Trans-Stock Warehousing and Cold Storage Limited, located in Christendom, Ferrybank, on the north bank suburb of the River Suir at an approximate distance of 600m from the SDZ. All planning applications within 700m of the Seveso site require referral to the Health & Safety Authority for technical advice in order to reduce the risk and limit the consequences of major industrial accidents.

5.3.6 Likely Effects on Population and Human Health

Likely significant beneficial effects:

- Compact City and urban consolidation: The NQ SDZ as a brownfield site has the potential to maximise urban consolidation by promoting the North Quays as a sustainable, viable, attractive and good quality alternative over other out-of-town and/ or rural locations as places to live, work and recreate in the county and the South East region.
- Healthy by design: The promotion of healthier lifestyles by integrated land use planning which can influence healthier decisions e.g. reducing sedentary lifestyles, tackling rising obesity levels, reducing the reliance on the private car, promoting sustainable /public transport options, etc.
- Opportunities to provide for residential development that reflect changing lifestyles of the population e.g. reduction in household/ family size, ageing population, population that is living healthier for longer, reliance on the digital economy, community connections, etc.

- Opportunities for improved access to a sustainable transportation network including the provision of sustainable transport options including; cycleways, walkways and promotion of smarter travel which can help people's quality of life by offering viable alternatives to using the private car.
- Creation of improved access and social connectivity between existing and future populations in the City and environs through integrated land use planning particularly in the city centre (to the south) and the adjoining residential neighbourhoods particularly the Ferrybank / Belview, city centre and wider environment.

Likely unknown effects and or potential for significant adverse effects:

- Radon rises through the ground to disperse in the air and only becomes a health hazard when it is trapped in buildings. NQ SDZ should consider the integration of monitoring measures to monitor radon gas in buildings. To prevent high-radon levels occurring in new buildings it is a requirement to install passive preventive measures in all new buildings and to continuously monitor radon levels in all buildings.
- Future planning applications that are located within 700m of the Seveso Sites require referral to the Health & Safety Authority (HSA) for technical advice in order to reduce the risk and limit the consequences of major industrial accidents. Any site located in the SDZ within 700m from the Seveso II site: Trans-Stock Warehousing and Cold Storage Limited, Christendom, Ferrybank will be required to be referred to the HSA.
- Traffic is a key pressure on air and noise environment in the area. The NQ SDZ is currently subject to high levels of noise due to its proximity to the Dock Road. The Planning Scheme has the potential to reduce and/or exacerbate this issue if, managed/ not managed appropriately. All planning applications within the SDZ should seek to minimise noise, vibration and air pollution levels from traffic and impact to existing and future populations that can be associated with incompatible land uses.
- Noise sources from transport such as from the Dock Road and future transport infrastructure will need to be considered as part of future planning proposals.
- The Planning Scheme should seek to implement best practice in the provision of appropriate drinking water to service the NQ SDZ.
- The Planning Scheme should, where possible and appropriate, include/ and/ or promote the inclusion of specific policies/ objectives regarding the provision and maintenance of adequate and appropriate wastewater treatment infrastructure to service zoned lands and developments in a planned and co-ordinated fashion.
- There may be impact from the Planning Scheme due to higher buildings, overshadowing and / or wind tunnel effects.

5.4 Water Resources and Flooding

This section includes an overview of water resources and issues considered as part of the Draft Planning Scheme, including water status and quality, aquifer classification, groundwater vulnerability and flooding. Flooding is more comprehensively dealt with in the Draft Strategic Flood Risk Assessment (SFRA), contained as a separate document to the Draft Planning Scheme. Ireland has an abundance of surface water resources including river channels, lakes, estuaries and coastal waters, the most notable of these within the plan area being the River Suir. The state of Ireland's groundwater and surface water is assessed based on a water

quality monitoring programme designed to support the implementation of the Water Framework Directive river basin planning process.

5.4.1 Hydrology

The Water Framework Directive (WFD) is now in its draft second cycle. The North Quays SDZ is within the new National River Basin District (NRBD), which was formed from the merger of the Eastern, South Eastern, South Western, Western and Shannon River Basin Districts from the 1st Cycle of the WFD. The draft second cycle RBMPs sets out the status of waters in the River Basin District (RBD); the proposed environmental objectives and the draft programme of measures to achieve those objectives by 2021. The National River Basin District is divided into 40 catchment units, of which the SDZ is located in the Suir Unit of Management (UoM), No 16.

According to the South East River Basin District Management Plan (RBMP) in order to meet the requirements of the Water Framework Directive, water quality in Waterford Estuary needs to be restored to 'good' by 2021. The main waterbody in relation to the SDZ is the Middle Suir Estuary. However there are also a number of tributaries and streams that flow into the River Suir close to the NQ SDZ. The Luffany River is located approximately 50 metres east of the SDZ and it flows from the northern banks into the River Suir while St. John's River flows from the south banks of the River Suir. The initial objectives of the RBMP will be incorporated into the Draft Planning Scheme to help protect and improve the status of the adjacent waters.

5.4.2 Hydrogeology

The North Quays area is located within the Mullinavat groundwater body and is identified as having moderate groundwater vulnerability. Plunkett Train Station and part of the western portion of the SDZ are located on 'extreme' ground water vulnerability area. The South Quays has 'moderate' groundwater vulnerability located on the Waterford groundwater body. The Geological Survey of Ireland (GSI) reports that the NQ SDZ is within 'poor aquifer' bedrock which is generally unproductive except in local zones.

5.4.3 Flooding

Waterford Flood Alleviation Scheme has addressed flood areas through the construction of flood defences along the south quays of the River Suir from Grattan Quay to Adelphi Quay and to the north bank of the St. John's River as far as the Courthouse in 2010. The Waterford City Development Plan 2013-2019 identifies that the site is within Flood Zones A and B. An SFRA has been undertaken as part of the development of the Draft Planning Scheme and has informed the preparation of the Draft Planning Scheme and the SEA process. The "Planning System and Flood Risk Management Guidelines for Planning Authorities" 2009 includes specific requirements for future developments, which will be incorporated into the Draft Planning Scheme. In the case of land use plans, the SFRAs and site specific FRAs shall provide information on the implications of flood risk as a result of the Draft Planning Scheme.

Existing Environmental Problems

The EPA's 'State of the Environment Report' (EPA 2016) details that there has been no improvement in Ireland's river water quality or transitional and coastal water quality over the past six years. The most widespread water problem in Ireland continues to be elevated nutrient concentrations (phosphorous and nitrogen), arising primarily from human activities such as agriculture and waste water discharges from

human settlements. The targeted improvement for surface waters through the first river basin planning cycle was not achieved; therefore a radically different approach is needed in the second cycle. Excessive siltation has also become a cause for concern as there is increasing evidence that the physical condition (hydromorphology) of surface waters may be as important to maintaining healthy ecosystems as the quality of the water sustaining them.

5.4.4 Likely Effects on Water Resources

As part of the SEA process, there are a number of likely significant impacts identified in relation to water resources and flooding, these include:-

- Developments during both during construction and operation are likely to have a significant adverse effect on the river water quality of the Lower River Suir if unmitigated. The Planning Scheme through specific provisions should seek to comply with the WFD and restore and protect river water quality of the Lower River Suir.
- The impacts of nutrient enrichment and the process of eutrophication is a major concern in the marine environment and will be required to be considered as part of waste water treatment system of the NQ Planning Scheme and future proposals.
- Careful consideration of design and development in flood zones and future flood events will be considered throughout the development of the SDZ Planning Scheme and will be subject to a site specific flood risk assessment and proposed mitigation as part of the SFRA.
- The treatment of sewage and industrial waste water (water that is discharged to sewers) continues to be one of the principal pressures on water quality in Ireland. Despite ongoing improvements in urban waste water treatment plants and the effluent discharged is not up to standard in many locations (EPA, 2016). This should be addressed as part of Planning Scheme.
- Fisheries resources deliver economic and social benefits to the Irish economy which will require to be protected against any likely impacts caused by development or contaminants that may enter water course as a result of development.
- Appropriate measures should be proposed in the Planning Scheme to ensure the continued protection and status of groundwater source.

5.5 Air and Climatic Factors

Air quality monitoring in Ireland is generally of a high standard across the country and is monitored by the EPA. Waterford lies in Zone C 'Other Cities and large Towns' and the EPA reports that the current air quality of Waterford City is good (EPA 2017b). Zone C levels of NO_x started to spike in 2013 but have been declining since 2014. A conservative estimate of the background NO₂ concentration in the region of the proposed development in 2017 is 10 µg/m³.

With regard climatic factors, ozone levels in Ireland are lower than those in mainland Europe but can exceed the WHO air quality guideline values. Ozone increases in Ireland are highly influenced by transboundary emissions and can affect those who suffer from respiratory conditions. In terms of CO, based on EPA data, a conservative estimate of the background carbon monoxide concentration in Waterford in 2017 is 0.6 mg/m³, which is well below the limit value of 10 mg/m³ (EPA 2016).

Benzene and Particulate Matter levels are below recommended EU levels however PM levels exceed the WHO air quality guideline levels in some areas of Ireland. PM₁₀ in the region of the proposed SDZ is in the region of 20 µg/m³ in 2017.

Existing Environmental Problems

The key issue involving the assessment of the effects of implementing the Draft Planning Scheme on air and climatic factors relates to greenhouse gas emissions arising from transport and energy efficiency in buildings. By providing options that reduce journey times and include more sustainable modes of transport, populations can reduce greenhouse gas emissions by shifting away from relying on the private car. There are also positive impacts in relation to air and noise pollution and more efficient and sustainable use of land, infrastructure and service provision. The implications of climate change with regard to flood risk in relevant locations will be considered as part of the SFRA for the Draft Planning Scheme.

5.5.1 Likely Effects on the Air and Climate Environment

- Increase development in the area has the potential to have adverse effects on the road traffic which is a threat to the emissions to air and air quality due to increased congestion and also increase noise levels in the area. The Draft Planning Scheme promotes sustainable travel modes which should reduce the need to travel by car. However the implementation of the range of measures will be required in order for a modal shift to occur.
- Therefore it is considered there will be likely beneficial impact on the environment due to reduction in green house gas (GHG) emissions and air pollution due to integrated land use and transportation infrastructure which is likely to result in a reduction in need to travel by car.
- Likely to be short-term adverse impacts due to construction related impacts.
- There are challenges of climate change on future land uses on the NQ SDZ and surrounding environment, much of which is within designated Flood Zones. The SFRA will inform flood risk due to the development and provide suitable mitigation measures, to counteract this.
- Likely beneficial impact on the environment due to energy efficiency and energy conservation measures as part of planning applications.
- Sources of energy have the potential to increase GHG emissions. There is likely to be a reduction in the use of and dependency on transport based fossil fuels and increase alternative sources of more sustainable energy sources.
- The Waterford Climate Change Strategy (2011) sets out an action plan to offset carbon emissions.
- Energy Consumption in transport as well as buildings should be explored including opportunities such as renewable energy.

5.6 Geology and Soils

The Geological Survey of Ireland indicate that the bedrock of the area is part of the Ballylane Shale Formation, described as green & grey slate with thin siltstone of the Palaeozoic, Lower - Middle Ordovician Age. The subsoil's are identified by the EPA as Peaty Gleys Acidic. The NQ SDZ is identified as being 'made ground'. The Corine land cover 2012 classifies the SDZ as 'discontinuous urban fabric' and 'road and rail networks'. The NQ SDZ lands are the whole of those lands historically used for port related activities on the northern side of the River Suir. Therefore there may be areas of potential contamination at the site associated with derelict industrial buildings and storage sheds associated with the historic Port of Waterford.

Existing Environmental Problems

The EPA State of the Environment report (2016) states: Soils, land cover and landscapes are resources that need to be protected, monitored and managed. Population increase and settlement growth are the principal causes of land use changes in urban areas and can lead to soil sealing. This has implications for soil quality and therefore forward strategic planning and new infrastructure are needed to ensure that growth is sustainable and does not add to the environmental pressures that are already evident.

5.6.1 Likely Effects on the Soils and Geology Environment

- Likely beneficial impact on soil resources due to reuse / regeneration of existing brownfield sites in an urban environment.
- Planning proposals or inclusion of green infrastructure / open spaces as part of the planning scheme may reduce soil sealing through Sustainable Urban Drainage System (SUDS) and other landscaping measures.
- There may be significant adverse impact if contaminated land is found to be present on site. If present on site this could impact on groundwater, surface water and species and habitats which depend on these water resources. There may be a requirement for remediation of potentially contaminated lands and associated waste management which will address the protection of groundwater, water quality and biodiversity including the designated Lower River Suir SAC. Remediation measures may require a licence from the EPA under the Waste Management Act 1996 for treatment and or removal or disposal sites under strict internationally accepted standards.

5.7 Material Assets

Material assets are taken to include infrastructure and utilities including rail, road, water supply, the electric grid, gas network and wastewater treatment facilities. It also includes economic assets such as lands, coastal and water resources which support fisheries and tourism industry.

The SDZ site has many types of transport infrastructure including; Dock Road (R711), the River Suir is an active navigation channel and the Waterford to New Ross old railway line located to the east of the site. There are a number of existing policies and objectives that support the development of public transport infrastructure at Waterford's North Quays. Specific objectives of relevance to the future development of the NQ SDZ are those included as part of the Waterford City Development Plan 2013-2019, PLUTS Strategy 2004, and Ferrybank-Belview Local Area Plan 2009 which include a range of transport objectives.

With regards drinking water, the quality is generally good for this area (Irish Water 2017), however there are exceedances reported for three parameters: Clostridium perfringens, Cryptosporidium and total coliforms. There is currently no suitable wastewater drainage or surface water drainage on site. Electricity, gas supplies and broadband service will need to be sourced from local sources while addressing measures to reduce energy consumption and incorporate renewable energy sources. Tourism and fisheries resources are relevant to Waterford and will be incorporated into the Draft Planning Scheme.

Existing Environmental Problems

- The car is still the dominant choice of transport in Ireland and Waterford City. Transport is a significant contributor to Ireland's greenhouse gas emissions.

Air pollutants released from transport are a key public health issue. A key challenge of the Planning Scheme is to increase passenger numbers by bus, rail and sustainable transport (cycling and walking) in order to reduce car dependency and associated environmental effects.

- Promoting energy conservation, energy efficiency and use of alternative energy sources is a key national policy objective.
- Drinking water supply, water quality, conservation and affordability are ongoing national issues affecting the existing and future populations.

5.7.1 Likely Effects on Material Assets Environment

Many of the impacts are unknown but have the potential to lead to adverse impacts across EPOs:

- The Planning Scheme promotes significant quantities of new development in the absence of satisfactorily addressing capacity in the wastewater infrastructure this could potentially have significant adverse impacts on the environmental receptor water.
- Construction and development in general can impact on water quality. Failure to comply with the EU Water framework Directive may result in reduction to water quality. Compliance is required to ensure and maintain at least good ecological status to receiving waters.
- Increased demand for good quality clean drinking water supply will be required to be addressed as part of the Planning Scheme.
- Waste and wastewater collection systems and appropriate discharge that respects the WFD requirements and conservation objectives of the Lower River Suir SAC will require to be addressed as part of the planning applications.
- Likely improvement in sustainable transport due to integrating transport options and promoting more sustainable travel patterns to include the rail network, walking and cycling.
- Likely increase in tourism capacity and connectivity as a result of future planning proposals.
- Ensuring the protection and continued use of the River as a navigation channel for existing and future users i.e. navigation / mooring/ berthing facilities and dredging considerations.
- Ensuring the protection of water quality and fisheries resource.
- Likely increase in waste levels as a result of future proposed developments during both construction and operation.

5.8 Cultural Heritage

Waterford is rich in the diversity and quality of the archaeological monuments and landscapes within the City. The Hennebique Building and Free standing crane on the North Quays are identified as buildings / structure of Architectural Heritage and are included as part of the National Inventory of Architectural Heritage. There is also potential that the remains of shipwrecks could be located within proximity to the quays that could be disturbed or impacted by any proposed works, while previously unknown underwater archaeological heritage could remain buried beneath the quays awaiting discovery.

5.8.1 Likely Effects on the Cultural Heritage Environment

- Considering the riverside and intertidal environment and scale of development being proposed (8.23 hectares), there is the potential for previously unidentified archaeological including underwater archaeological remains to be discovered during the course of development works.
- Potential that the remains of shipwrecks could be located within proximity to the quays that could be disturbed or impacted by any proposed works, while previously unknown underwater archaeological heritage could remain buried beneath the quays awaiting discovery.
- A key challenge will be the regeneration and development of the built environment whilst promoting the cultural heritage of the area such that they become 'place making' elements of the future and existing communities.
- High quality contemporary designs that respect the character of the adjacent South Quays ACA will enhance the special aesthetic qualities of the area.

5.9 Landscape

Waterford City is defined by the River Suir Waterway Corridor and the topography of the NQ SDZ is primarily flat land which gradually rises in a northerly direction. A landscape character assessment, as part of the North Quays Urban Design Framework 2008, identified a number of distinct Landscape Character Areas while Protected Vistas are identified in the North Quays Urban Design Framework 2008 and are protected under the Waterford City Development Plan 2013-2019. Development of public infrastructure options will be required to be cognisant of these views as well as those identified in the Belview-Ferrybank LAP 2009 (currently under review).

5.9.1 Likely Effects on the Landscape Environment

- Future developments will change the landscape in the area, and therefore proposals should be sympathetic to the riverscape in terms potential impacts associated with design and building height as well as impacts on the historic setting, zone of archaeological potential, ACAs and protected structures.
- Future development and landscape design and choice of plant species has the potential to impact positively on existing ecological corridors, blue and green infrastructure.
- Green infrastructure will have the potential to provide links to existing, historic and future heritage as well as contribute to the overall landscape and biodiversity of the City.
- Integration of the Waterford New Ross Greenway into planning scheme has the potential to provide an ecological corridor to support local biodiversity.
- Future development proposals have the potential to impact on significant views in the City and surrounding environs.

5.10 Inter-relationships Between Environmental Receptors

While all environmental topics interact with each other to some extent, it is considered at this stage that the most significant inter-relationships are between the water environment, biodiversity, landscape, soil, material assets and population and human health. Table 5.5 summarises the various environmental topic interrelationships by way of a matrix.

Table 5.5 Environmental Topic Interactions Matrix

| INTERACTIONS | Biodiversity | Population and Human Health | Landscape | Water Resources | Soils & geology | Material assets | Cultural heritage | Air & Climate |
|-----------------------------|--------------|-----------------------------|-----------|-----------------|-----------------|-----------------|-------------------|---------------|
| Biodiversity | | | | | | | | |
| Population and Human Health | | | | | | | | |
| Landscape | | | | | | | | |
| Water Resources | | | | | | | | |
| Soils & Geology | | | | | | | | |
| Material Assets | | | | | | | | |
| Air & Climate | | | | | | | | |
| Cultural Heritage | | | | | | | | |

6.0 ENVIRONMENTAL PROTECTION OBJECTIVES

The current EPOs from Waterford City Development Plan 2013-2019 has been used as a building block to develop the EPOs for the SEA. Table 6.1 below lists the EPOs under each environmental topic – some have been modified slightly reflecting the specific characteristics of the plan area. The EPOs can also be influenced by the comments from the statutory environmental authorities at SEA Scoping stage.

Table 6.1 Environmental Protection Objectives

Biodiversity, Flora and Fauna

B1: Protect, conserve and enhance habitats, species and areas of national and local importance, including aquatic habitats and species and promote the sustainable management of habitat networks.

Population and Human Health

P1: Facilitate a good standard of health for Waterford's population through ensuring high quality residential, recreational and working environments that are based on sustainable landuse and travel patterns.

Water Resources

W1: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contaminants to waters.

W2: To reduce and manage the risk of flooding.

Soils

S1: Protect, improve and maintain the quality of soils in the interests of avoiding environmental degradation in water quality and biodiversity.

Air and Climate

AC1: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey.

AC2: To limit adverse impacts of climate change through the use of sustainable energy sources.

Cultural Heritage

C1: To protect, conserve and enhance cultural heritage features of the plan area including the built environment, settings and known and unknown archaeological assets.

Landscapes

L1: Protect and conserve the quality, character and distinctiveness of the River Suir waterway corridor and minimise negative visual impacts.

Material Assets

MA1: Maintain sustainable access to assets such as open spaces, water resources, wastewater, drinking water, drainage and all other physical and social infrastructure.

The close connection with the EPOs of the current City Development Plan is to facilitate ease of monitoring of EPOs throughout the lifetime of the Planning Scheme and beyond. As already stated the EPOs from the existing SEA ER for the Waterford City Development Plan 2013-2019 listed in Table 6.1 above will be used to assess the likely significant impacts of the elements of this Draft Planning Scheme on the environment.

7.0 ASSESSMENT OF ALTERNATIVES

Article 5 of the SEA Directive requires the plan making authority to consider reasonable alternatives are identified taking into account the objectives and the geographical scope of the Planning Scheme. The alternatives are required to be described and evaluated for their likely significant effects on the environment. This chapter summarises the environmental assessment of the alternatives to the Planning Scheme.

One of the main goals of the Development Agency was to deliver a Planning Scheme that will generate key elements of development to include the provision of mixed uses development including residential, retail and employment opportunities coupled with a development of a transport hub and new sustainable transport bridge, connecting the North Quays with the South Quays.

The purpose of this section of the SEA is to examine the reasonable alternatives available to the Development Agency in developing the Planning Scheme. The alternatives considered are outlined below:

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

7.1 Assessment Methodology

As a mechanism of measuring the effects of each alternative on the environment, the alternatives will be tested against the Environmental Protection Objectives (EPOs) developed in Section 6 above, taking into account the objectives and the geographical scope of the Plan.

The results of the assessment will assist in determining the most practical reasonable and feasible option (preferred option) required to meet the objectives of the Plan. The Do Nothing scenario was not considered a reasonable alternative and therefore was not considered.

The Development Scenarios are given an assessment ratings ranging from 'Major Significant Adverse Impact' (XX) to 'Major Significant Beneficial Impact' √√ on the status of the Environmental Protection Objective and an associated explanatory text is provided for each alternative against each of the individual Environmental Protection Objectives (EPOs). Table 7.1 provides an explanation of the ratings used for the assessment.

Table 7.1 Likely Significant Effect of the Alternatives – Assessment Matrix

| | |
|----|---|
| √√ | Major Significant Beneficial Impact on the status of the Environmental Protection Objective |
| √ | Likely Significant Beneficial Impact on the status of the Environmental Protection Objective |
| 0 | Neutral or an Insignificant Impact on, the status of the Environmental Protection Objective |
| ? | Unknown / uncertain impact |
| X | Likely Significant Adverse Impact on the status of the Environmental Protection Objective – likely to be mitigated. |

| | |
|-----------|---|
| XX | Major Significant Adverse Impact on the status of the Environmental Protection Objective – unlikely to be mitigated fully |
|-----------|---|

Each of the alternatives is assigned an impact colour based Table 7.2 below in order to clear illustrate the preferred option under each of the EPOs as follows.

Table 7.2 Traffic Light Colour Coding of Alternatives

| Key to Traffic Light Colour Coding of Alternative |
|---|
| Preferred Alternative |
| Least Preferred |
| Equal or no difference in rating between two or more Alternatives |
| Lowest Scoring of the Alternatives |

The alternatives are evaluated using compatibility criteria to determine how they would be likely to affect the status of the EPOs. The alternatives are also assessed for interactions which may cause effects on specific components of the environment and are given an assessment rating. Table 7.3 of the Environmental Report contains the detail of the evaluation of the alternatives as tested against each of the EPOs. Table 7.3 below provides a summary of the assessment ratings.

Table 7.3 Summary of Alternatives Assessment

| Environmental Receptor - Environmental Protection Objective | Alternative 1 – High Density Development | Alternative 2 – Medium Density Development | Alternative 3 – Low Density Development |
|---|--|--|---|
| Biodiversity, Flora and Fauna: B1 | √ and X | √ and X | √√ and X |
| Population and Human Health: P1 | √ and XX | √√ and X | √ and X |
| Water Resources: W1 | 0 and ? | 0 and ? | 0 and ? |
| W2: | 0 and ? | 0 and ? | 0 and ? |
| Soils: S1 | √√ | √√ | √√ |
| Air and Climate: AC1 | √√ and X | √√ | XX |
| AC2: | √√ | √√ | √ |
| Cultural Heritage: C1 | XX | XX | XX |
| Landscapes: L1 | √ and X and ? | √√ and X and ? | √ and X and ? |
| Material Assets: MA1 | √ and X and ? | √√ and X and ? | √ and X and ? |

It is clear from above assessment that all three options have the potential to create beneficial and adverse impacts on the environment protection objectives (EPOs). However, the above assessment demonstrates that Alternative 2 - medium density option has the greatest capacity to deliver the planning scheme objectives while also resulting in the least potential for adverse impacts on the environment and builds on the future sustainability of the site when compared with the other two alternatives. It also had the greatest beneficial impacts across a greater number of the EPOs than any of the other alternatives assessed. Most importantly, it is the most practical and feasible option capable of being implemented in the Waterford City context. The medium density alternative responds to the core planning scheme goals and

objectives and addresses issues of sustainability, whilst avoiding the potential for adverse impacts associated with the high and low density options. Therefore, Alternative 2 Medium Density Development is deemed to be the preferred planning scheme option.

8.0 EVALUATION OF PROPOSED DRAFT PLANNING SCHEME PROVISIONS

In accordance with best practice methodology, the assessment of the likely significant effects on the environment of implementing the Planning Scheme for the North Quays SDZ was carried out using an accepted and commonly used methodology of creating an assessment matrix. The assessment matrix comprises the 'policies and objectives' on one axis and the Environmental Protection Objectives (EPOs) on the other, developed earlier in the SEA process, outlined in Table 6.1. In this case, the policies and objectives are replaced with 'Goals', 'Vision(s)', 'Specific Actions' and supporting text from the draft North Quays Planning Scheme.

The Strategic Environmental Objectives above are used in the environmental assessment of the proposed measures contained in the Draft Planning Scheme for the SDZ. The assessment systematically assesses each action or proposal as part of the Draft Planning Scheme under each of the environmental topics in order to establish the likely significant effects on the environment. The EPOs are used as standards against which the provisions of the Draft Planning Scheme can be evaluated in order to help identify areas in which likely significant positive or adverse impacts are anticipated to occur on that EPO.

Where likely significant effects are identified as part of the Draft Planning Scheme and environmental protection measures which could potentially mitigate these effects are not present in the Planning Scheme or the current Waterford City Development Plan 2013-2019, mitigation measures are proposed, in order to prevent, reduce and as fully as possible offset any significant effects on the environment. (These are further detailed in Section 9).

8.1 Methodology to Assess Significant Effects

The significance of the policy impact on the individual EPO is given an assessment rating ranging from 'Likely significant beneficial impact on the status of the EPO' to 'Major significant adverse impact on the status of the EPOs'. Provisions can also have an unknown impact as well as a neutral or insignificant impact. In some cases, ratings are combined where it is not clear from the provision(s) being assessed what the likely significant impact will be, in these cases suggested amendments may also be provided in order to reduce this uncertainty. Where any significant adverse impacts are identified, the SEA team checks for suitable mitigation measures contained in the Waterford City Development Plan 2013-2019 and where appropriate additional mitigation is proposed as part of the SEA process, contained in Section 9 of the ER.

8.2 Summary of Assessment of Matrix – Likely Significant Effects

The following sections present the summary of the assessment of likely significant effects of the Planning Scheme completed in the matrix above. The Three overarching Visions of the North Quays SDZ Planning Scheme are:

- To create a sustainable, compact extension to the City Centre that will serve a future population of 83,000 people.
- A regeneration catalyst for the City and Region and the establishment of a sustainable modern city quarter.
- Creation of an integrated multi-modal transport hub designed to sustainably meet the access requirements of The City.

A number of Principal Goals are identified as part of the Planning Scheme which are supported by attainable steps referred to as 'specific objectives' contained in the six Chapters of the Draft Planning Scheme. The six Chapters are: Chapter 1 Introduction; Chapter 2 Site Context; Chapter 3 Physical and Social Infrastructure; Part a: Access and Connectivity, Part b: Environmental and Social Infrastructure; Chapter 4: Planning Strategy; Chapter 5 Architectural Strategy; Chapter 6 Actions and Implementation.

"In determining whether planning permission should be refused or granted, development proposals within the North Quays SDZ will be considered under the following:

The principal goals:

- *The Planning Scheme urban form and land uses*
- *The specific objectives contained within the Planning Scheme"*

Two specific objectives, PSAI 1 and PSAI 2 are seen as the key policy tools that will be used by decision makers in order to ensure that the future implementation and delivery of the Planning Scheme is consistent with the Planning Scheme. These Specific Objectives will ensure that the appropriate environmental and sustainability considerations are addressed in the Compliance Statement to accompany all planning applications.

PSAI 1: Any future planning application on the North Quays SDZ shall be consistent with the vision, goals and specific objectives as set out in this planning scheme.

PSAI 2: Any future planning application on the North Quays SDZ shall be accompanied by a Compliance Statement illustrating how the development complies with the planning scheme.

These Specific Objectives will ensure that the required planning and environmental assessments are completed as part of future planning applications as appropriate in compliance with EU, National and local policy. These will include; Site Specific Flood Risk Assessment, Appropriate Assessment and Environmental Impact Assessment as appropriate, and any other supporting studies that will be required to address the specific environmental considerations of the site.

A summary of the assessment undertaken and the significant environmental effects identified is discussed in the following sections under each of the Environmental Protection Objectives (EPOs).

8.2.1 Summary of Assessment and Significant Impacts Identified on Biodiversity, Flora and Fauna

EPO B1: Protect, conserve and enhance habitats, species and areas of national and local importance, including aquatic habitats and species and promote the sustainable management of habitat networks.

The assessment found that the likely significant effects on biodiversity, flora and fauna EPO arising from the implementation of the Draft Planning Scheme will be mainly during the construction phases of developments and associated infrastructure development proposed in the Draft Planning Scheme. A mixed assessment rating has been applied to some objectives assessed. This may include positive, negative and unknown impacts. This mixed rating is due to: the strategic nature of the policy being assessed; the likelihood that the adverse impacts will be short-term - mainly during construction stages; greening and landscaping activities proposed are likely to result in benefits to the local biodiversity of the site in the long-term. Some impacts

are classified as unknown due to the lack of detailed information at this level of assessment. However, with the application of planning application, Appropriate Assessment, EIA and Compliance Statement these impacts will be identified and addressed.

Overall, the assessment found that due to the scale of developments proposed, as well as the proximity to the Lower River Suir SAC, proposals have the potential to impact on water quality, noise and lighting impacts on biodiversity during construction and operation phases, as well as give rise to. The Natura Impact Report (NIR) found these have the potential to adversely affect the Conservation Objectives for Twaite Shad, Atlantic Salmon and Otter in the Lower River Suir SAC and the River Barrow and River Nore SAC. However, based on the conclusions of the NIR these will be mitigated at planning application, Appropriate Assessment stages. There is likely to be long-term beneficial impacts on this EPO due to future landscaping and greening proposals which will improve the local biodiversity of the site. The assessment matrix found that there are no major significant adverse effects on this EPO and any likely significant adverse effects are likely to be mitigated through proposals contained in the Draft Planning Scheme and the application of the relevant policies and objectives of the Waterford City Development Plan 2013-2019 (as amended).

8.2.2 Summary of Assessment and Significant Impacts Identified on Population and Human Health

EPO P1: Facilitate a good standard of health for Waterford's population through ensuring high quality residential, recreational and working environments that are based on sustainable landuse and travel patterns.

The assessment found that due to the range of proposals contained in the Draft Planning Scheme there will be long-term beneficial impacts on the population and human health EPO. Due to the significant range of mixed use developments proposed in the Planning Scheme it will provide a range of opportunities and landuse options for the future development of the area, which will support the physical, social and environmental needs of existing and future populations. The proposed investment in physical infrastructure i.e. the transport hub, Greenway, sustainable transport bridge, pedestrian and cycling infrastructure, bus service is likely to benefit a wider population and improve lifestyle factors in the long-term and embed sustainability into the future development of the site. The development of workplace travel plans and the inclusion of end of trip facilities in all new buildings are expected to support both the physical and behavioural changes that are required to support this EPO and deliver on creating a modal shift away from the use of the private car. Noise and air impacts are likely during construction stages and monitoring of noise impacts particularly from the existing Dock Road will be undertaken as part of the Local Authority Noise Action Plan.

The development of a compact urban quarter that has quality residential units whilst being integrated with mixed uses, sustainable transport and the existing city centre will benefit the existing and future population of the area. The interactions between other EPOs and their specific objectives will also benefit populations. These include measures to support and enhance local biodiversity, flood resilience, green infrastructure, energy efficiency measures, landscaping, provision of essential services i.e. water, waste water, drainage, Wi-Fi zones, utilities etc, and the development of long-term employment opportunities and social infrastructure. Architecture, public realm and quality design measures are seen as key to ensuring the developments are innovative, responsive to today's needs, aesthetically pleasing,

high quality and accessible to all in order to create a socially cohesive urban environment and community.

The assessment found there are unknown and / or potential for adverse impacts that may occur however these are likely to be short-term during the construction phase due to noise, dust, vibration associated with construction activities and traffic. Particularly sensitive receptors will include neighbouring properties and those located in the northern environs, however it is likely that these will be mitigated at planning application and construction stages.

The site is located in a high radon area. Radon rises up through the ground to disperse in the air and only becomes a health hazard when it is trapped in buildings. It was considered that an additional specific objective could be included as part of the Planning Scheme objectives to install passive preventive measures in all new buildings and to continuously monitor radon levels in all buildings to ensure no adverse impacts occur.

Due to the proximity of the site to the Trans Stock Warehousing Seveso site, it was also found that an additional specific objective may be required as part of the Planning Scheme in order to highlight the requirement that all future planning applications must consult with the HSA.

Generally, it was found the Draft Planning Scheme is going to promote significant new development to occur in the area. It is likely to have short term adverse impacts on some populations, mainly during construction stages. There are significant long-term beneficial impacts due to the proposals contained in the Draft Planning Scheme to support a public transport hub, walking and cycling infrastructure, green routes, landscaping proposals, the construction of a promenade along the riverfront, energy conservation measures, sustainable and energy efficient housing and the provision of retail and commercial developments to serve the growing population of Waterford over the long-term.

8.2.3 Summary of Assessment and Significant Impacts Identified on Water Resources (W1) and (W2)

EPO W1: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contaminants to waters.

EPO W2: To reduce and manage the risk of flooding.

The Draft Planning Scheme places emphasis on ensuring high quality and sustainable development can be accommodated on the site for future population growth and economic development. The environmental assessment found that future developments proposed could lead to significant adverse, unknown and significantly beneficial impacts on water quality, particularly within the Lower River Suir.

The significant potentially adverse impacts are identified as likely to occur as a result of construction activities associated with new developments, particularly those on, and/ or within close proximity to the Lower River Suir SAC. Policies contained within the Planning Scheme include PSI 10, which refer to the requirement for all planning applications to be accompanied by:- surface water drainage plan, proposals for the management of surface water within sites in accordance with requirements as listed in Section 3b.1.3 of the Draft Planning Scheme. These measure will ensure the

protection of water quality of the existing water bodies and ground water sources in the area. The Scheme also provides for objectives for best practice SuDS techniques on existing sites, where possible, while PSI 11 ensures that surface and ground water quality resources are protected. PSI 12 also makes provision for contaminated surface water such as oil/ fire water/detergents which will be intercepted and stored appropriately for future treatment and disposal.

Objectives contained in the Draft Planning Scheme that have the potential for significant, long-term beneficial impacts on this environmental receptor include those that help support and provide for the improvement of water quality in line with the South Eastern River Basin Management Plan. Furthermore, the implementation of SuDS, green roofs, bioretention areas / modified planters, rainwater harvesting, permeable surfacing and swales as part of future development proposals coupled with landscaping, provision of open spaces and parks, green infrastructure and requirements for incorporation of SuDS measures in all developments will be beneficial to this EPO.

The potential negative or unknown impacts are identified as part of the assessment, where construction and operational phases have the potential for negative impacts on water resources. These potential impacts are more appropriately assessed at project stage, either by way of a planning application and / or an Environmental Impact Assessment. The assessment found that ground investigations currently taking place on the site will inform potential contaminated land issues and any mitigation required to ensure protection of water resources and waste management. A specific objective is required to address the potential issues arising on soil, ground and surface water contamination, if potentially contaminated soils are not managed appropriately – both during construction and longer term. It is considered that the addressing any contaminated lands on the site through the appropriate remediation will lead to a long term beneficial impact on the soil resources, groundwater and surface water bodies in the area.

In terms of flood risk management a Strategic Flood Risk Assessment (SFRA) has been undertaken to inform the preparation of the Draft Planning Scheme. No future developments will be permitted to contradict the recommendations of the SFRA. SuDS will also be applied on the site which will reduce run-off rates from newly paved areas and the other supporting policies contained in the Planning Scheme.

8.2.4 Summary of Assessment and Significant Impacts Identified on Soils

EPO S1: Protect, improve and maintain the quality of soils in the interests of avoiding environmental degradation in water quality and biodiversity.

The assessment found that the Draft Planning Scheme will have a significant beneficial or neutral impact on the status of this EPO. It was found that due to the historic activities on the site, there may be significant adverse impact if contaminated land is found to be present on site which could impact on groundwater, surface water, species and habitats which depend on these water resources, affecting other EPOs. The SEA supports the inclusion of an additional specific objective to ensure all potentially contaminated is dealt with in accordance with waste management legislation prior to redevelopment. This will ensure adverse impacts will not impact adversely on the protection of groundwater, water quality and biodiversity including the designated Lower River Suir SAC. Any required remediation measures may require a licence from the EPA under the Waste Management Act 1996 (as amended) for treatment and / or removal. Overall the SEA assessment considers that the regeneration of a brownfield site in a city centre location will result in the

preservation of greenfield sites and with the removal of contaminated soils from site and remediation will lead to a long term beneficial impacts on the soil resources, groundwater and surface water bodies in the area.

8.2.5 Summary of Assessment and Significant Impacts Identified on Air and Climate

EPO AC1: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey

It is recognised that by increasing the amount of development in an area at a local level that this has the potential to impact on the amount of road traffic, which would be one of the biggest threats to air quality. However the Draft Planning Scheme has proposed through its Visions, Principal Goals and specific objectives to ensure that compact, sustainable, integrated and complimentary proposals are developed in relation to sustainable travel, such as the transport hub, sustainable transport bridge, bus service, pedestrian and cycling infrastructure and the connection with the Waterford to New Ross Greenway, all of which will support and encourage a modal shift. These wide range and ambitious measures will improve travel choice and accessibility, shorten the length and duration of trips and reduce the need to travel by car while also offsetting any likely adverse impact on air quality created by future developments over the long-term.

EPO AC2: To limit adverse impacts of climate change through the use of sustainable energy sources.

Ambitious objectives are contained within the Draft Planning Scheme that will support the use of sustainable energy sources in all buildings. The Draft Planning Scheme states envisages it will one of the first developments in Ireland that will comply with, "Nearly Zero Energy Buildings" (NZEB) standards, by 2020. Measures contained in the Scheme will have approximately 60% less energy consumption than buildings that are constructed to current Building Regulation Standards.

The range of specific objectives contained in the Draft Planning Scheme are considered to support and minimise adverse impacts on the environment through the implementation of policies on waste management, control of emissions and the promotion of energy efficiency, thereby supporting the implementation of climate change measures contained in the Climate Change strategy for Waterford City.

8.2.6 Summary of Assessment and Significant Impacts Identified on Cultural Heritage

EPO C1: To protect, conserve and enhance cultural heritage features of the plan area including the built environment, settings and known and unknown archaeological and assets.

One of the Draft Planning Scheme Principal Goals is *"To create a sustainable urban environment, which respects it's natural, historic and cultural heritage."* The Planning Scheme promotes the regeneration of this Brownfield site which is formerly port related lands into a sustainable, compact extension to the city centre that will serve future populations. It recognises the unique setting on the River Suir, and the close proximity to the existing historic city core and South Quays ACA. The Planning Scheme states that it will support the delivery of a scheme of high design merit that will bring a new and exciting interpretation of the quays while respecting its maritime past and the traditional streetscape of the South Quays that has developed over many centuries. Overall, the assessment of the Planning Scheme found to have either a unknown/uncertain with the potential for long-term significant adverse on the

cultural heritage EPO. There are no Record of Protected Structure (RPS) on the site however 'The Hennebique Building' and 'Free standing crane' on the North Quays are identified as buildings / structures of Architectural Heritage and are included as part of the National Inventory of Architectural Heritage (NIAH). The exact impacts on these structures will be dependent on development proposals put forward and cannot be determined at present. In relation to unknown impacts, the North Quays has the potential to be of high archaeological potential due to its historic past as a working quay and being the focus for maritime traffic over a long period. There is high potential that previously unknown or unrecorded riverine / underwater archaeological heritage could be retained within the areas. Construction works have the potential to discover and disturb such features, however these impacts are best assessed at project stage. It is not known if all likely impacts can be mitigated against, therefore an additional mitigation measure is proposed.

8.2.7 Summary of Assessment and Significant Impacts Identified on Landscapes

EPO L1: Protect and conserve the quality, character and distinctiveness of the River Suir waterway corridor and minimise negative visual impacts.

The assessment of the Draft Planning Scheme found that the majority of measures contained therein are likely to have significant beneficial impacts. The Draft Planning Scheme will result in the regeneration and re-imagination of the former port related lands now derelict within this strategic, city centre location. The future developments are expected to dramatically improve the existing landscape, views and visual impact of the River Suir waterway corridor and also of Waterford City as a whole. The adverse or unknown / uncertain impacts identified relate to lack of specific information relating to development proposals which will be informed by design, building height, treatment etc and are best assessed at project stage. Measures contained within the Planning Scheme will facilitate the assessment of impacts and inform mitigation measures at project stage through the requirement to undertake a Design Statement for high buildings, as well as the requirement to submit a Design Statement and Visual Impact Assessment as part of all planning applications. In general, the environmental assessment found that the Planning Scheme will have significant beneficial impacts on landscape EPO. There are a suite of specific objectives outlined as part of the Planning Scheme contained in the various chapters including, Physical and Social Infrastructure, including integrating green infrastructure, biodiversity and use of ecological corridors into future developments will assist in improving the landscape of the area. The Planning Strategy (Chapter 4) also details views, building heights, consideration of landmark buildings, massing, public realm, and urban form, coupled with the variety of measures detailed in the Architectural Strategy which will all serve to dramatically improve the landscape of the area.

8.2.8 Summary of Assessment and Significant Impacts Identified on Material Assets

EPO MA1: Maintain sustainable access to assets such as open spaces, water resources, wastewater, drinking water, drainage and all other physical and social infrastructure.

The Draft Planning Scheme was found to have generally significant beneficial, neutral, unknown / uncertain impacts on material assets. The Draft Planning Scheme states Irish Water has confirmed that there is sufficient capacity within the system to serve the site. In relation to foul drainage, the Ferrybank pumpstation has been sized to take account of any potential development on the North Quays. Irish Water has confirmed that there is sufficient capacity within the system to serve the site. The assessment did not identify any specific objectives that have potential for

significant adverse impacts on material assets i.e. essential services, water and waste management and all other physical and social infrastructure. Significant beneficial impacts are also expected from the implementation of a number of objectives promoting sustainable technology, accessible Wi-Fi Zones and sustainable technology components across the area.

The Planning Scheme was found to have significant beneficial impacts in relation to facilitating sustainable modes of transport infrastructure and encouraging modal change from the private car. It was also found to adopt a sustainable approach to waste management requiring all developments within the North Quays to comply with waste policy set out in the Waterford City Development Plan 2013-2019 in accordance with the waste management hierarchy of waste prevention, waste recycling energy recovery and disposal. At planning application stage proposed development will have to show regard for refuse collection/recycling compositing etc at suitable locations where required.

The Draft Planning Scheme promotes the creation of a mix of uses which is expected to benefit from the transport hub, sustainable transport bridge and improved accessibility and connectivity with existing public transport in association with proposed new walking and cycling facilities that will ultimately improve connectivity throughout the City. The provision of public plazas, a riverside walkway, promenades, podiums, parks and active and passive open spaces will all significantly benefit this EPO and the future resident, workers and tourists to the area.

9.0 MITIGATION AND MONITORING

Where likely significant effects are identified as part of the SEA process, initially the Planning Scheme and current Waterford City Development Plan 2013-2019 was checked for the existence of environmental protection measures which could potentially mitigate these effects. Where it is found that the Planning Scheme lacks in these, additional mitigation measures will be recommended where necessary. Mitigation measures are proposed, in order to prevent, reduce and as fully as possible offset any significant effects on the environment.

Relevant policies and objectives from the Waterford City Development Plan 2013-2019 have been incorporated as mitigation measures for each environmental topic and changes have been made to incorporate these measures into the text of the Planning Scheme. The following outlines the summary of the main areas for which mitigation measures and monitoring are proposed as part of the SEA process. Some of these are contained as part of the suggested green text as part of the SEA matrix others are proposed by the SEA team to be considered by policymakers to be incorporated as part of the next iteration of the Planning Scheme. Any additional Mitigation measures are identified in Table 9.1 of the SEA ER. If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.

9.1 Biodiversity, Flora and Fauna

Mitigation measures and monitoring proposals focus on likely impacts to the Lower River Suir SAC and to incorporate consideration of measures such as sensitive lighting, ecological connectivity along the bank of the River Suir, restrictions on construction works adjacent to the SAC and the creation of a construction erosion and sediment control plan. With regards vegetation, management and monitoring of invasive species will be implemented and all future landscaping is required to consider locally sourced species that will support local biodiversity while enhancing the area and improving the connectivity of ecological corridors. No further mitigation is required as part of this stage of the SEA process.

9.2 Population and Human Health

The SEA proposes various changes in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details. The SEA team propose two new Specific Objectives:

- a) To prevent high-radon levels occurring in new buildings it is a requirement to install passive preventive measures in all buildings and to continuously monitor radon levels in all buildings.
- b) For sites located within the 700m from the Trans Stock Seveso Site/ Major Accidents all planning applications will be required to consult with the HSA at planning application stage.

The provision of supporting physical and behavioural change infrastructure is seen as key to encourage a modal shift away from the private car. If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.

9.3 Water Resources

Water quality, the control of storm and surface waters, drainage systems, unauthorized discharge, water and waste water pumping, attenuation and urban drainage systems and surface water run-off control and treatment are areas which mitigation and monitoring has focused. With regards to flood risk, the mitigation and monitoring proposed as part of the SFRA will be required to be considered by all future planning applications. As well as the requirement to preparation of site specific flood risk assessment for all future planning applications. No further mitigation is required as part of this stage of the SEA process.

9.4 Soils

Proposed mitigation as part of the Planning Scheme will incorporate flood management measures. An additional mitigation measure is proposed to be inserted into the Planning Scheme to address contaminated land issues as a new specific objective;

- a) All potentially contaminated land shall be dealt with in accordance with waste management legislation prior to redevelopment.

If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.

9.5 Air and Climate

Air and Climate mitigation and monitoring measures will focus on the implementation of improving travel choice and reducing emissions from transport sector. This is supported by the provision of a good quality public transport system and choice of sustainable transport modes improving connectivity through the city, providing cycle parking and networks between neighbourhood areas. Policies on waste management, emissions and energy efficiency, the implementation of a climate change strategy for Waterford City. The assessment of anticipated impacts including flood risk of new developments and the implementation of climate change reduction measures as part of WCDP. Mitigation measures also include the use of sustainable energy technologies and energy conservation practices. There are no further mitigation required as part of this stage of the SEA process.

9.6 Cultural Heritage

Cultural Heritage mitigation and monitoring include measures to protect and enhance the environmental quality, character and distinctiveness of archaeological and architectural heritage and underwater archaeology. A further additional specific objective is recommended to be included as part of the Planning Scheme objectives as follows:

- a) To protect the landscape and visual character of monuments and recorded sites.

If the suggested amendments are incorporated adequate mitigation is in place together with the policies and objectives of the Waterford City Development Plan and no further mitigation is required as part of this stage of the SEA process.

9.7 Landscapes

Mitigation and monitoring measures to protect Landscapes focus on the protection of the character and setting of the river corridor and views of special amenity, the provision of sustainable riverside walkways, green infrastructure, tree cover, public

realm and general amenity through the implementation of a planting and management scheme. If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.

9.8 Material Assets

Material Assets mitigation and monitoring measures include the ensuring an adequate water supply, waste water system and to maintain and expand the water conservation programme as part of all future developments. SEA proposed mitigation is the inclusion of an additional objective as follows:

- a) All planning applications are required to demonstrate as part of the Compliance Statement how the services and infrastructure requirements for each planning application will be developed to include connections to the strategic network, together with a programme of installation works and responsibility for delivering infrastructure.

If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.

9.9 Monitoring Programme & Reporting

The SEA monitoring programme for the plan is set-out below in Table 9.2 of the SEA ER. Both the positive and negative effects of the Planning Scheme on the environment are considered in the monitoring programme and recorded for all the EPOs. The future monitoring process will be undertaken with a view to better understand the effects of the plan's implementation across all environmental topics.

Waterford City and County Council, as the Development Agency, will be responsible for monitoring and reporting on feedback. An Annual Progress Report will be prepared by the Council, detailing planning permissions granted, development commenced and/or completed, progress on objectives and progress on sustainability indicators in the SDZ.

10.0 CONCLUSION

In accordance with the requirements of the SEA Directive and Section 168 (2) of the Planning and Development Act 2000 (as amended), this SEA identifies and proposes measures to reduce likely significant adverse effects identified. The Development Agency in its role in the preparation of the Draft Planning Scheme has integrated the individual SEA, AA and SFRA provisions into the text, policies and objective of the Draft Planning Scheme. Furthermore due to the iterative process of SEA, AA and SFRA during the plan making process various iterations of the Draft Planning Scheme have been developed.

The Draft Planning Scheme is supported by higher level international, national and city level policies. The Draft Planning Scheme also includes the specific objective PSS 1: All future planning applications shall comply with the relevant Waterford City Development Plan policies and objectives, this ensures a robust level of environmental protection.

For the most part, the findings of “uncertain” impacts in the SEA matrix will be determined at a lower level of environmental assessment largely through the relevant planning process which may be supported by EIA, AA and FRA and other supporting assessments/studies. These assessments will involve application of Appropriate Assessment, landscape appraisal, archaeological and architectural heritage appraisal and flood risk assessment to accurately determine the impacts under the range of environmental headings detailed above.

As the Draft Planning Scheme is strategic in nature it will be necessary to define more detailed environmental control measures at the project level and in accordance with controls and mitigation set out in respective appropriate assessment when more specific information is available.

Monitoring of the Planning Scheme and any likely significant effects on the environment is supported by a monitoring programme identified in Table 9.2 the ER.

STRATEGIC ENVIRONMENTAL ASSESSMENT DRAFT ENVIRONMENTAL REPORT

1.0 INTRODUCTION

This is the Strategic Environmental Assessment (SEA) Environmental Report (ER) for the Waterford North Quays Strategic Development Zone (NQ SDZ) Planning Scheme. The Government designated lands at North Quays in Waterford City as a site for a Strategic Development Zone on 20th January 2016. Waterford City and County Council has been specified as the 'Development Agency' and is currently in the process of developing a Planning Scheme. Roughan & O'Donovan Consulting Engineers have been appointed by Waterford City and County Council to undertake engineering and environmental consultancy services including the Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) as part of the preparation of the Planning Scheme. The SEA process ensures that the preparation of the Planning Scheme is informed by environmental considerations from the outset.

The purpose of this SEA Environmental Report (ER) is to identify, describe and evaluate the likely significant effects on the environment of implementing the proposed NQ SDZ. The aim of the ER is to identify:

- Existing environmental issues in the proposed SDZ area;
- The likely significant effects on the environment resulting from implementation of the Planning Scheme;
- How the likely significant effects on the environment can be prevented or reduced; and,
- How environmental effects will be monitored over the lifetime of the SDZ Planning Scheme.

It should be noted that this Environmental Report forms only part of the SEA process. The SEA process also comprises a Scoping Report, a Non Technical Summary (NTS) and at the final stage, an SEA Statement will be published. The Scoping Report (March 2017) determined the baseline environmental parameter data and issues to be considered in the ER. Statutory consultation was carried out with the relevant environmental authorities at the Scoping stage and the responses received from these are addressed in this ER. The purpose of this ER is to document the process that has been followed in carrying out the SEA and where relevant how the Draft Planning Scheme has subsequently been altered as a result of the identification of the likely significant environmental effects identified during the SEA process.

1.1 Legislative Context

The Directive on Strategic Environmental Assessment (SEA) (2001/42/EC) came into force in July 2001 requiring each Member State to assess and consider the 'likely significant environmental effects' of public plans prior to their adoption. All land-use plans in Ireland are subject to SEA procedures and environmental considerations must be assessed at an early stage in the decision-making process.

The Directive was transposed into Irish Law in 2004 by two sets of Regulations which were both amended in 2011, as follows:

- European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011, (S.I. No. 200 of 2011), amending the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004);

NOTE: Article 3 of SI 435 of 2004 specifically precludes application of these provisions to planning schemes for strategic development zones, which are covered separately in S.I.436 of 2004 (as amended) and;

- Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011, (S.I. No. 201 of 2011), amending the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. No. 436 of 2004).

This legislation requires mandatory Strategic Environmental Assessment as part of the preparation of a Planning Scheme for a Strategic Development Zone.

1.2 Integration with Appropriate Assessment

The SEA legislation and guidelines indicate that there should be complete integration between the preparation of the Planning Scheme, the SEA process and any Appropriate Assessments including Habitats Directive Assessment (HDA) which might be required.

Article 6(3) of the Habitats Directive (92/43/EEC) states that any plan or project not directly connected with or necessary to the management of a Natura 2000 site, *i.e.* Special Area of Conservation (SAC) or Special Protection Area (SPA), but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to an Appropriate Assessment (AA) of its implications for the site in view of the site's Conservation Objectives.

Under the Habitats Directive and the European Communities (Birds and Natural Habitats) Regulations 2011-2015, where an AA is required and will be undertaken in conjunction with the SEA, environmental problems, indicators or other issues relevant to the assessment should be identified that need to be considered during the SEA process.

The Appropriate Assessment has been carried out in parallel with the Draft Planning Scheme and the SEA and is prepared as a separate document accompanying the Draft Planning Scheme. Stage 1 of AA (Screening) involves assessing the Draft Planning Scheme in principle and determining the likelihood of significant effects on Natura 2000 sites as a result of its implementation, either individually or in combination with other plans or projects. The AA Screening considered that there was potential for the Draft Planning Scheme to have a significant effect on certain Qualifying Interests of the Lower River Suir SAC, adjoining the site and the River Barrow and River Nore SAC located downstream of the SDZ. The AA Screening concluded on the basis of objective information that significant effects are likely, or cannot be ruled out, therefore full AA (Stage 2) is required.

Stage 2 of AA involves a scientific analysis of the potential impacts of the Draft Planning Scheme on the habitats and/or species for which the Natura 2000 sites "screened in" at Stage 1 are selected. The draft Natura Impact Report (NIR) was prepared on this basis in respect of the implications of the Draft Planning Scheme for the Lower River Suir SAC and the River Barrow and River Nore SAC in view of their Conservation Objectives. Where significant or potentially significant impacts arising from the Draft Planning Scheme are identified, appropriate mitigation is prescribed to eliminate these impacts and ensure that there will be no adverse effect on the Natura 2000 sites concerned.

The Draft Planning Scheme states that any plan or project with the potential to give rise to significant direct, indirect, secondary impacts or through indirect or cumulative

impact, on a Natura 2000 site(s) shall be subject to an Appropriate Assessment in accordance with Article 6 of the EU Habitats Directive (92/43EEC) and associated legislation and guidelines informing decision making. All proposals are required to consider the mitigation measures contained in the Natura Impact Report of the Draft Planning Scheme.

The findings of the ER and NIR have informed each other to ensure no adverse impacts the on Natura 2000 sites will occur.

1.3 Integration with Strategic Flood Risk Assessment

The integration with Strategic Flood Risk Assessment (SFRA) is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009). The Waterford City Development Plan 2013-2019 identifies Flood Zones A and B located on the NQ SDZ.

"Flood Zone A – where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);

Flood Zone B – where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding.

Flood Zone C – where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all areas of the plan which are not in zones A or B". (DEHLG, 2009)

As with SEA, it is important to incorporate the SFRA into the development of the Draft Planning Scheme and SEA process and provide a coherent and transparent approach as to how it has been considered in making spatial planning decisions.

The SFRA has been prepared as a separate document that accompanies the Draft Planning Scheme. The SFRA has considered the local hydrological conditions pertaining to Waterford North Quays SDZ and found that the site is subject to flooding for 1% and 0.1% AEP events. The proposed Draft Planning Scheme satisfies the requirements of the Justification Test for development plans (as described in the OPW's "The Planning System and Flood Risk Management Guidelines for Planning Authorities") and is therefore deemed appropriate for the site. The findings of the SFRA indicate that flood risk to the site can be managed without increasing flood risk elsewhere. Recommendations including minimum floor levels, drainage measures and flood resilient design implementation are outlined in full in the SFRA while they have also been incorporated into the Draft Planning Scheme. The SFRA concludes that all planning applications for proposed development within the SDZ area should include a site-specific Flood Risk Assessment (FRA).

2.0 SEA PROCESS

2.1 Introduction

Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt the plan or programme. Article 1 of the SEA Directive states:

“The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.”

There are a number of clearly defined SEA stages. These are illustrated below in Figure 2.1 as they relate to the plan making process.

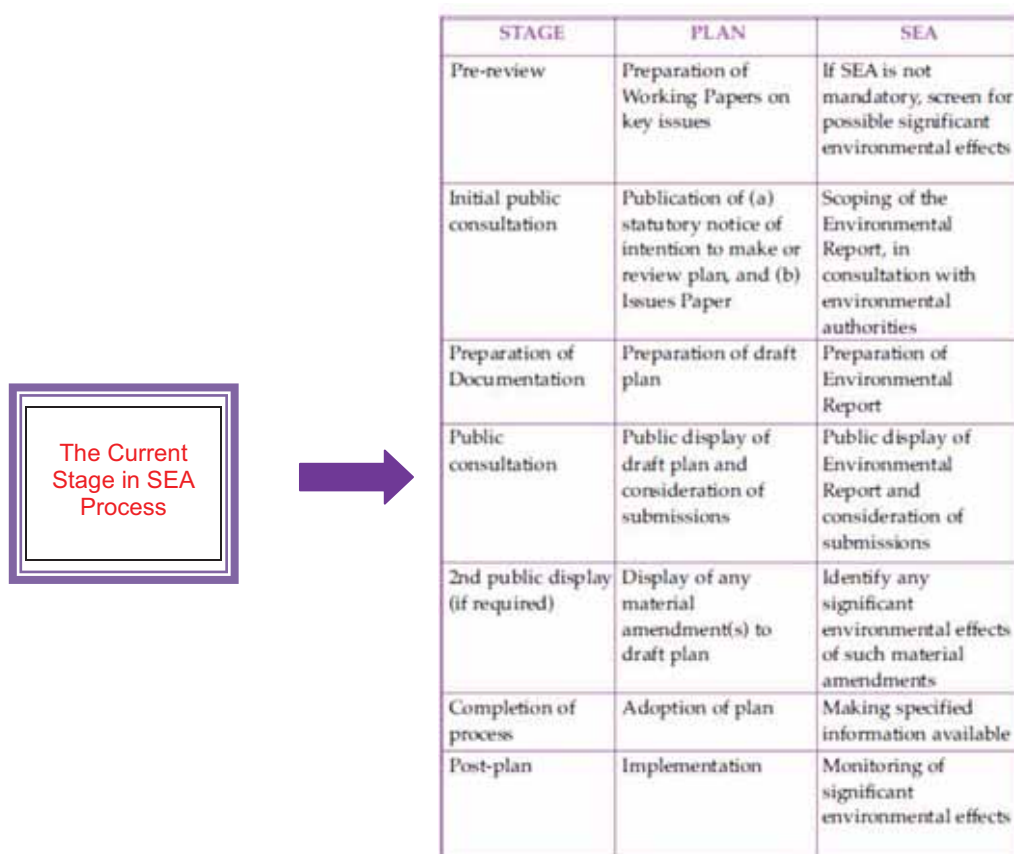


Figure 2.1 Generic Stages of SEA and the Plan-making Process (Government of Ireland, 2004)

The Guidelines for Regional Authorities and Planning Authorities (2004) state that SEA is intended to improve the quality of the plan making process by:

- *Facilitating the identification and appraisal of alternative plan strategies.*
- *Raising awareness of the environmental impacts of plans: while it will not always be possible to eliminate all potentially significant negative effects in balancing policy options, SEA at least helps to clarify the likely consequences*

of such choices, and makes specific provision for mitigation measures where some negative impacts cannot be avoided.

- *Encouraging the inclusion of measurable targets and indicators: which will facilitate effective monitoring of implementation of the plan, and thus make a positive contribution to subsequent reviews.*

The purpose of the SEA is to systematically identify and evaluate the likely significant environmental effects on the plan area and its environs due to the implementation of the Planning Scheme. The SEA process informs Waterford City and County Council during the plan making process of the likely and significant environmental effects as a result of implementing the plan. The SEA process is recognised as a central mechanism in promoting sustainable development, in raising awareness of the significant environmental issues experienced by an area and ensuring that these issues are addressed within the capacity of the planning system.

2.2 SEA Guidance

This SEA Environmental Report has been prepared by Roughan O'Donovan having regard to the following documents:

- Environmental Protection Agency (2003) Development of Strategic Environmental Assessment (SEA) Methodologies for Plans & Programmes in Ireland - Synthesis Report;
- Department of Environment Community and Local Government (2004) Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans & Programmes on the Environment Guidelines for Regional Authorities & Planning Authorities (Section 28 Guidelines);
- Environmental Protection Agency (2015) Integrating Climate Change into Strategic Environmental Assessment in Ireland – A Guidance Note;
- Environmental Protection Agency (2013) SEA Resource Manual for Local and Regional Planning Authorities – Integration of SEA Legislation and Procedures for Landuse Plans;
- Environmental Protection Agency, (May 2016) EPA Scoping Template Web Version;
- Environmental Protection Agency & Mid-West Regional Authority (2013) Draft SEA Resource Manual for Local and Regional Authorities, Integration of SEA Legislation and Procedures for Landuse Plans;
- Dr Ainhoa González Del Campo for the Environmental Protection Agency (2015) GISEA Manual Improving the Evidence Base in SEA; and,
- Environmental Protection Agency (2015) Developing and Assessing Alternatives in Strategic Environmental Assessment.

The Department of Environment, Communities and Local Government (DoECLG) Circular (PSSP 6/2011) '*Further Transposition of the EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA)*' has also been taken into account, as well as the DoECLG Circular (Circular PL 9 of 2013) 'Article 8 (Decision Making) of EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA) as amended' during the preparation of the Plan and in undertaking the SEA process.

2.3 Key Stages in the SEA Process

This section deals with how the key stages of the SEA are undertaken alongside the preparation of the Planning Scheme.

2.3.1 Screening

SEA is a mandatory requirement during the preparation of a Planning Scheme for Strategic Development Zones, therefore the Screening Stage was not required in this case and the process moved directly to the Scoping Stage.

2.3.2 Scoping

The purpose of the Scoping report was to consult with relevant environmental authorities and to draw an opinion on the scope and level of detail of the environmental information to be included in this Environmental Report and as part of the Planning Scheme. A Scoping Report was sent to relevant environmental authorities and submissions regarding the Planning Scheme were received. All comments have been fully taken into account during this SEA process. The details of the responses and how they are addressed are contained in **Appendix B** of this Environmental Report.

The SEA Directive requires that information is provided on '*any existing environmental problems which are relevant to the plan or programme*'. Information was therefore provided in the Scoping Report on existing environmental problems which are relevant to the area. The SEA Directive requires that information on the baseline environment be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected and the likely evolution of the current environment in the absence of the strategic action i.e. the Planning Scheme. Any information that does not focus upon this is surplus to requirements; therefore the SEA focuses on the significant issues, disregarding the less significant ones. In addition, the SEA Directive aims to avoid duplication of the assessment whereby a strategic action forms part of a hierarchy in the decision making process. Furthermore, if certain matters are more appropriately assessed at different levels of the decision making process in which the Planning Scheme is positioned, or, if certain matters have already been assessed by a different level of the hierarchy then additional assessment is not required during the SEA process as they are more appropriately assessed at that level in the decision making process e.g. at project level planning application/ Environmental Impact Assessment (EIA) stage.

2.3.3 Alternatives

The SEA Directive requires that reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme are identified, described and evaluated for their likely significant effects on the environment. Discussion on the alternatives considered is provided in Section 7 of this Report.

2.3.4 Environmental Report

The SEA Environmental (ER) is placed on public display alongside the Planning Scheme. The likely significant environmental effects of the Planning Scheme are identified and their significance evaluated with regard to the environmental baseline. The Environmental Report provides relevant information to the decision-makers, the members of the Council, who decide whether or not to accept the Planning Scheme, as well as to the public, providing a clear explanation of the likely significant environmental effects of the Planning Scheme.

If any modifications to the Planning Scheme are made after this consultation period, the ER will be updated to assess those changes and any likely significant effects on the environmental topics as a result of those changes.

Iterative Process

The process of SEA is an iterative one and has been used to inform the proposed Draft Planning Scheme including changes to maps and objectives and/ or wording of the Draft Planning Scheme.

In order to address the certain issues and ensure sustainable development, changes are recommended by the SEA team. For example, this could be in the form of additional policy wording, to ensure that all future development is subject to site specific flood risk assessment including consideration of surface water provisions at development management stage, in accordance with the 'Planning System and Flood Risk Management – Guidelines for Planning Authorities'. Or similarly, that all future developments undertake Appropriate Assessment Screening in order to ensure the Lower River Suir SAC is protected.

2.3.5 The SEA Statement

If the Planning Scheme is passed by the Elected Members, a document referred to as the SEA Statement must be made available to the public. This is required to include information on:

- how environmental considerations have been integrated into the Planning Scheme - highlighting the main changes to the Planning Scheme which resulted from the SEA process;
- how the Environmental Report and consultations have been taken into account - summarising the key issues raised in consultations and in the Environmental Report, indicating what action, if any, was taken in response; and
- the reasons for choosing the Planning Scheme in the light of other reasonable alternatives.

2.4 Consultation

Waterford City and County Council undertook an initial public consultation in March 2016 which invited pre-draft submissions and observations regarding the development of the Draft Planning Scheme. These public submissions have been considered as part of this SEA process and the preparation of the Draft Planning Scheme.

Under Article 6 of the SEA Directive, the competent authority preparing the plan, in this case Waterford City and County Council, is required to consult with specific environmental authorities 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:

Table 2.1 List of Environmental Authorities Consulted

| Consultee name | Postal address | Email address |
|---------------------------------|--|--|
| Environmental Protection Agency | Tadhg O'Mahony Environmental Protection Agency, SEA Section, Office of Environmental Assessment, EPA Regional Inspectorate, Inniscarra, Co. Cork | sea@epa.ie t.omahony@epa.ie |

| Consultee name | Postal address | Email address |
|---|---|--|
| Ms Heather Humphreys TD, Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs | Covered by sending to Development Applications Unit (below) | |
| Development Applications Unit | The Manager Development Applications Unit, Department of Arts, Heritage Regional, Rural and Gaeltacht Affairs ,Newtown Road, Wexford | manager.dau@ahg.gov.ie |
| Mr Simon Coveney TD, Minister for Housing, Planning, Community and Local Government | Planning System and Spatial Policy, Department of Housing, Planning, Community and Local Government, Custom House, Custom House Quay, Dublin 1, D01 W6X0 | sea@environ.ie |
| Mr Denis Naughten TD, Minister for Communications, Climate Action and Environment | Corporate Support Unit, Department of Communications, Energy and Natural Resources, Elm House, Earlsvale Road, Cavan | corporatesupport.unit@dcenr.gov.ie |
| Mr Michael Creed TD, Minister for Agriculture, Food and the Marine | Environmental Co-ordination Unit, Climate Change and Bio Energy Division, Department of Agriculture, Food and the Marine, Pavalion A, Grattan Business Park, Portlaoise, Co. Laois | environmentalco-ordination@agriculture.gov.ie |
| Kilkenny County Council | c/o Caitriona O'Sullivan Forward Planning Kilkenny County Council, County Hall, John Street, Kilkenny | planning@kilkennycoco.ie |
| Tipperary County Council | Nuala O'Connell Tipperary County Council, Civic Offices, Limerick Road, Nenagh, County Tipperary | planning@tipperarycoco.ie |
| Wexford County Council | Forward Planning Wexford County Council, Block B at County Hall, Carricklawn, Wexford | Planning@wexfordcoco.ie |
| Cork County Council | Cork County Council Floor 13, County Hall, Carrigrohane Rd, Sunday's Well, Cork | planninginfo@corkcoco.ie planningpolicyunit@corkcoco.ie |
| Carlow County Council | Arlene O'Connor Carlow County Council, County Buildings, Athy Rd, Graigue, Carlow | aoconnor@carlowcoco.ie |

2.5 Legislative Conformance

In accordance with Section 179C of the Planning and Development Act 2000-2016 (as amended), an environmental report for a Planning Scheme for a Strategic Development Zone (SDZ) shall identify, describe and evaluate the likely significant effects on the environment of implementing the planning scheme and reasonable alternatives taking account of the objectives and the geographical scope of the scheme. For this purpose, the report shall:-

- (a) Contain the information specified in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended (See Table 2.2 below);
- (b) Take account of any submission or observation received in response to a Scoping Notice (See Appendix B); and
- (c) Be of sufficient quality to meet the requirements of the Regulations.

An environmental report shall include the information that may reasonably be required taking into account:

- (a) Current knowledge and methods of assessment,
- (b) The contents and level of detail in the planning scheme,
- (c) The stage of the planning scheme in the decision-making process, and
- (d) The extent to which certain matters are more appropriately assessed at different levels in the decision-making process in order to avoid duplication of environmental assessment.

This SEA ER complies with the provisions of the SEA Regulations and is written in accordance with Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended.

Table 2.2 is a reproduction of the checklist of information required to be contained in the Environmental Report (DEHLG, 2004) and includes the corresponding sections of this Report which deal with these requirements.

Table 2.2 Checklist of Information to be Contained in the Environmental Report (Schedule 2B - DEHLG, 2004)

| Information Required to be included in the Environmental Report | Corresponding Section of this Report |
|---|--------------------------------------|
| (A) Outline of the contents and main objectives of the Planning Scheme, and of its relationship with other relevant plans and programmes | 3 & 4 |
| (B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the Planning Scheme | 5 |
| (C) Description of the environmental characteristics of areas likely to be significantly affected | 5 |
| (D) Identification of any existing environmental problems which are relevant to the Planning Scheme, particularly those relating to European protected sites | 5 |
| (E) List environmental protection objectives (EPOs), established at international, EU or national level, which are relevant to the Planning Scheme and describe how those objectives and any environmental considerations have been taken into account when preparing the Planning Scheme | 4 & Appendix A |
| (F) Describe the likely significant effects on the environment | 8 |
| (G) Describe any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse environmental effects of implementing the Planning Scheme | 8 |
| (H) Give an outline of the reasons for selecting the alternatives considered, and a description of how the assessment was undertaken (including any difficulties) | 7 |

| Information Required to be included in the Environmental Report | Corresponding Section of this Report |
|---|--|
| (I) A description of proposed monitoring measures | 9 |
| (J) Conclusion – Overall findings of the assessment | 10 |
| (K) A non-technical summary of the above information | Non Technical Summary |
| (L) Interrelationships between each Environmental topic | Addressed as it arises within each Section |

3.0 THE NORTH QUAYS PLANNING SCHEME

3.1 Statutory Context for the NQ SDZ

The Government designated lands at North Quays in Waterford City as a site for a Strategic Development Zone (SDZ) on 20th January 2016. Part IX of the Planning and Development Act 2000-2011 provides for the designation of a Strategic Development Zone (SDZ) to facilitate development which in the opinion of the Government is of economic or social importance to the State. Waterford City and County Council are specified as the Development Agency (SI No 30 of 2016) for the purpose of developing a planning scheme for the North Quays Strategic Development Zone (SDZ).

The Government designation for the site permits *“the establishment of a strategic development zone in accordance with the provisions of Part IX of the Act for a mixed use development which may include commercial activities including, office, hotel, leisure and retail facilities, residential development and the provision of educational facilities, supporting transport infrastructure, emergency services and the provision of community facilities as referred to in Part III of the First Schedule to the Act, including health and childcare services, as appropriate”*.

The SDZ has been designated taking into consideration existing planning policy to include:

- The National Spatial Strategy 2002-2020 which identifies Waterford as a Gateway;
- The South East 2010-2020 Regional Planning Guidelines which identify the North Quays as an area of key regional significance;
- The core strategy and objectives of the Waterford City Development Plan 2013-2019; and
- Wider Government policy to support balanced regional development.

Once a Planning Scheme comes into effect, any development within it will require planning permission from Waterford City and County Council. If development proposals are consistent with the Planning Scheme they will be granted permission. Proposals which are not consistent with the Planning Scheme will be refused permission. No party may appeal to An Bord Pleanála the decision of Waterford City and County Council, on any application for permission in respect of a development within the area of the Planning Scheme.

3.2 Contents of the Draft Planning Scheme

The Draft Planning Scheme has been prepared by Waterford City & County Council as the designated Development Agency for the North Quays SDZ. It comprises a written document with maps and figures. Separate documents that accompany it and that have informed the development of the Draft Planning Scheme include this Environmental Report (Strategic Environmental Assessment), the Natura Impact Report (Appropriate Assessment) and a Strategic Flood Risk Assessment.

The Draft Planning Scheme is comprised of six Chapters, as follows:

- Chapter 1: Introduction
- Chapter 2: Site Context
- Chapter 3: Physical & Social Infrastructure

- Chapter 4: Planning Strategy
- Chapter 5: Architectural Strategy
- Chapter 6: Actions & Implementation

The Draft Planning Scheme sets out the Vision and Principal Goals for the North Quays SDZ, which are supported by Specific Objectives throughout the document. The Draft Planning Scheme outlines how it will guide the future development of the area in terms of physical, social, economic and environmental protection and enhancement in accordance with the national, regional and local higher-level plans and policies. The Draft Planning Scheme includes the objective PSS 1: All future planning applications shall comply with the relevant Waterford City Development Plan policies and objectives.

The development of the North Quays SDZ envisaged by the Draft Planning Scheme addresses the need to re-use brownfield sites and to consolidate and optimise land uses in the core city centre area. The vision includes for a mixed use development area which will connect to the existing City Centre (to the south) via a new sustainable transport bridge over the River Suir.

The Draft Planning Scheme proposes an integrated multi-modal transportation hub including the relocation of train station to the north quays and a mix of land uses to include comparison retail, food and beverage retail, 200-300 residential units, office, hotel and events centre, Tourism/Cultural /Enterprise/Light Industry/Community and public open spaces. Pedestrian access is prioritised along the river front, with the service access road proposed to form a spine road through the site, parallel to the railway line either above or below ground. It is envisaged in the Draft Planning Scheme that the SDZ will build on the character of the riverside location and create a high-quality urban quarter which extends and links to the neighbouring city centre and improves access to the surrounding areas including Ferrybank, Abbeylands and Rockshire. An overview of the contents of each chapter of the Draft Planning Scheme is presented below.

Chapter 1: Introduction

This chapter details the background of the site and the need for the development of the North Quays as identified in National, Regional and Local planning policy. The Vision and Principal Goals for the North Quays SDZ are stated and the role of Strategic Environmental Assessment (SEA) process and Appropriate Assessment (AA) process in the preparation and development of the Draft Planning Scheme is explained.

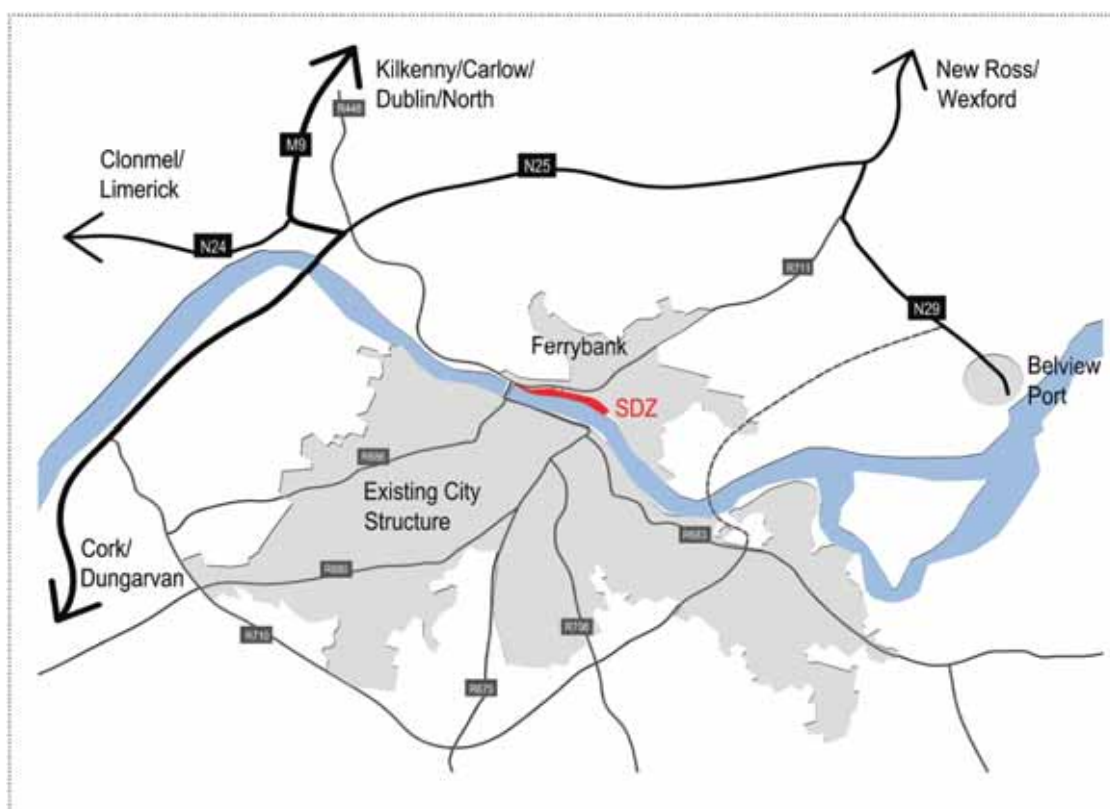


Figure 3.1 The Location of the North Quays SDZ in the Context of Waterford City and the Road Network

Chapter 2: Site Context

This Chapter provides a description and the context of the site, including its prominent location along the River Suir, opposite the South Quays and the existing city centre. It acknowledges the history of the site as the former centre for commercial and port activity within Waterford City and the importance of the quays in that regard. An overview of the site and surrounding environs includes a description of the existing landscape and topography of the North Quays site, including its physically and visually contained location between the River Suir and the elevated lands to the north. An account of the constraints which currently define the site and its environs are also identified, highlighting some of the challenges posed by the site.

This chapter of the Draft Planning Scheme also examines the location of the North Quays site in relation to the City Centre, identifying the uneven development north and south of the River Suir and the restricted development of the City Centre, which is reported as causing retail leakage from the region. It outlines the opportunities that the development of the North Quays can provide to enhance the growth of the City Centre.

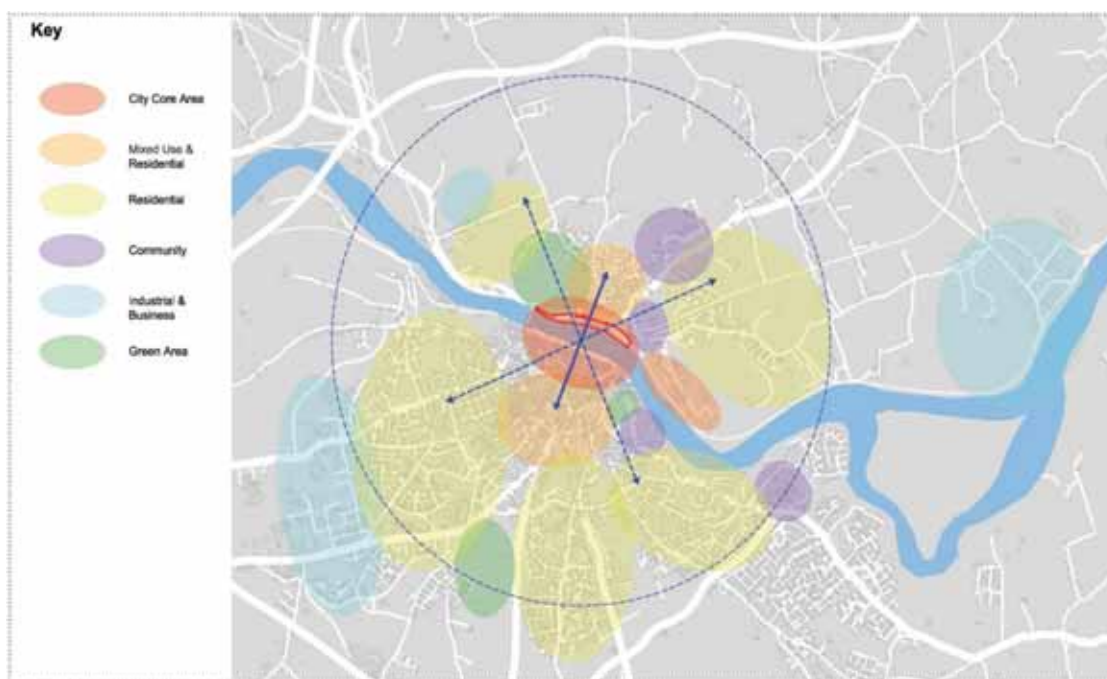


Figure 3.2 Illustration of how the North Quays Consolidate the City Core and Link to Mixed-use, Residential and Community Areas North of the River

Chapter 3: Physical & Social Infrastructure

This Chapter details the physical and social infrastructure proposed by the Draft Planning Scheme and presents these in two parts: Part A Access & Connectivity and Part B Environmental & Social Infrastructure.

Part A identifies new access and connectivity points that will be developed as part of the SDZ, including two new access points from Dock Road and Abbey Road, and a sustainable transport bridge across the River Suir from the South Quays. Parking provisions are detailed along with a summary of traffic analysis carried out. Compliance with the Waterford Planning Land Use and Transportation Strategy (PLUTS 2004-2020) is considered to be a key feature of the development of the Planning Scheme. The proposed transportation hub and transport provisions are detailed and their role in future-proofing the transportation needs of the city. Specific Objectives are established to ensure that sustainable transport is provided for as part of future development proposals, focusing on a reliance on the use of the private car to the provision of public transport, bicycle and pedestrian infrastructure.



Figure 3.3 Proposed Access Routes to into and Within the North Quays SDZ



Figure 3.4 Example Design for the New Sustainable Transport Bridge Across the River Suir

Part B outlines environmental infrastructure provisions envisaged for the SDZ site, including water supply, foul drainage and surface water drainage implementing Sustainable Urban Drainage Systems (SuDS). The SuDS principles mentioned in the Draft Planning Scheme include green roofs, bio-retention areas/modified planters, rainwater harvesting, permeable surfacing and swales, while Specific Objectives are also included for surface water drainage and flood management.

Specific Objectives relating to the protection of the Natura 2000 sites and the protection, enhancement and preservation of biodiversity on the site are also included. These will ensure that future planning applications will not give rise to significant direct, indirect or secondary impacts, through indirect or cumulative impact, on Natura 2000 site(s). It states: "All future planning applications will be subject to Appropriate Assessment in accordance with Article 6 of the EU Habitats Directive and must comply with the Specific Objectives outlined in the Draft Planning Scheme."

Utilities and information communication technology provisions, energy sources and waste management objectives for the SDZ are also detailed. Social infrastructure provisions outline the range of infrastructure that will be permissible and accessible to the future populations. It outlines the importance of good quality social infrastructure in promoting integration of the North Quays with existing communities. Community infrastructure is also considered such as educational, childcare, healthcare facilities and play areas.

Chapter 4: Planning Strategy

This chapter details there a three development zones in the SDZ. It illustrates using maps the location of types of developments, massing, heights, parking considerations and permissible landuse types. It details the extent of development and breakdown of land use, including the maximum and minimum provisions for each land use type, as per Table 3.1 below.

Table 3.1 Extent of Development, as Set Out in the Draft Planning Scheme

| Land Use | Minimum Gross Lettable Area | Maximum Gross Lettable Area |
|--|-----------------------------|-----------------------------|
| Retail (Comparison) | 20,000sqm | 30,000sqm |
| Food and Beverage | 5,000sqm | 7,000sqm |
| Office | 10,000sqm | 15,000sqm |
| Hotel and Conference Centre | 10,000sqm | 15,000sqm |
| Tourism / Cultural / Enterprise / Light Industry / Community Facilities | 10,000sqm | 15,000sqm |
| Residential | 200 units | 300 units |

Specific objectives are outlined for each land use type while limits and specifications are also given for views, building height, massing, landmark buildings, public realm and urban form.



Figure 3.5 Illustration of Potential View from Southeast of the North Quays

Chapter 5: Architectural Strategy

This chapter describes the architectural vision for the North Quays SDZ in creating a sustainable modern quarter connected to and consolidating the city centre while facilitating the natural expansion of the northern city environs. The vision aims to encompass connectivity and porosity together with a variation in ground levels through the use of podiums. A riverside promenade is proposed along the length of the scheme while edges and massing provisions are also detailed. Specific design requirements and objectives for the central development zone are included as it is the most significant, key section of the development. The transportation hub identified as part of the supporting infrastructure for the SDZ is outlined with a

number of specific objectives while development areas to the east and west of the SDZ and views of key importance are also identified.

Landscaping and public space considerations are outlined through a landscape strategy and greening requirements including objectives with the intent of creating a mix of quality active and passive spaces that will have an important role to play in the health and well being of the area as well as animating the site. Materials, finishes and technology to be considered as part of future proposals are outlined and recognised as playing a significant role in creating an innovative, smart and cohesive image for the North Quays. Sustainability objectives relating to sustainable transport, building design, energy use and energy efficiency are also outlined. Specific Objectives are included to ensure future proposals contribute towards reduced carbon emissions.



Figure 3.6 Examples of a City Centre Promenade

Chapter 6: Actions & Implementation

This Chapter sets out the key actions required for the successful delivery of the North Quays. It states that, An Implementation Plan for the Development Agency will be prepared following the adoption of the Planning Scheme to prioritise the investment and funding requirements identified in the Planning Scheme and set out the delivery programme for the Development Agency. Engagement with relevant stakeholders, including landowners and infrastructure providers, will form part of the preparation of the Implementation Plan. It indicates how the Development Agency envisages how the Phases will occur and the provision of key elements of infrastructure. The chapter also details development contributions exploring potential sources of funding to ensure the completion of the development. It outlines the process by which all applications in the SDZ will be assessed. Each Planning application within the planning scheme area must be accompanied by a Compliance Statement illustrating how the development complies with the Planning Scheme.

In order to assess planning applications under the SDZ and determine whether planning permission should be refused or granted, a Compliance Matrix will be prepared by the Development Agency in determining whether planning permission should be refused or granted, development proposals within the North Quays SDZ will be considered under the following:

- The principal goals
- The Planning Scheme urban form and land uses
- The specific objectives contained within the Planning Scheme

3.3 Principal Goals for the North Quays

The Principal Goals for the North Quays are:

- To create a strong and complementary extension of the City Centre.
- To form a sustainable, smart connected urban area of regional significance acting as a gateway to the City;
- Provide a dynamic new economic engine for the city and region;
- To promote the expansion of the City centre to the north of the River Suir in a manner that enhances and supports balanced and sustainable growth in Waterford City and encourages its vitality and viability;
- To link the north and south side of the city by providing a new sustainable transport bridge crossing and improve accessibility and connectivity by creating an environment that facilitates internal pedestrian and cycle movements;
- To provide a rich and diverse mix of uses where a sustainable balance of retail, working, living and recreation can be achieved;
- To develop a design led scheme of high quality architectural merit.
- To balance the employment, retail and commercial base of the North Quays with the future residential growth of the City and the south east region;
- To provide a sustainable transport hub on the North Quays;
- To provide for sustainable patterns of movement and access with priority for pedestrians, cyclists and public transport;
- To promote quality design for the spaces between and around buildings, the public realm that connects the various elements of the North Quays together including the wider hinterland;
- To create a safe, accessible and socially cohesive environment where people of all ages and abilities can live work and relax;
- To provide sustainable infrastructure and services for future populations;
- To provide for the protection, enhancement and improvement of the natural environment, including the avoidance of adverse effects on European sites, particularly the Lower River Suir SAC and the River Barrow and River Nore SAC;
- To create a sustainable urban environment, which respects it's natural, historic and cultural heritage;
- To provide sustainable solutions that addresses and manages the risk of flooding and climate change; and
- To promote the incorporation of resource energy efficiency and waste management into the area.

The principal goals are supported by attainable steps referred to as specific actions throughout the Draft Planning Scheme.

3.4 The Vision

The opportunity exists for a transformative development that can become a regeneration catalyst for the city and region. The vision for the North Quays is:

- To create a sustainable, compact extension to the City Centre that will serve a future population of a 83,000 people;
- A regeneration catalyst for the City and Region and the establishment of a sustainable modern city quarter;
- Creation of an integrated multi-modal transport hub designed to sustainably meet the access requirements of the City; and

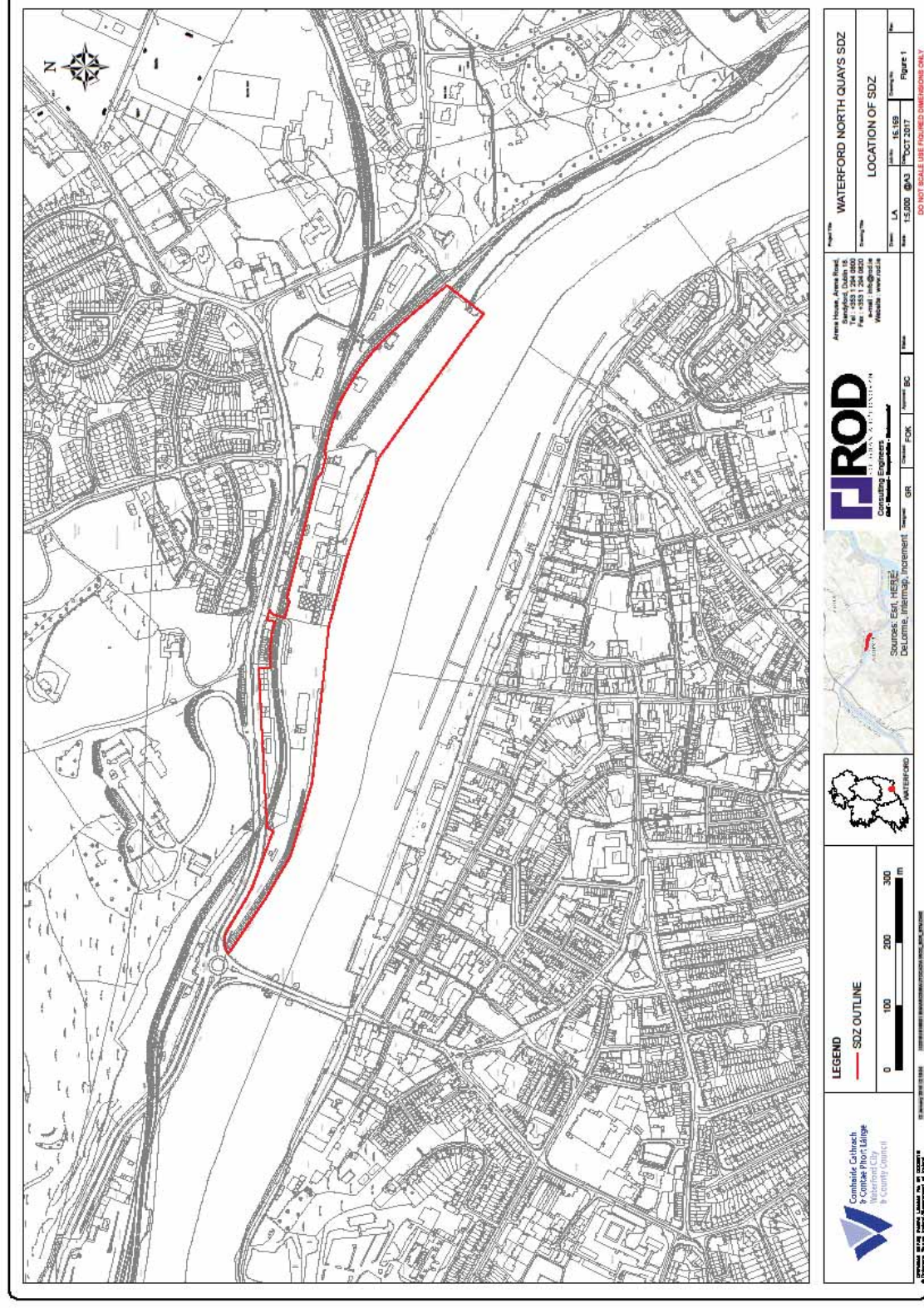
- Building on the context and the riverside location of the site to create a high quality urban quarter as a natural extension of the City Centre.

3.5 SDZ Location and Description

The designated NQ SDZ is an 8.23 hectare brownfield site located on the northern banks of the River Suir, 300m from Waterford City centre. The SDZ stretches from Rice Bridge, approximately 1km eastward to just before Abbey Church. With the exception of the Hennebique Building, all of the industrial buildings and storage sheds were demolished during 2015 and 2016. The SDZ comprises an assembly of wharves and the Rosslare to Waterford rail line traverses the site in an east west direction.

The site is bound to the south by the River Suir, and to the north by the Dock Road (R711) – a regional dual carriageway connecting Waterford City centre with the national routes including N29 (to Bellview Port), located 4.7 km to the northeast, N25 (leading to the M9 Kilkenny and Dublin) and N25 to New Ross and Wexford.

The site has a very significant presence in Waterford City, forming as it does a nearly 1km frontage opposite the City Centre and being visible from the main northern approaches to the city as well as from the city centre and south quays. The site has a south facing aspect and has significant redevelopment capacity, already having contained buildings of seven or eight storey equivalence and having very few boundary constraints due to separation from existing (mixed residential/commercial) development by the presence of the disused New Ross railway line and dual carriageway road network to the North and River Suir to the South.



4.0 RELATIONSHIP WITH OTHER RELEVANT PLANS

The SEA of the proposed Waterford's NQ SDZ Draft Planning Scheme is informed and carried out in the context of a wide range of EU, National, Regional and local legislation and plans as detailed in Table 4.1 below. In particular, the interaction of the proposed Draft Planning Scheme with the environmental protection objectives (EPOs) and standards included within the Waterford City Development Plan 2013-2019 and other plans and programmes must be considered.

A review of the relevant plans, policies and programmes relevant to the Draft Planning Scheme was carried out. The detailed review focussed primarily on International, European, national and local plans. The purpose of this review is to take into consideration the policy framework within which the Draft Planning Scheme is being developed. In accordance with the legislative requirements an outline of the contents and main objectives of the plan and relationship with other relevant plans is provided in Appendix A.

Where it was identified that the Draft Planning Scheme may have a negative impact on the EPOs of these individual plans and programmes, a means of addressing these issues is presented i.e. typically through the assessment by the Environmental Protection Objectives (EPOs). The EPOs have been adapted from the SEA process of the Waterford City Development Plan 2013-2019 and are used to assess the likely significant effects of implementing the Draft Planning Scheme. Where any likely significant adverse impacts are identified the ER includes mitigation measures to prevent, reduce and as fully as possible offset these effects on the environment.

However, it could be considered to be premature to undertake any meaningful assessment at this plan level stage in order to assess the likely effects of the types of developments that could occur in combination with the implementation of the proposed Draft Planning Scheme.

The Planning Scheme is a statutory plan, positioned at the lower end of the hierarchy of policy documents. From the review of policy documents it is considered to be broadly consistent and supportive of these higher level policy documents discussed in Appendix A.

Table 4.1 Relevant Plans, Programmes and Policies

| International/European Union Level |
|---|
| <ul style="list-style-type: none"> • Johannesburg Plan of Implementation, 2002 • Agenda 21 • EU Biodiversity Strategy 2020 • Convention on Wetlands of International Importance (Ramsar Convention) 1971 • EU Environmental Action Programme • European Spatial Development Perspective 1999 • EU White Paper on Renewable Energy 1997 • COMAH (Seveso III 2012/18/EU) Directive – European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 • EU Water Framework Directive 2000/60/EC • SEA Directive (Directive 2001/42/EC) • EIA Directive (2011/92/EU as amended by 2014/52/EU) • Floods Directive 2007/60/EC • Habitats Directive 92/43/EEC (the Habitats Directive) |

- Birds Directive (2009/147/EC)
- European Communities Quality of Salmonid Waters Regulations 1998
- Drinking Water Directive (98/83/EC)
- Urban Waste Water Treatment Directive (91/271/EEC)
- Groundwater Directive (2006/118/EC)
- EU Surface Water Directive (2006/118/EC)
- Shellfish Waters Directive (2006/113/EC)
- Integrated Pollution Prevention and Control (IPPC) Licensing 2004
- Nitrates Directive (91/676/EEC)
- European Convention on the Protection of the Archaeological Heritage, 1992 (the Valletta Convention)
- The Clean Air for Europe Directive (2008/50/EC) and the Fourth Daughter Directive (2004/107/EC)
- Noise Directive 2002/49/EC
- Marine Strategy Framework Directive (2008/56/EC)
- UN Kyoto Protocol (2nd Kyoto Period)
- The Second European Climate Change Programme (ECCP II)
- Paris climate conference (COP21) 2015
- EU 2020 climate and energy Package
- Environmental Liability Directive (2004/35/EC)
- European Landscape Convention, 2000

National Level

- Our Plan - Ireland 2040 The Draft National Planning Framework (NPF) 2017
- The National Spatial Strategy 2002-2030 - due to be updated in 2017
- Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007 – 2020
- Our Sustainable Future - A Framework for Sustainable Development in Ireland
- The National Development Plan (2007-2013)
- Urban Regeneration and Housing Act 2015
- National Heritage Plan 2002
- Framework and Principles for the Protection of the Archaeological Heritage – Published by Dúchas The Heritage Service).
- Smarter Travel – A Sustainable Transport Future 2009-2020;
- National Catchment Flood Risk Assessment and Management Programme;
- National Biodiversity Plan 2011-2016
- Ireland's First National Cycle Policy Framework (2009)
- National Policy on Town Defences 2008
- Noise Regulations, 1994
- National Action Plan for Social Inclusion 2007-2016
- Wildlife (Amendment) Act, 2000
- Creating a Green Infrastructure for Ireland- Enhancing Natural Capital for Human Wellbeing 2010
- National Climate Change Strategy 2007-2012
- Air Pollution Act 1987
- Local Government (Water Pollution) Acts, 1977 and 1990
- Water Quality (Dangerous Substances) Regulations 2001
- National Inventory of Architectural Heritage
- Framework and Principles for the Protection of the Archaeological Heritage 1999
- Landscape Assessment Guidelines 2000

- National Landscape Strategy 2015-2024
- Building on Recovery; Infrastructure & Capital Investment Programme 2016-2021
- Planning and Development Act, 2000 (as amended) Planning and Development Regulations 2001 (as amended)
- National Climate Change Adaptation Framework (2012)
- Climate Action and Low Carbon Development Act 2015
- National Renewable Energy Action Plan
- Strategic Framework for Integrated Land Transport (SFILT)
- Grid25 Implementation Programme
- Water Services Strategic Plan – A Plan for the Future of Water Services (2015);
- National Anti-Poverty Strategy (1997)
- Healthy Ireland – A Framework for Improved Health and Wellbeing 2013-2025;

Guidelines:

- The Planning System and Flood Risk Assessment Guidelines, Guidelines for Planning Authorities (2009)
- Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities (2009)
- Urban Design Manual A Best Practice Guide (2009)
- Design Manual for Urban Roads and Streets (DMURS) (2013)
- Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns and Villages) (2009)
- Architectural Heritage Protection – Guidelines for Planning Authorities 2004
- Development Management Guidelines (DoEHLG) 2007
- Traffic Management Guidelines (2003)
- Childcare Facilities, Guidelines for Planning Authorities (2001)
- The Provision of Schools and the Planning System, A Code of Practice for Planning Authorities (July 2008)
- Towards Sustainable Local Communities: Guidelines on Local Agenda 21 (2001)

Regional Level

- Regional Planning Guidelines for the South East Region 2010-2022
- Regional Spatial and Economic Strategies (once they are prepared)
- Draft River Basin Management Plan (2nd Cycle RBD)
- Draft Flood Risk Catchment Management Plans for the South East
- The Joint South East Waste Management Plan
- South East Region Employment Action Plan 2011
- Eastern Midlands Regional Waste Management Plan (2015-2021)
- Eastern River Basin Management Plans
- S&E Regional Operational Programme 2014- 2020
- South East Economic Development Strategy (SEEDS) 2013-2019

County and Local Level

- Waterford City Development Plan 2013- 2019 (incorporates the Housing Strategy) and SEA Environmental Report for Waterford City Development Plan.
- Waterford County Development Plan 2011-2017
- Waterford Planning, Land Use and Transportation(PLUTS) Study (2004)
- Economic Strategy for Waterford City and County (2013)
- Waterford North Quays - Urban Design Framework Plan (2008)
- Ferrybank- Belview Local Area Plan 2009 (under review)
- One Waterford: Local Economic & Community Plan 2015-2020
- Report of the Waterford Re-Organisation Implementation Group and Economic Strategy

for Waterford City and County, One Waterford – Delivering Jobs, Efficiency and Growth (2013)

- County Waterford Economic Plan: Ready for Growth 2010-2014
- Strategy for Economic, Social & Cultural Development of Waterford City 2002-2012
- Strategy for Fishery Dependent Communities(FLAG): Wicklow, Wexford and Waterford 2013
- Waterford Children & Young People's Services Committee Children & Young People's Plan 2015-2018
- Waterford City & County Council Corporate Plan 2015-2020;
- Waterford City Retail Strategy (2012)
- Waterford City Transport Feasibility Study (2010)
- Waterford Climate Change Strategy (2011)
- Strategic Plan 2014 – 2017 Waterford - Active People, Active Place
- Waterford City Centre Urban Renewal Scheme (2015)
- Kilkenny City and Environs Development Plan 2014-2020 – Appendix A Retail Strategy
- Kilkenny County Development Plan 2014-2020

4.1 Waterford City Development Plan 2013-2019

Waterford City Development Plan 2013-2019 supports the development of the North Quays SDZ which is zoned as part of a larger mixed use 'opportunity site'. The opportunity site includes Plunkett Railway Station and lands to the North including Sion Hill House and the former Ard Ri hotel site. The *Waterford North Quays - Urban Design Framework Plan* prepared in 2008 set out a broad vision for this area comprising development concepts and urban design guidelines including infrastructure options to include a bridge crossing connecting the North Quays. A range of mixed uses including retail, office and residential would be permissible on the site under this zoning.

The Draft Planning Scheme includes the objective PSS 1: All future planning applications shall comply with the relevant Waterford City Development Plan policies and objectives.

4.2 PLUTS Strategy 2004

The Waterford Planning, Land Use and Transportation Study 2004 (PLUTS) recognises the potential of the North Quays as an extension of the city centre and prioritised a new city centre pedestrian bridge and a new public transport interchange at North Quays. Key recommendations of the PLUTS include;

- A new city centre bridge for pedestrians and cyclists which will link the redeveloped North Quays with the existing City Centre;
- Provision of a rail-passenger platform on the North Quays as part of a new Public Transport Interchange; and
- The PLUTS proposes a future 3rd bridge crossing downstream on the Suir which would complete the loop around the system connecting the N25 Bypass, the River Suir Bridge and the Outer Ring Road. This in the long run will relieve traffic load from both sides of the quays.

The implementation of the Draft Planning Scheme is deemed to support the PLUTS Strategy.

4.3 Ferrybank- Bellview Local Area Plan

“The Ferrybank neighbourhood is located to the north of the North Quays SDZ. It is divided between two local authorities. The electoral division of Ferrybank located in Waterford City and the Kilculliheen electoral division located in County Kilkenny. Ferrybank is perceived at local level to comprise of old and new Ferrybank, with the area characterised as old Ferrybank being situated in Waterford City and the newer area for the most part being situated in Kilkenny. Thus, there is a need for co-operation and joined up thinking between the two local authorities in the delivery of services, through the process of development management and planning for the future of the area.”¹

At the time of writing the Ferrybank-Bellview Local Area Plan (LAP) 2009 is under review. The current LAP outlines a strategy for the proper planning and sustainable development of an area of land stretching from Grannagh to Belview and from the River Suir to the line of the Waterford bypass, adjacent to the SDZ area. The policies, objectives and zoning objectives for existing and future development of the Ferrybank area have been considered as part of the Draft Planning Scheme proposals.

A summary of the other key planning and land-use policy documents relevant to the North Quays SDZ and how they relate to the Plan and assessment of likely cumulative impacts is provided in **Appendix A**.

¹ Waterford City Development Plan 2013 – 2019, Page 101

5.0 BASELINE ENVIRONMENT

5.1 Introduction

The environmental baseline of the North Quays SDZ area is described in this section. This baseline together with the Environmental Protection Objectives (EPOs) (outlined in Section 6) are used in order to identify, describe and evaluate the likely significant environmental effects of implementing the proposed SDZ in order to determine what if any mitigation and monitoring measures are required.

Baseline data is essential to establish the current state of the environment in order to assist with the identification, evaluation and monitoring of the likely significant effects of the Planning Scheme on the environment. The baseline information forms the platform to identify existing environmental problems. From this, the highlighted environmental issues can then be used to establish the EPOs. In this case, as the process involves the Draft Planning Scheme of the SDZ, the EPOs established as part of the Environmental Report of the Waterford City Development Plan 2013-2019 have been adapted for this assessment of the SDZ in order to ensure that any likely significant impacts on the SEA topics are addressed and can be included as part of future monitoring of the SDZ.

Where data gaps are found for particular aspects of the environment, the significance of these data gaps will be evaluated and clearly stated. An examination will also be made as to whether these gaps can be addressed during the SEA process.

The environmental baseline is described in line with the legislative requirements outlined in Schedule 2B of the SEA Regulations 2004-2011, encompassing the following environmental receptors/ topics: biodiversity, flora and fauna, population and human health, soils, geology, water, air and climate, material assets, cultural heritage, landscape and the interrelationship between these components.

5.1.1 Geographic Area that Applies to the SDZ

The designated NQ SDZ is an 8.23 hectare brownfield site located on the northern banks of the River Suir 300m from Waterford City centre. It comprises 8.23 hectares of brownfield port lands close to the commercial centre of Waterford city centre as shown in Figure 5.1.

The North Quays SDZ is bound to the south by the River Suir, and to the north by the Dock Road (R711) - a regional dual carriageway connecting Waterford City centre with the N29, located 4.7km to the northeast. Land uses bounding the north of the site include; a petrol station, a number of single-storey residential dwellings and large industrial units. The western portion of the site is very narrow and is bound by the Dock Road and roundabout that leads to Edmund Rice Bridge and Plunkett Rail Station further east. The eastern boundary comprises industrial units, trees and hedges. Further east is Abbey Community School and the Church of Ireland Abbey Church and Graveyard.

The SDZ stretches from Rice Bridge, 1.1 km eastward to just before Abbey Church. The site is bound to the south by the River Suir, and to the north by the Dock Road (R711) – a regional dual carriageway connecting Waterford City centre with the national routes including N29 (to Bellview Port), located 4.7 km to the northeast, N25 (leading to the M9 Kilkenny and Dublin) and N25 to New Ross and Wexford.

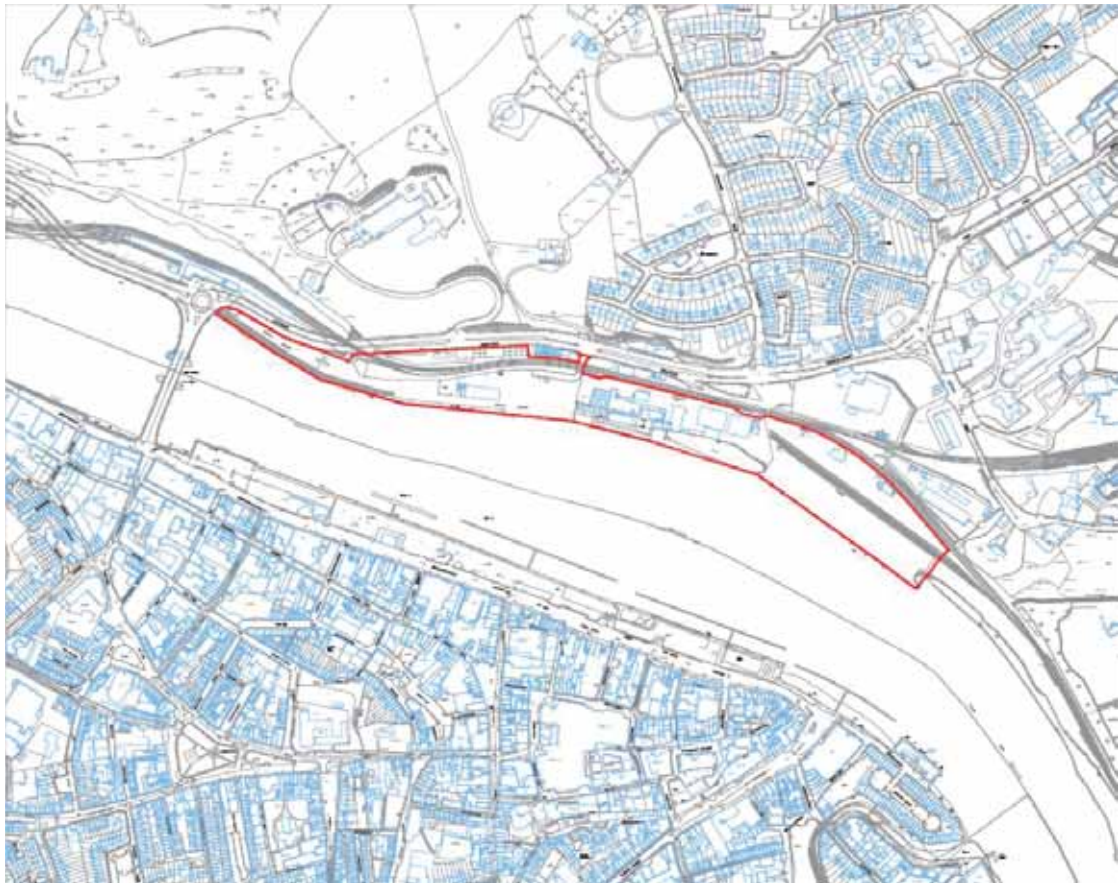


Figure 5.1 North Quays Strategic Development Zone Boundary (8.23ha)

The Study area includes a wider area surrounding the North Quays and city centre and includes lands adjacent to the SDZ including the River Suir, Waterford City Centre and the Ferrybank area. The site is contiguous to the Ferrybank Neighbourhood Centre in the administrative area of Kilkenny County Council. The SDZ has a very significant presence in Waterford City, forming as it does a nearly 1km frontage opposite the city centre and being visible from the main northern approaches to the city as well as from the city centre and south quays. The opportunity exists for a transformative redevelopment that can become a regeneration catalyst for the City.

The site is unique given its proximity to the city centre, its south facing aspect and waterfront location on the Suir Estuary. It also has very significant redevelopment capacity, previously housing buildings of 7 story equivalence and having very few boundary constraints due to separation from other development by the presence of the River Suir, the railway line and the (R711) Dock Road dual carriageway.

5.1.2 Evolution of the Environment in the Absence of the Planning Scheme

The SEA Directive requires that the ER includes a description of the likely evolution of the environment in the absence of the SDZ. This will be considered under the "Do Nothing Scenario" in Section 7 of this ER.

5.1.3 Data Gaps and Limitations

This baseline description is not intended to be an exhaustive description of all baseline environmental data within the area that may be impacted upon by the Planning Scheme. Instead, it is focused on providing relevant baseline information at an appropriate scale and detail for the purposes of this Draft Scheme for the North

Quays SDZ. Overall it is considered that adequate baseline information was gathered to enable an assessment of the likely significant effects on the environment from the Draft Planning Scheme.

5.1.4 Environmental Topics Scoped Out at SEA Scoping Report Stage

No environmental topics or receptors were scoped out at SEA Scoping stage. The SEA Scoping report highlighted that there may be several issues that could result in likely significant effects on certain SEA topics as a result of the SDZ Draft Planning Scheme, therefore further assessment is required and is undertaken in this ER. The following sections outline the baseline environmental receptors, any known existing environmental issues, threats or sensitivities and likely significant effects from the Draft Planning Scheme.

5.2 Biodiversity, Flora and Fauna

Biodiversity or “biological diversity” is one of the key terms in conservation, encompassing the richness of life and the diverse patterns it forms. The Convention on Biological Diversity (CBD) defines biological diversity as ‘the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems’ (Article 2). Waterford City supports a wide diversity of natural and semi-natural habitats and a wide range of plant and animal species. The Waterford North Quays Strategic Development Zone southern boundary comprises the Lower River Suir Special Area of Conservation (SAC) which is a very large, multi-interest site covering more than 100km of the main river channel.

The 'likely zone of impact' of the Draft Planning Scheme was defined as a 15km buffer around lands encompassing the NQ SDZ to ensure all conceivable impacts had been captured in the assessment.

5.2.1 Natura 2000 Designated Sites

Article 6(3) of the Habitats Directive requires that all plans and projects not directly connected with or necessary to the management of European sites and likely to have a significant effect thereon be subject to an Appropriate Assessment (AA) of their implications for the integrity of such sites, both individually and in combination with other plans and projects. To this end, an AA Screening was undertaken which was informed by a desk study and ecological surveys (discussed below). The AA screening determined that five Natura 2000 sites are located within the 15km 'likely zone of impact' of the Draft Planning Scheme (Table 5.1; Figure 5.2).

Table 5.1 Natura 2000 Sites within the Likely Zone of Impact of the Draft Planning Scheme

| Natura 2000 Site and Area | Site Description | Closest Proximity |
|---|--|---|
| Lower River Suir SAC [002137] Site area: 7,099.99 ha | This site consists of the freshwater stretches of the River Suir immediately south of Thurles, the tidal stretches as far as the confluence with the Barrow/Nore immediately east of Cheekpoint in Co. Waterford. The Suir and its tributaries flow through the counties of Tipperary, Kilkenny and Waterford. The Lower River Suir contains excellent examples of a number of Annex I habitats, including the priority habitats alluvial forest and Yew woodland. The site also supports populations of several important animal species; some listed on Annex II of the Habitats Directive or listed in the Irish Red Data Book. The presence of two legally protected plants (Flora (Protection) Order, 2015) and the ornithological importance of the site adds further to the ecological interest and importance. | The Plan is directly within and adjacent to the SAC |
| River Barrow and River Nore SAC [002162] Site area: 12,373.17 ha | This site comprises the River Barrow and River Nore catchments from the source in the Slieve Bloom Mountains to Creadan Head in Waterford. Urban centres along the site include Portarlinton, Athy, Carlow, Kilkenny and New Ross. Overall, it is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the Habitats Directive. Furthermore, it is of high conservation value for its populations of a number of bird species listed on Annex I of the Birds Directive. The occurrence of several Red Data Book plant species and the endemic population of the hard-water form of the Freshwater pearl mussel (limited to a 10 km stretch of the Nore) add further value to this site. | The SAC boundary is c. 6km downstream of the Plan area. |
| Tramore Dunes and Backstrand SAC [000671] Site area: 752.83 ha | This site comprises a shallow and sheltered intertidal area, known as the Back Strand, enclosed by a substantial sand spit, Tramore Burrow. Here, salt marsh vegetation, <i>Spartina</i> swards and communities of <i>Salicornia</i> and other annuals thrive. The salt marshes are of the lagoon type, a rare type in Ireland, and both Atlantic and Mediterranean communities are well represented. The intertidal sand and mud flats are of moderate size and have <i>Zostera</i> communities. Five Red Data Book plant species have been known from the site and one, <i>Polygonum maritimum</i> , has its only Irish station here. The site supports important wintering waterfowl populations, with <i>Branta bernicla hrota</i> in international numbers and seven other species in numbers of national importance. Two species listed on Annex I of the Birds Directive occur - <i>Pluvialis apricaria</i> and <i>Limosa lapponica</i> . | The SAC boundary is c. 10km south of the Plan area. |

| Natura 2000 Site and Area | Site Description | Closest Proximity |
|--|--|---|
| Tramore Backstrand SPA [004027] Site area: 675.98 ha | An important estuarine site which has an internationally important population of <i>Branta bernicla hrota</i> . It supports a further six species in numbers of national importance, including <i>Pluvialis apricaria</i> , <i>Pluvialis squatarola</i> , <i>Limosa limosa</i> and <i>Limosa lapponica</i> . The population of <i>Pluvialis squatarola</i> is of particular note as it represents 4% of the national total. <i>Egretta garzetta</i> breeds locally and the Tramore Back Strand is their main feeding area. The site provides very good feeding areas for wintering waterfowl. High tide roosting sites, however, are limited. Wintering bird populations have been well monitored at the site since the 1970s. | The SPA boundary is c. 10km south of the Plan area. |
| Mid Waterford Coast SPA [004193] Site area: 937.47 ha | This site encompasses the areas of high coast and sea cliffs in Co. Waterford between Newtown Cove to the east and Ballyvoyle to the west. The site includes the sea cliffs and the land adjacent to the cliff edge. The high water mark forms the sea boundary. This site supports a nationally important population of breeding <i>Pyrhocorax pyrrhocorax</i> , a Red Data book species. 24 breeding pairs were recorded in the 1992 survey and 20 in the 2002/03 survey. The site supports an important <i>Falco peregrinus</i> population (7 pairs in 2002). The site also holds nationally important populations of <i>Phalacrocorax carbo</i> (79 pairs) and <i>Larus argentatus</i> (147 pairs), as well as smaller numbers of other breeding seabirds. | The SPA boundary is c.14km south of the Plan area. |



5.2.2 Appropriate Assessment & Natura Impact Report

On the basis of the Appropriate Assessment Screening and in applying the Precautionary Principle, indicators of significance show that there is the potential for localised short-term or long-term interference with the Lower River Suir SAC and the River Barrow and River Nore SAC as a result of the implementation of the Draft Planning Scheme for the Waterford North Quays Strategic Development Zone.

Significant effects are likely to arise as a result of the changes in land use and associated construction works within and in close proximity to the Lower River Suir SAC and direct impacts cannot be objectively ruled out at this stage. The Appropriate Assessment Screening concluded that the Draft Planning Scheme could not be “screened out” in terms of the likelihood of significant effects on the Lower River Suir SAC and the River Barrow and River Nore SAC.

In accordance with the provisions of Article 6(3) of the Habitats Directive, Part 5 of the Habitats Regulations and Part XAB of the Planning and Development Acts, 2000-2015, the Draft Planning Scheme was subject to a Stage 2 Appropriate Assessment, including the preparation of a Natura Impact Report (NIR), providing Waterford City & County Council, as the competent authority, with the information upon which it will base its Appropriate Assessment.

Where adverse impacts were identified in the NIR, amendments to the text of the Draft Planning Scheme have been made to eliminate the risk of significant impacts on Natura 2000 sites. Subsequently, in view of best scientific knowledge and in view of the Conservation Objectives of the relevant Natura 2000 sites, the NIR for the scheme has determined that, given the full and proper implementation of the mitigating policies and objectives prescribed therein, there will be no adverse effect on the integrity of Natura 2000 sites arising from the Draft Planning Scheme, either individually or in combination with other plans or projects.

5.2.3 Nationally Designated Sites

There are 34 nationally designated sites, including one Natural Heritage Area (NHA) and 33 Proposed Natural Heritage Areas (pNHA), located within the 15km ‘likely zone of impact’ of the plan, are identified in Table 5.3 below.

Table 5.2 Nationally Designated Sites within 15km of Draft Planning Scheme

| Designated Name | Site Code |
|--|-----------|
| Natural Heritage Areas (NHA) | |
| Keeragh Islands NHA | 000703 |
| Proposed Natural Heritage Area (pNHA) | |
| Lower River Suir (Coolfinn, Portlaw) | 000399 |
| Fiddown Island | 000402 |
| Hugginstown Fen | 000404 |
| Lough Cullin | 000406 |
| Tibberaghny Marshes | 000411 |
| River Suir Below Carrick-On-Suir | 000655 |
| Belle Lake | 000659 |
| Carrickavrantry Reservoir | 000660 |
| Dunmore East Cliffs | 000664 |

| Designated Name | Site Code |
|------------------------------|-----------|
| Islandtarnsey Fen | 000666 |
| Portlaw Woods | 000669 |
| Tramore Dunes And Backstrand | 000671 |
| Ballyhack | 000695 |
| Ballyteige Burrow | 000696 |
| Bannow Bay | 000697 |
| Barrow River Estuary | 000698 |
| Boley Fen | 000699 |
| Tintern Abbey | 000711 |
| Ballykelly Marsh | 000744 |
| Hook Head | 000764 |
| Oaklands Wood | 000774 |
| Waterford Harbour | 000787 |
| Brownstown Wood | 000827 |
| Grannyferry | 000833 |
| Kylecorragh Wood | 000842 |
| Ballin Lough (Waterford) | 001691 |
| Ballyvoyle Head To Tramore | 001693 |
| Castlecraddock Bog | 001695 |
| Fennor Bog | 001697 |
| Kilbarry Bog | 001700 |
| King's Channel | 001702 |
| Lissaviron Bog | 001705 |
| Duncannon Sandhills | 001738 |

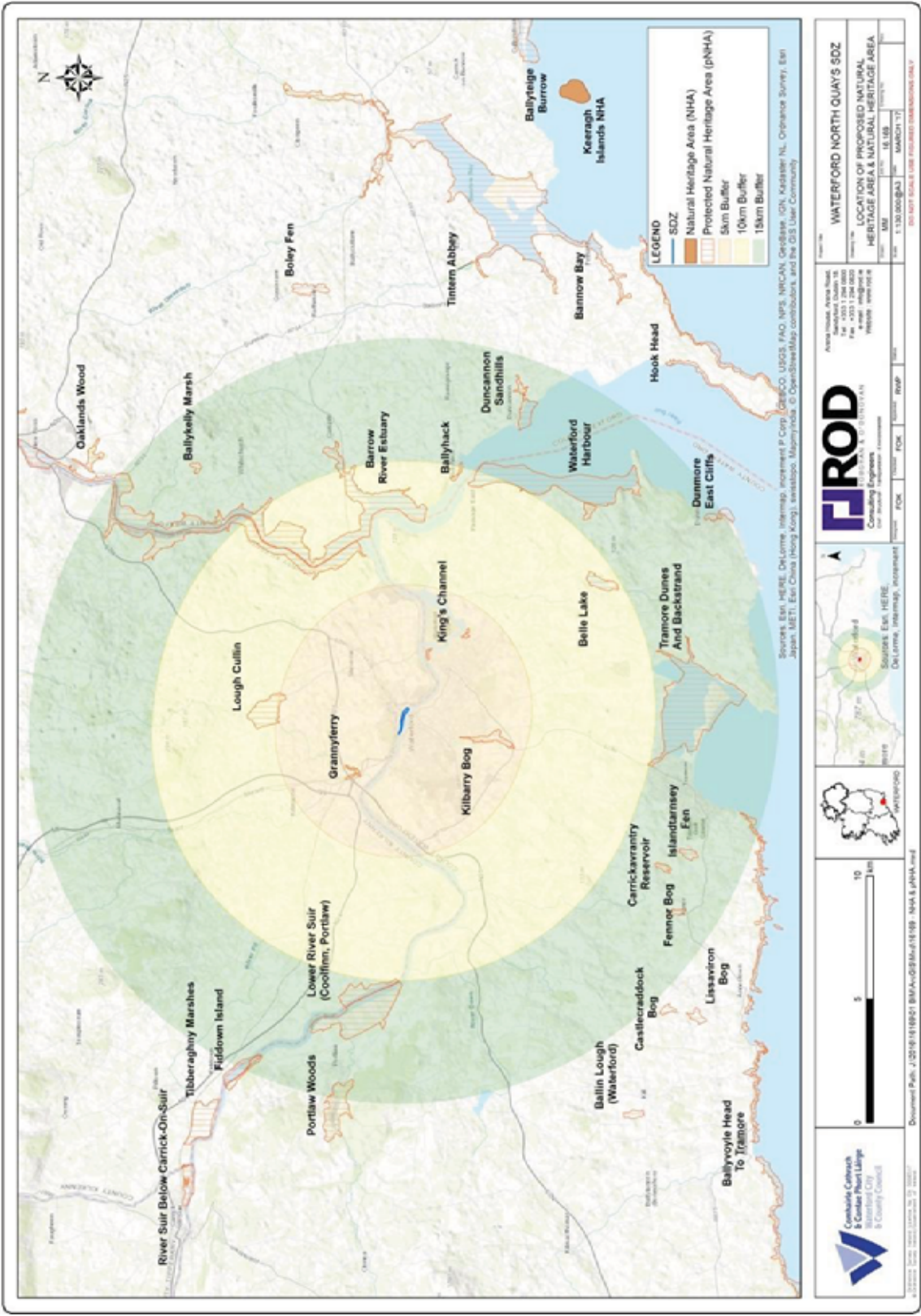


Figure 5.3 Natural Heritage Areas (NHA) and Proposed Natural Heritage Areas (pNHAs) within 15km of the Draft Planning Scheme

5.2.4 Flora and Fauna

In order to examine baseline ecological conditions and determine the presence and proximity of any Qualifying Interests/Special Conservation Interests of Natura 2000 sites in relation to the Draft Planning Scheme, data relating to the ecology of the Plan area and protected sites potentially affected by the Plan were obtained from statutory and non-statutory consultees, as well as a desk study of publicly available information and ecological field surveys.

Desk Study

An initial desk study was undertaken in November 2016 and included reviews of reporting commissioned under Article 17 of the Habitats Directive (NPWS, 2013), Site Synopses, Standard Data Forms and Conservation Objectives for Natura 2000 sites, in particular the Lower River Suir SAC, the River Barrow and River Nore SAC and other Natura 2000 sites within 15 km of the Draft Planning Scheme. A review of the National Biodiversity Data Centre (NBDC) online database (NBDC, 2016) was undertaken and a data request was also submitted to the NPWS. The results of the desk study were used to inform the design of initial multidisciplinary ecological walkover surveys. A follow-up desk study was undertaken in February 2017 to check for any new records since the initial desk study. The results of the desk study are listed in the following sections.

National Parks & Wildlife Service (NPWS)

A data request was submitted to the NPWS for details on rare and protected species records from within the relevant hectads (S51, S61). Table 5.3 lists rare and protected species records obtained from NPWS. All of these species are protected under the Wildlife Acts.

Table 5.3 NPWS Records for Rare and Protected Species

| Common Name | Scientific Name | Status |
|-------------------|--|----------------------|
| Mammals | | |
| Irish Hare | <i>Lepus timidus</i> subsp. <i>hibernicus</i> | Annex V HD, WA |
| Otter | <i>Lutra lutra</i> | Annexes II,IV HD, WA |
| Badger | <i>Meles meles</i> | WA |
| Stoat | <i>Mustela erminea</i> subsp. <i>hibernica</i> | WA |
| Hedgehog | <i>Erinaceus europaeus</i> | WA |
| Grey Seal | <i>Halichoerus grypus</i> | Annex II HD, WA |
| Birds | | |
| Barn Owl | <i>Tyto alba</i> | WA, Red List BOCCI |
| Reptiles | | |
| Common Lizard | <i>Zootoca vivipara</i> | WA |
| Amphibians | | |
| Smooth Newt | <i>Lissotriton vulgaris</i> | WA |
| Common Frog | <i>Rana temporaria</i> | Annex V HD, WA |
| Fish | | |
| Sea Lamprey | <i>Petromyzon marinus</i> | Annex II HD |
| Twaite Shad | <i>Alosa fallax</i> | Annexes II,IV HD |
| Allis Shad | <i>Alosa alosa</i> | Annexes II, V HD, WR |

| Common Name | Scientific Name | Status |
|--------------------------|------------------------------------|----------------------|
| Invertebrates | | |
| Freshwater Pearl Mussel | <i>Margaritifera margaritifera</i> | WA |
| White-clawed Crayfish | <i>Austropotamobius pallipes</i> | Annexes II, V HD, WA |
| Plants | | |
| Corncockle | <i>Agrostemma githago</i> | Extinct |
| Divided Sedge | <i>Carex divisa</i> | FPO 2015 |
| Opposite-Leaved Pondweed | <i>Groenlandia densa</i> | FPO 1999 |
| Meadow Barley | <i>Hordeum secalinum</i> | FPO 2015 |
| Sharp-leaved Fluellen | <i>Kickxia elatine</i> | FPO 1987 |
| Borrer's Saltmarsh-grass | <i>Puccinellia fasciculata</i> | FPO 2015 |
| Betony | <i>Stachys officinalis</i> | FPO 1999 |

Status (listing conferring protection or describing conservation status) abbreviations: Annex II/IV/V (non-avian species) = Habitats Directive (HD); WA = Wildlife Acts; FPO = Flora (Protection) Order, 1987, 1999 2015.

National Biodiversity Data Centre

The National Biodiversity Ireland Database (NBDC) was accessed in November 2016, prior to conducting the multi-disciplinary walkover surveys and was rechecked for updates in February 2017. Table 5.4 lists the rare and protected species recorded within the hectads pertaining to the Draft Planning Scheme. To avoid replication all records of species represented in the NPWS dataset have been removed from the displayed NBDC data. Table 5.5 lists the Invasive Alien Species (IAPS) recorded within these hectads.

Table 5.4 NBDC Records for the Relevant Hectads

| Common Name | Scientific Name | Status |
|----------------------|----------------------------------|-----------------------------|
| Mammals | | |
| Daubenton's Bat | <i>Myotis daubentonii</i> | Annex IV HD, WA |
| Leisler's Bat | <i>Nyctalus leisleri</i> | Annex IV HD, WA |
| Bandit Pipistrellus | <i>Pipistrellus pipistrellus</i> | Annex IV HD, WA |
| Soprano Pipistrelle | <i>Pipistrellus pygmaeus</i> | Annex IV HD, WA |
| Brown Long-eared Bat | <i>Plecotus auritus</i> | Annex IV HD, WA |
| Red Squirrel | <i>Sciurus vulgaris</i> | WA |
| Pygmy Shrew | <i>Sorex minutu</i> | WA |
| Fish | | |
| Atlantic Salmon | <i>Salmo salar</i> | Annex II HD |
| Invertebrates | | |
| Marsh Fritillary | <i>Euphydryas aurinia</i> | Annex II HD, WA |
| Birds | | |
| Kingfisher | <i>Alcedo atthis</i> | Annex I BD, WA, Amber BOCCI |
| Short-eared Owl | <i>Asio flammeus</i> | Annex I BD, WA, Amber BOCCI |
| Hen Harrier | <i>Circus cyaneus</i> | Annex I BD, WA, Amber BOCCI |
| Merlin | <i>Falco columbarius</i> | Annex I BD, WA, Amber BOCCI |
| Bar-tailed Godwit | <i>Limosa lapponica</i> | Annex I BD, WA, Amber BOCCI |

| Common Name | Scientific Name | Status |
|------------------------|-------------------------------|-----------------------------------|
| Whooper Swan | <i>Cygnus cygnus</i> | Annex I BD, WA, Amber BOCCI |
| Corn Crake | <i>Crex crex</i> | Annex I BD, WA, Red List BOCCI |
| Dunlin | <i>Calidris alpina</i> | Annex I BD, WA, Red List BOCCI |
| Common Goldeneye | <i>Bucephala clangula</i> | Annex II BD, WA, Red List BOCCI |
| Eurasian Curlew | <i>Numerius arquata</i> | Annex II BD, WA, Red List BOCCI |
| Northern Lapwing | <i>Vanellus vanellus</i> | Annex II BD, WA, Red List BOCCI |
| Northern Shoveler | <i>Anas clypeata</i> | Annex II, III BD, WA, Red List |
| Wigeon | <i>Anas penelope</i> | Annex II, III BD, WA, Red List |
| Common Pochard | <i>Aythya ferina</i> | Annex II, III BD, WA, Red List |
| Grey Partridge | <i>Perdix perdix</i> | Annex II, III BD, WA, Red List |
| European Golden Plover | <i>Pluvialis apricaria</i> | Annex II, III BD, WA, Red List |
| Eurasian Woodcock | <i>Scolopax rusticola</i> | Annex II, III BD, WA, Red List |
| Greylag Goose | <i>Anser anser</i> | Annex II, III BD, WA, Amber BOCCI |
| Tufted Duck | <i>Aythya fuligula</i> | Annex II, III BD, WA, Amber BOCCI |
| Common Coot | <i>Fulica atra</i> | Annex II, III BD, WA, Amber BOCCI |
| Eurasian Teal | <i>Anas crecca</i> | Annex II, III BD, WA, Amber BOCCI |
| Greater Scaup | <i>Aythya marila</i> | Annex II, III BD, WA, Amber BOCCI |
| Common Snipe | <i>Gallinago gallinago</i> | Annex II, III BD, WA, Amber BOCCI |
| Jack Snipe | <i>Lymnocyptes minimus</i> | Annex II, III BD, WA, Amber BOCCI |
| Yellowhammer | <i>Emberiza citrinella</i> | WA, Red List BOCCI |
| Common Redshank | <i>Tringa totanus</i> | WA, Red List BOCCI |
| Black-headed Gull | <i>Larus ridibundus</i> | WA, Red List BOCCI |
| Herring Gull | <i>Larus argentatus</i> | WA, Red List BOCCI |
| Sand Martin | <i>Riparia riparia</i> | WA, Amber BOCCI |
| Common Shelduck | <i>Tadorna tadorna</i> | WA, Amber BOCCI |
| Great Cormorant | <i>Phalacrocorax carbo</i> | WA, Amber BOCCI |
| Spotted Flycatcher | <i>Muscicapa striata</i> | WA, Amber BOCCI |
| Common Starling | <i>Sturnus vulgaris</i> | WA, Amber BOCCI |
| Northern Wheatear | <i>Oenanthe oenanthe</i> | WA, Amber BOCCI |
| Little Grebe | <i>Tachybaptus ruficollis</i> | WA, Amber BOCCI |
| Grey Plover | <i>Pluvialis squatarola</i> | WA, Amber BOCCI |
| Common Sandpiper | <i>Actitis hypoleucos</i> | WA, Amber BOCCI |
| Sky Lark | <i>Alauda arvensis</i> | WA, Amber BOCCI |
| Common Swift | <i>Apus apus</i> | WA, Amber BOCCI |
| Red Knot | <i>Calidris canutus</i> | WA, Amber BOCCI |
| Common Linnet | <i>Carduelis cannabina</i> | WA, Amber BOCCI |
| Mute Swan | <i>Cygnus olor</i> | WA, Amber BOCCI |
| House Martin | <i>Delichon urbicum</i> | WA, Amber BOCCI |
| Common Kestrel | <i>Falco tinnunculus</i> | WA, Amber BOCCI |
| Eurasian Oystercatcher | <i>Haematopus ostralegus</i> | WA, Amber BOCCI |
| Barn Swallow | <i>Hirundo rustica</i> | WA, Amber BOCCI |

| Common Name | Scientific Name | Status |
|--------------------------|-----------------------------|-----------------|
| Lesser Black-backed Gull | <i>Larus fuscus</i> | WA, Amber BOCCI |
| Great Black-backed Gull | <i>Larus marinus</i> | WA, Amber BOCCI |
| Plants | | |
| Chives | <i>Allium schoenoprasum</i> | FPO 2015 |
| Weasel's-snout | <i>Misopates orontium</i> | FPO 2015 |

Status (listing conferring protection or describing conservation status) abbreviations: Annex II/IV/V (non-avian species) = Habitats Directive (HD); Annex I/II/III (bird) = Birds Directive (BD); WA = Wildlife Acts; FPO = Flora (Protection) Order, 2015; and, Red/Amber = Birds of Conservation Concern in Ireland, 2014 to 2019 (BOCCI)

Invasive Alien Species

The risk of spreading invasive alien species (IAS) listed on the Third Schedule of to European Communities (Birds and Natural Habitats) Regulations, 2011-2015 is a material consideration for any development. In the case of the proposed Draft Planning Scheme, the ecologists identified a small stand of Common Cordgrass (*Spartina anglica*) on the bank of the River Suir within the NQ SDZ. A number of examples of other unlisted but invasive species were recorded, including Butterfly Bush (*Buddleja davidii*) and Traveller's Joy (*Clematis vitalba*). The risk of contamination to other sites from the Chinese mitten crab (*Eriocheir sinensis*) which has occurred in the Waterford Estuary since 2005 should be considered during the project level assessment. Management and monitoring of invasive species has been identified as an issue in order to avoid degradation of habitats by IAS. Waterford's location in a harbour area makes it susceptible as a vector site for introduction of new species. It is important that the propagation of native species, characteristic of their respective habitats, is supported and that further expansion of IAS is halted.

Table 5.5 Invasive Alien Species (IAS) Listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 Recorded within the Relevant Hectads

| Common Name | Scientific Name |
|-------------------------|-------------------------------|
| Japanese Knotweed | <i>Fallopia japonica</i> |
| New Zealand Pigmyweed | <i>Crassula helmsii</i> |
| Himalayan Balsam | <i>Impatiens glandulifera</i> |
| Three-cornered Leek | <i>Allium triquetrum</i> |
| Giant Knotweed | <i>Fallopia sachalinensis</i> |
| Rhododendron | <i>Rhododendron ponticum</i> |
| Water Fern | <i>Azolla filiculoides</i> |
| Brazilian Giant-rhubarb | <i>Gunnera manicata</i> |
| American Skunk-cabbage | <i>Lysichiton americanus</i> |
| Common Cord-grass | <i>Spartina anglica</i> |
| Chinese Mitten Crab | <i>Eriocheir sinensis</i> |
| Eastern Grey Squirrel | <i>Sciurus carolinensis</i> |
| Brown Rat | <i>Rattus norvegicus</i> |

Bat Fauna

Aardwolf Wildlife Surveys undertook a bat survey of the Former Flour Mill prior to the demolition of buildings on the SDZ in April 2014. The results state that all accessible areas within each of the accessible structures were visually surveyed for bats and/or their signs of presence. No evidence of these mammals were found.

The existing bat records within 10km of the Draft Planning Scheme (sourced from BC Ireland's National Bat Records Database) reveals that seven of the ten known Irish species have been observed locally. These include common *Pipistrellus pipistrellus* and soprano *P. pygmaeus* pipistrelle, Leisler's *Nyctalus leisleri*, brown long-eared *Plecotus auritus*, Daubenton's *Myotis daubentonii*, Natterer's *M. nattereri* and whiskered *M. mystacinus* bats as shown in Table 5.7. Roosts of some of these species are also known within this radius but none are in the vicinity of the Draft Planning Scheme.

Table 5.7 Adjudged Status of Bat Species within 10km of the Draft Planning Scheme

| Common name | Scientific name | Presence | Roosts | Source |
|------------------------|----------------------------------|------------------|---------|-----------|
| Common pipistrelle | <i>Pipistrellus pipistrellus</i> | Present | 3 known | BCIreland |
| Soprano pipistrelle | <i>Pipistrellus pygmaeus</i> | Present | 1 known | BCIreland |
| Nathusius' pipistrelle | <i>Pipistrellus nathusii</i> | Potential - rare | 0 known | BCIreland |
| Leisler's bat | <i>Nyctalus leisleri</i> | Present | 4 known | BCIreland |
| Brown long-eared bat | <i>Plecotus auritus</i> | Present | 3 known | BCIreland |
| Lesser horseshoe bat | <i>Rhinolophus hipposideros</i> | Absent | N/A | BCIreland |
| Daubenton's bat | <i>Myotis daubentonii</i> | Present | 0 known | BCIreland |
| Natterer's bat | <i>Myotis nattereri</i> | Present | 1 known | BCIreland |
| Whiskered bat | <i>Myotis mystacinus</i> | Present | 2 known | BCIreland |
| Brandt's bat | <i>Myotis brandtii</i> | Potential - rare | 0 known | BCIreland |

Source: Aardwolf Wildlife Surveys (2014) Bat Fauna Study

The Annex II Lesser Horseshoe bat *Rhinolophus hipposideros* has yet to be recorded in County Waterford and, presently, the nearest known Lesser Horseshoe area is immediately west and north of Cork city. The remaining Irish bat species, both rare; Nathusius' pipistrelle *P. nathusii* and Brandt's *M. brandtii* bat have not been recorded in the local area to date.

5.2.5 Ecology Surveys

Field surveys were conducted by suitably accredited and qualified ecologists from Roughan and O'Donovan (ROD) on 9th November 2016. These surveys included a multidisciplinary ecological walkover survey, habitat/botanical surveys and protected species surveys. The multidisciplinary survey was designed to record evidence of Otter, Bat, Badger and other protected mammals adhering to recognised methodology outlined in Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (NRA, 2008). Habitats present were classified in accordance with A Guide to Habitats in Ireland (Fossitt, 2000). Notes on the morphology, physical characteristics and potential of the river habitat to support protected flora and fauna were recorded. A description of the existing environment, general context, habitats and fauna encountered during field surveys is provided in the following sections.

Habitats

A total of 7 habitats were recorded within and adjacent to the NQ SDZ (Table 5.8).

Table 5.8 Habitats Recorded Within the Study Area

| Habitat Name | Fossitt Code |
|-----------------------------------|--------------|
| Tidal rivers | CW2 |
| Lower salt marsh | CM1 |
| Mud shores | LS4 |
| Amenity grassland | GA2 |
| Scrub | WS1 |
| Recolonising bare ground | ED3 |
| Buildings and artificial surfaces | BL3 |

5.2.6 Flora

Historical records of rare flora protected under the Irish Flora Protection Order (2015), for hectads (S51, S61) in the area of the Draft Planning Scheme include Borrer's Saltmarsh-grass, Meadow Barley and Divided Sedge.

5.2.7 Terrestrial Mammals

Otter

Otter (*Lutra lutra*) is an EU Habitats Directive Annex II and Annex IV species and is of high conservation interest. The multidisciplinary survey recorded signs of otter along the southern site boundary with the River Suir and on the quay wall. The North Quay wall area likely forms an important safe commuting route for otter between resting sites and hunting grounds. Alteration of the quay may result in barriers to connectivity.

Bat

All Irish bat species are protected under the Wildlife Act (1976) and Wildlife Amendment Acts (2000 & 2010). The bat roost suitability assessment undertaken during the multidisciplinary survey identified one tree and one building as having moderate and low bat potential. Each would require one bat survey between April and August if development is to occur within 30m. The tree is off Fountain St in the grounds of the primary school and the building is a small red brick slate roofed building along the quay wall. It is not possible at this plan stage to ascertain how many individual roosts are within the wider area and these shall be identified during the project level assessment and associated EIA at detailed design stage. No significant impacts are expected at this plan level stage on the bat population in the area as there will be limited if any fragmentation of linear features associated with bat movement. Bats and the use of lighting as part of the development and its potential effects on Bats will need to be assessed during the project level assessment.

5.2.8 Marine Mammals

No sightings or evidence of any marine mammal were recorded during the multidisciplinary survey. There have been reported sightings of cetacean and pinniped species, such as harbour porpoise (*Phocoena phocoena*) and grey seal (*Halichoerus grypus*) which are occasionally sighted in the waters. (SEA, Environmental Report, Waterford City and County Development Plan 2013-2019).

5.2.9 Birds

The habitat assessment undertaken as part of the multidisciplinary walkover survey did not identify habitats that would likely support important assemblages or significant populations of birds of conservation concern. Habitats within the SDZ were predominantly Buildings and Artificial Surfaces BL3 and Recolonising Bare Ground ED3.

5.2.10 Aquatic Species

The River Suir catchment is very important for the presence of a number of scarce and specialised aquatic species including Freshwater Pearl Mussel (*Margaritifera margaritifera*), White-clawed Crayfish (*Austropotamobius pallipes*) and populations of fish species including Atlantic Salmon (*Salmo salar*), Twaite Shad (*Alosa fallax*) and European Eel (*Anguilla anguilla*).

Inland Fisheries Ireland (IFI) is the state agency responsible for the protection, management and conservation of Ireland's inland fisheries and sea angling resources. IFI was contacted during the desk study to obtain information on fisheries within the River Suir. Their response, in March 2017 was as follows:

"Twaite shad typically move into the Barrow and Suir Estuaries during April and are highly mobile throughout the tidal sections of the rivers. Spawning occurs in late May-early June and is typified by an increase in movements from the lower estuary (Cheekpoint, Barrow Bridge, Bellevue and New Ross) to the spawning grounds at the upper tidal limits (St Mullins, Inistioge and Carrick-on-Suir). It is not unusual during this period for large numbers of shad to move back and forth between these locations on the rising and falling tides. It is especially important during this time that their movements are unimpeded. Following spawning the adults typically fall back to the lower harbour and eventually return to sea. The lower estuary is, however, an important year-round nursery area for juvenile shad.

In addition to salmonids (Salmon and Trout) Shad are just one of a number of migratory species who require unimpeded passage from the sea to freshwater habitats in the Suir to spawn - sea lamprey (May & June), river lamprey (throughout winter and early spring - now especially) and smelt (March & April). Juvenile eels will also be making their way upriver at this time to seek out habitats in the upper estuary and river to mature."

Development in the NQ SDZ could bring about impacts on aquatic species within the River Suir. Poor site management during construction and inappropriate scheduling of works have the potential to lead to negative impacts on fish species including Twaite Shad and Atlantic Salmon.

The proposed sustainable transport bridge that will connect the south quays to the north quays SDZ is currently undergoing an Environmental Impact Assessment (EIA). Inland Fisheries of Ireland (IFI) were consulted as part of this process. The key sensitivities within the River Suir and its catchment that may be impacted by future development were identified as including; maintenance of water quality during the construction phase is of paramount importance and that all watercourse crossings must be agreed with IFI and reference should be made to the document *Guidelines on Protection of Fisheries during Construction Works in and adjacent to Waters* (IFI, 2016).

5.2.11 Ecological Corridors

Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping stones for wildlife, including for migration, dispersal and genetic exchange of species of flora and fauna. The Directive requires that ecological connectivity and areas of ecological value outside the Natura 2000 network of designated ecological sites are maintained and it recognises the need for the management of these areas through land use planning and development policies.

Ecological corridors are important in connecting areas of local biodiversity with each other and with nearby designated sites to prevent islands of habitat from becoming isolated. Ecological corridors include linear features such as treelines, hedgerows, disused railway lines, rivers, streams, canals and ditches, all of which occur within the proposed Variation area and provide ecological corridors or stepping stones for wildlife moving within their range. They are particularly important for mammals, especially bats, and small birds. Within and surrounding the overall Draft Planning Scheme area, the ecological networks are made up of components including the waterbodies of the River Suir, the disused railway line, the areas of woodland adjacent to the site consisting of linear and clustered native planting. These components provide a range of habitats and facilitate networks or linkages to the surrounding countryside for biodiversity, flora and fauna.

5.2.12 Existing Environmental Problems/ Issues/ Threats

The EPA State of the Environment (2016) report states the key pressures on Ireland's Habitats and Species include: Changing land use, direct impact and unsustainable exploitation pressures evident across different habitats. The EPA State that *"pressures from urbanisation, fertiliser use and road building have reduced since the first assessment of Ireland's habitats and species (2001-2006) (NPWS, 2013). However, in a recovering economy, it is foreseeable that future land use changes will further threaten Ireland's habitats and species. The continuing deterioration of high quality rivers is of great concern, particularly as species such as salmon, trout and the declining freshwater pearl mussel require and depend on high quality water and river habitat (NPWS, 2013)."*

Deliberate or accidental introduction of species can have a negative impact on the economy, wildlife or habitats and require a national response. Invasive species have been identified on the North Quays SDZ site. Future redevelopment of the site will require management of these species, if present. The safe disposal of IAS material, including soil infested with seed, is problematic and needs to be further addressed.

The SDZ site location and proximity to the Lower River Suir SAC is identified as an environmental sensitivity which may be adversely impacted by the future development proposals. A key challenge in the development of the SDZ Draft Planning Scheme is to ensure the maintenance of favourable conservation status for all protected habitats and species as part of the Lower River Suir SAC.

5.2.13 Likely Effects on Biodiversity, Flora and Fauna of the Draft Planning Scheme

An AA and Natura Impact Report (NIR) as required by the EU Habitats Directive (Directive 1992/43/EEC) and transposing Regulations, has been undertaken alongside the preparation of the SEA and the preparation of the Draft Planning Scheme. Where available the designation, Qualifying Interests, current threats to designation and Conservation Objectives of each site are outlined in the NIR which has been prepared as a separate document as part of this Draft Planning Scheme process.

As the Draft Planning Scheme is strategic in nature it will be necessary to carry out more detailed Appropriate Assessments at project level when more specific information is available on the development proposals. There may also be a requirement to undertake an Environmental Impact Assessment (EIA) at project level in accordance with the requirements of the EIA Directive, as appropriate. Water quality is also a key consideration which supports biodiversity among other EPOs and the requirements of the WFD will be relied upon, as appropriate.

Biodiversity is not confined to statutory designated sites, but is found throughout the city in built-up areas. When development occurs on brownfield sites there is an opportunity to integrate and enhance biodiversity considerations. The development of high quality natural and semi-natural habitats over what is currently a predominantly sealed /artificial surface presents an opportunity to improve and enhance biodiversity considerations in the Draft Planning Scheme area and beyond. The integration of ecological corridors has the potential to have a positive impact on existing flora and fauna. However, new development can also result in fragmentation of ecological corridors such as those used by Otter along the water edge. These corridors are used by wildlife to move from one area to another for breeding, in search of food, etc. The significance of this potential loss is dependent on the scale of development and in-combination effects which is more appropriately assessed at project level appropriate assessment stage.

Likely effects on biodiversity, flora and fauna of the Draft Planning Scheme include:

- Arising from both construction and operation of future development and associated infrastructure: there is potential for loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance, fragmentation to biodiversity, flora and fauna.
- Potential loss or temporary loss of habitat due to construction on exposed mudflats, for which the SAC is not designated, but is a listed Annex I habitat.
- Likely direct/ indirect temporary adverse impacts on aquatic species during construction phases associated with the Planning Scheme on, or close to the quay walls/ wharves and the construction of the sustainable transport bridge.
- Potential disturbance to species during construction and operation activities associated with the development of the Planning Scheme.
- Likely disturbance on otter commuting routes between resting sites and hunting grounds along the River Suir quay wall and mudflats.
- Potential impact on the aquatic species due to construction activities in the inter-tidal and/ or river environment. Also there could be potential impact on the aquatic species due to increased human population in the immediate area, e.g. introduction of lighting and sources of noise along the riverside as a result of riverside walkway.
- Potential impacts on status of the Lower River Suir and the River Barrow and Nore SAC arising from alterations in quality, flow and/or morphology with regard to bridge piers associated with the proposed sustainable transport bridge across the River Suir which will be subject to separate planning application, EIA and site specific AA.
- Potential adverse impacts due to construction and operation activities (e.g., wastewater and drainage) on the achievement of good status of the South East River Basin Management Plan in accordance with the Water Framework Directive.

- Potential introduction / spread of invasive species if unmitigated.
- It is not expected there will be significant impacts on bat fauna. However prior to the development of the site, a bat fauna study should be undertaken to identify the presence of any bats and assess any negative impacts to same.

5.3 Population and Human Health

The proposed Draft Planning Scheme may lead to impacts on population and human health due land use changes, land-take, severance, possible noise, air, landscape and visual impacts. Population and Human Health are very much influenced by the presence and state of the other environmental receptors. Thus, all of the issues raised under the other environmental parameters are important issues which cannot be comprehensively covered in this section, but which are considered in each environmental topic and the overall assessment.

It is widely accepted that good planning decisions can influence sustainable development objectives. *"Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs"*². Sustainable development includes health and well-being considerations as well as contributing to the efficient resource use in the existing built environment. Sustainable development also aims to protect and conserve the natural areas and ecosystems on which human beings depend which are coming under increasing pressure for development.

5.3.1 Population

The 2016 Census results report the population of the state to be 4.76 million, representing an increase of 3.8% since the last 2011 Census period. The population of Waterford City and suburbs increased by 3.85% between 2011 and 2016, bringing the population to 53,504 persons in 2016. This increase is largely in line with the population growth of the state.

The National Spatial Strategy (NSS) sought to develop Waterford City as a Gateway City and a primary driver of economic and population growth within the South East region. The Draft National Planning Framework (NPF), Ireland 2040 - Our Plan continues to support this broad objective and is currently at draft stage. The NPF identifies Waterford as the principal urban centre in Ireland's south-east and is unique in having a network of large and strong regional urban centres in close proximity within each of the surrounding counties that both complement the role of Waterford and perform strong regional and local economic and development.

The NPF states that in terms of overall population and employment growth and new housing provision, the five cities of Dublin, Cork, Limerick, Galway and Waterford will be targeted to accommodate 50% of overall national growth between them. The NPF outlines how it will target patterns of development through key National policy objectives, relevant to Waterford this includes:

- 'Building Accessible Centres of Scale' with Waterford City and Suburbs identified to increase by 30,000 people. This would result in a total population of 83,000 by 2040.
- "Compact Smart Growth" with 50% new housing on infill/ Brownfield sites to be located in Waterford City and Suburbs, Cork and Limerick.

² From 'Our Common Future (The Brundtland Report)'

The NPF also includes references to improving connectivity and road and rail journey times to and from Waterford which will be vital to support the future growth of the region and support the development of the NQ SDZ.

The South East Regional Planning Guidelines 2010 -2022 provides a population target of 55,000 for Waterford City and 62,500 for Waterford City and Environs by 2022. However, these will be required to be reviewed based on the Final National Planning Framework population growth figures.

The NQ SDZ is currently an uninhabited, city centre brownfield site. The site is located within the Ferrybank Electoral Division (ED) as shown in Figure 5.4. CSO 2016 population figures indicate a total population of 858 representing a decline of 53 persons or -5.8% since the last Census period.

The demographics for the Ferrybank ED indicate that the minority of the population are aged 19-29 (95 no.) while there are 134 no. young people aged 0-18. However a significant portion of the current population are aged 30 years and over (373) while another 246 persons are aged 65 and over. This will have implications in relation to improving accessibility and variety of choice for these and future populations in the Ferrybank ED.

The 2016 results indicate the Ferrybank ED has a total of 468 dwellings with 56 vacant on census night and 3 vacant holiday homes.

Table 5.9 Means of Travel to Work, School or College for Population Aged 5 Years and Over (Source: CSO, 2016)

| Means of travel to work, school or college | Age |
|--|------------|
| Total - School or college | 123 |
| On foot - Total | 102 |
| Bicycle - Total | 9 |
| Bus, minibus or coach - Total | 20 |
| Train, DART or LUAS - Total | 1 |
| Motorcycle or scooter - Total | 3 |
| Car driver - Total | 192 |
| Car passenger - Total | 53 |
| Van - Total | 18 |
| Other (incl. lorry) - Total | 0 |
| Work mainly at or from home - Total | 8 |
| Not stated - Total | 23 |

The table above indicates that the primary means of travel to work in this ED is by private car, either as a driver or passenger. The next most popular is walking. The train is reported as being the least reported form of transport with just one person stating it as a mode of transport to work, school or college.

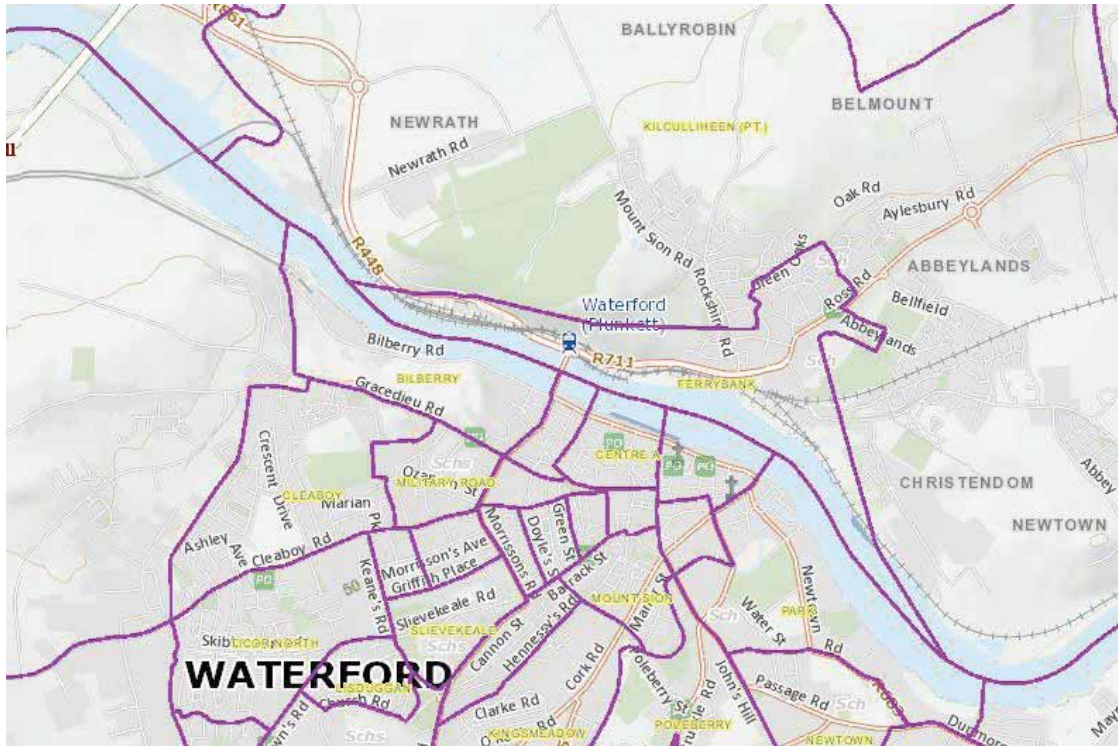


Figure 5.4 Map of Electoral Divisions – Ferrybank ED

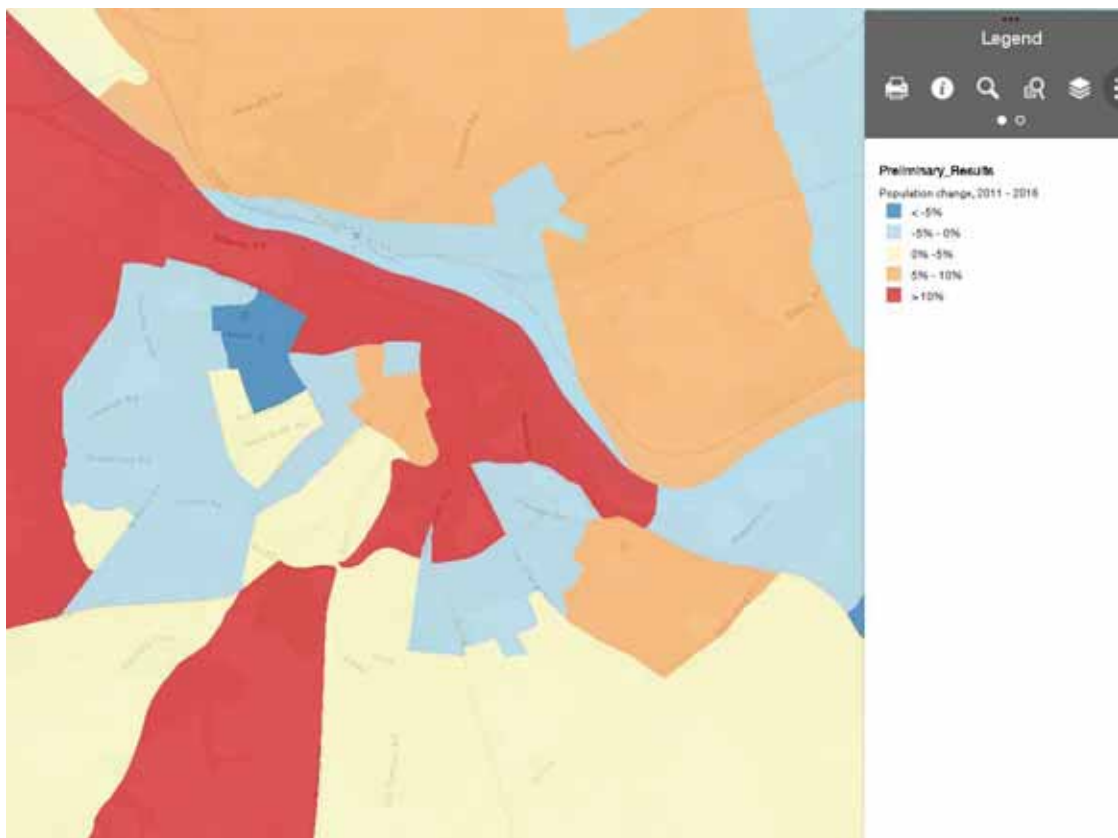


Figure 5.5 Population Change 2011-2016 (Source: CSO 2016)

Figure 5.5 indicates population change from the CSO 2016 Population Results. The red areas represent the greatest percentage increases, followed by the orange and yellow. We can see that much of the core areas of Waterford have experienced more than 10% population increase. Many of these areas are along the South

Quays while the blue areas illustrate the areas in the city that have experienced population decline. The 2016 population results found that areas increasing by more than 10% included Bilberry ED (+11.7%), The Glen ED (31.1%), Centre A (16.5%), Custom House B (26.3%) and Park (10%) while areas that have experienced population decline include Ferrybank ED (-5.8%), which includes the NQ SDZ.

5.3.2 Human Health

Human health impacts relevant to SEA are those which arise as a result of interactions with environmental receptors (i.e. from air pollution, odour, noise, contaminated land/ soil, drinking water, etc) which have the potential to cause a threat to the health of populations and the wider environment. Hazards or nuisances to human health can also arise as a result of incompatible adjacent land uses.

Preventing exposure to environmental hazards is the function of environmental regulation by minimising exposure and by taking action when standards are exceeded e.g. noise, air, water pollution, etc. The Health Model developed by the EPA illustrates the potential impacts on health and well being from the range of environmental sources including the built and natural environment and consumption patterns. These 'harms' can impact on the six core service needs for our wellbeing: clean air, clean water, access to amenity, safe food, stable environment, and safe shelter. It is also important to note that many of the environmental threats to our health are associated with our lifestyles, behaviours and available choices influenced by the built environment. A SEA process informs the proactive approach to environmental protection.



Figure 5.6 Health Model (Source: EPA, 2016)

Waterford is a member of the World Heritage Organisation (WHO) European Network of Healthy Cities. This initiative aims to enhance the health of the City, its environment and the people of all groups. Waterford City Development Plan 2013-2019 states that “*Waterford will endeavour to respond to the following healthy city criteria: age friendly city, migrants and social inclusion, active citizenship, reducing risk factors for chronic diseases, promoting physical activity, reducing isolation and*

promoting mental health, healthy urban design, creativity and liveability, healthy transport, safety and security.” Waterford has also committed to becoming an Age Friendly County.

The Census 2016 reports on self reported health of the population of Ireland. With respect to the Ferrbank ED the majority of people surveyed (680) reported that they were in very good or good health (79%).

Table 5.10 Population by General Health and Sex, Ferrybank ED (Census 2016)

| No of people surveyed | Health Status |
|-----------------------|--------------------|
| 393 | Very good - Total |
| 287 | Good - Total |
| 106 | Fair - Total |
| 21 | Bad - Total |
| 10 | Very bad - Total |
| 41 | Not stated - Total |
| 858 | Total |

In the Ferrybank ED 40 persons are reported as having a disability. The Ferrybank ED is classified as a disadvantaged area which can also influence health outcomes.

Noise

Environmental noise is unwanted or harmful outdoor sound and is the second greatest environmental cause of health problems, after air quality. Noise issues are typically considered across three categories in Ireland; neighbourhood noise, environmental noise and noise from sites regulated by the EPA and local authorities EPA (2016). The Environmental Noise Directive (2002/49/EC), as transposed into Irish Law by the Environmental Noise Regulations (SI No. 140 of 2006) relates to the assessment and management of environmental noise and is commonly known as the Environmental Noise Directive or END. The aim of the END is to provide a common framework to avoid, prevent or reduce the harmful effects of exposure to environmental noise.

Waterford City and County Noise Action Plan 2013-2018 (WCC, 2013) includes the Strategic noise maps and a noise action plan produced by Waterford City Council in 2013. Under the Environmental Noise Regulations 2006, Waterford City and County Councils are the designated body for preparing a Noise Action Plan for roads within the city and county, that have traffic levels of more than 3 million vehicles per year. This plan provides a description of the extent of the action planning area, the stretches of road affected by environmental noise and the main sources of environmental noise and actions required to reduce noise impacts.

The noise maps use noise indicators Lden and Lnight; Lden describes the long term average sound rating level over the day, evening and night time noise levels and Lnight equates to a one year average sound level over an 8 hour night time period between 11pm and 7am. The Noise Action Plan defines areas with desirable low sound levels as areas with night time level less than 50 decibels and/or an Lden level less than 55 decibels. Areas with undesirable high sound levels are defined as areas with a night time level greater than 55 decibels and an Lden level greater than 70 decibels.

The results of the noise mapping indicate that a relatively small number of the population within the functional area of Waterford City and County Council are being exposed to noise levels due to major road traffic sources.

The R711 (Dock Road) including Rice Bridge and the R680 Regional Road adjacent to the south quays were found to have Lden ranges of between 65 dB to 75 dB. The majority of the North Quays area currently experiences Lden ranges of between 55 to 60 dB with areas close to Dock Rd and Rice Bridge experiencing Lden levels of 60 to 65 dB. The lowest Lden levels are found to the east of the site where the site is located a greater distance from existing traffic and infrastructure. These levels can be seen in Figures 5.7 and 5.8.

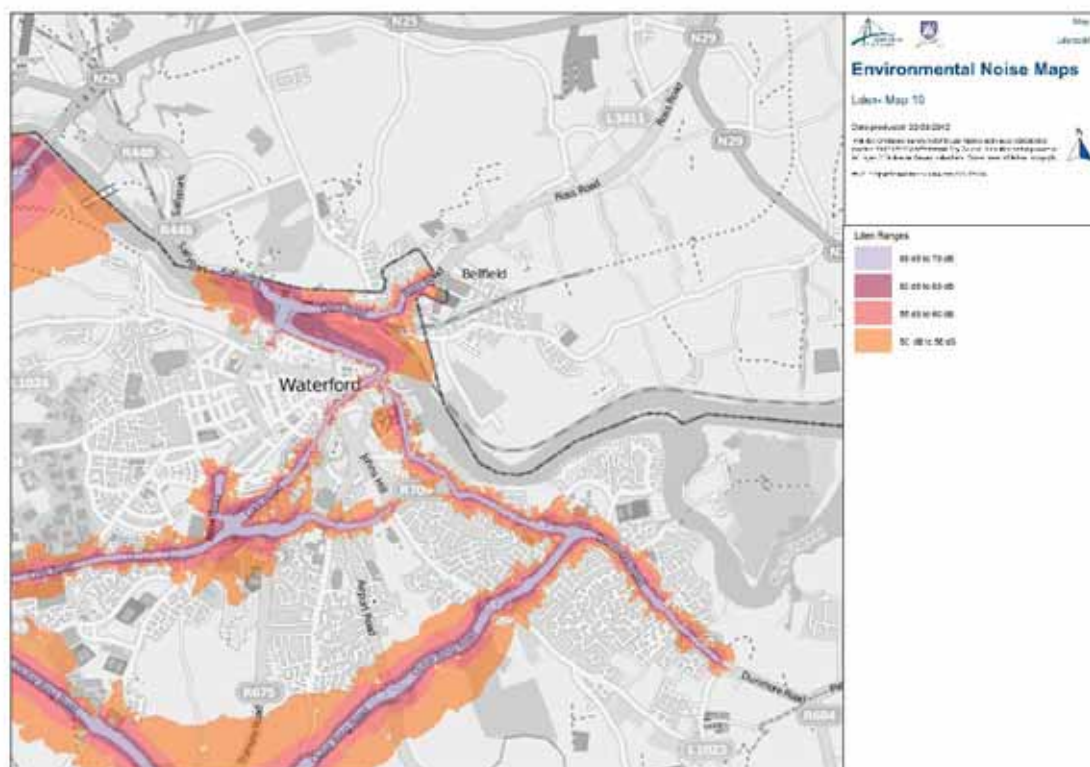


Figure 5.7 Waterford Lden Environmental Noise map

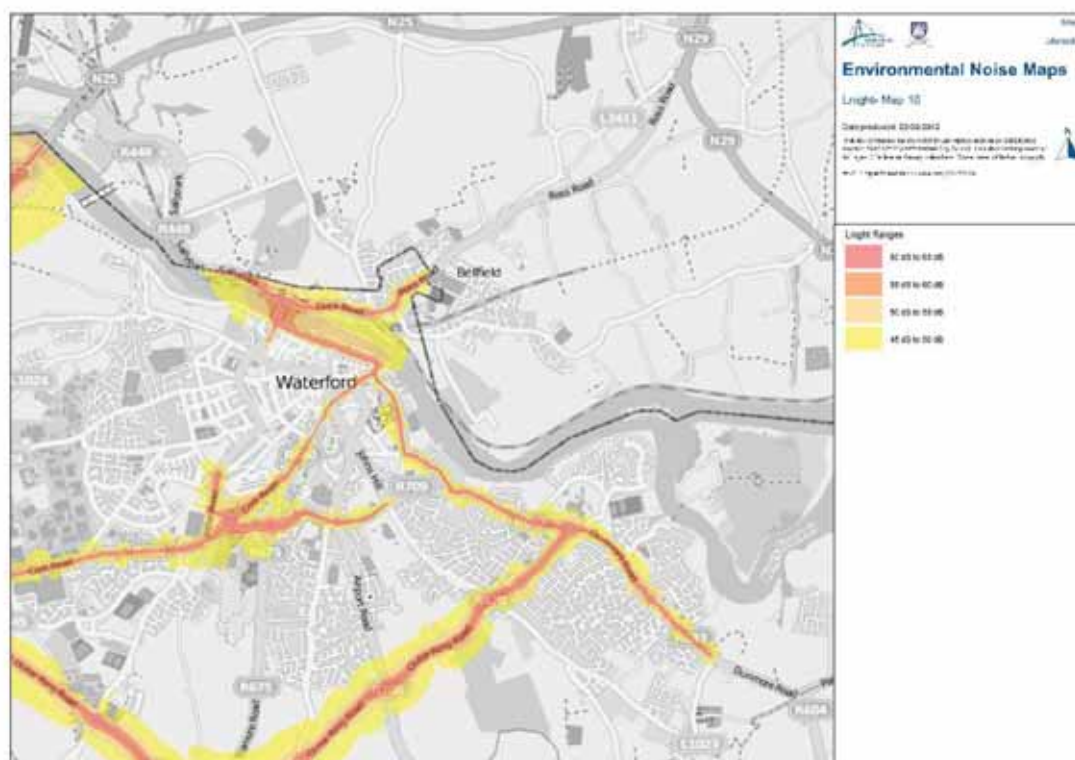


Figure 5.8 Waterford Lden-night Environmental Noise map

Recent baseline noise surveys (March 2017) were carried by AWN Consulting within the SDZ site, outside the rear of the residential properties at Sion Row. The noise climate was dominated by road traffic movements on Dock Road with ambient noise levels ranging from 59 to 61 dB LAeq (the equivalent continuous sound level). Background levels for the same location were found to be between 51 and 53 dB LA90 (the sound level that is exceeded for 90% of the sample period).

General measures to prevent noise and reduce, avoid or relocate the various types of noise source are outlined in the Noise Action Plan. Measures include the reduction of traffic density through promoting public transport, traffic management, the reduction of heavy goods vehicles in built up areas and noise screening where necessary. Future developments are to be designed and constructed in such a way as to minimise noise disturbances e.g. the position, direction and height of new buildings, along with their function, their distance from roads and the position of noise barriers and buffer zones with low sensitivity to noise. These measures are required to be considered as part of future planning proposals of the SDZ.

Radon

Radon is a naturally occurring radioactive gas that originates from the decay of uranium in rocks and soils. It is colourless, odourless and tasteless and can only be measured using special equipment. When radon surfaces in the open air, it is quickly diluted to harmless concentrations, but when it enters an enclosed space, such as a house or other building, it can sometimes accumulate to unacceptably high concentrations. Radon decays to form tiny radioactive particles, some of which remain suspended in the air. When inhaled into the lungs these particles give a radiation dose that may damage cells in the lung and eventually lead to lung cancer.

The NQ SDZ is located in a high radon area. 'High Radon Area' is one in which more than 10% of homes are predicted to have radon levels in excess of the reference

level of 200 Bq/m³. Radon rises up through the ground to disperse in the air and only becomes a health hazard when it is trapped in buildings. To prevent high-radon levels occurring in new buildings installation of passive preventive measures in all new buildings can be undertaken and radon levels can be monitored in all buildings. All new planning applications should integrate radon preventative measures and appropriate monitoring in new buildings in accordance with the Building Regulations.

Major Accident/ Seveso Sites

Human health and the environment are at risk of serious injury due to major industrial accidents which involve dangerous substances. Any establishment that presents a major accident hazard because of the presence of dangerous substances in quantities that exceed specified thresholds are governed by COMAH (Control of Major Accident Hazards) Regulations.

There is one site within close proximity of the study area which is designated as a Seveso II site under the Major Accident Seveso III (Directive 2012/18/EU). This site is the Trans-Stock Warehousing and Cold Storage Limited, located in Christendom, Ferrybank, on the north bank suburb of the River Suir at an approximate distance of 600m from the SDZ. It is an Upper Tier Seveso Site under the COMAH regulations, as listed on the Health and Safety Authority (HSA) website. Its designation aims to avoid and minimise the effects, to both man and the environment, of major accidents at the facility due to the presence of dangerous substances. All planning applications within 700m of the Seveso site require referral to the Health & Safety Authority for technical advice in order to reduce the risk and limit the consequences of major industrial accidents.

5.3.3 Likely Effects on Population and Human Health

As part of the SEA process, there are a number of likely significant beneficial and unknown or likely to have adverse affects which have been identified in relation to Population and Human Health these include:-

Likely significant beneficial effects:

- Compact City and urban consolidation: The NQ SDZ as a brownfield site has the potential to maximise urban consolidation by promoting the North Quays as a sustainable, viable, attractive and good quality alternative over other out-of-town and/ or rural locations as places to live, work and recreate in the county and the South East region.
- Healthy by design: The promotion of healthier lifestyles by integrated land use planning which can influence healthier decisions e.g. reducing sedentary lifestyles, tackling rising obesity levels, reducing the reliance on the private car, promoting sustainable /public transport options, etc.
- Opportunities to provide for residential development that reflect changing lifestyles of the population e.g. reduction in household/ family size, ageing population, population that is living healthier for longer, reliance on the digital economy, community connections, etc.
- Opportunities for improved access to a sustainable transportation network including the provision of sustainable transport options including; cycleways, walkways and promotion of smarter travel which can help people's quality of life by offering viable alternatives to using the private car.
- Creation of improved access and social connectivity between existing and future populations in the City and environs through integrated land use planning particularly in the city centre (to the south) and the adjoining

residential neighbourhoods particularly the Ferrybank / Belview, city centre and wider environment.

Likely unknown effects and or potential for significant adverse effects:

- Radon rises through the ground to disperse in the air and only becomes a health hazard when it is trapped in buildings. NQ SDZ should consider the integration of monitoring measures to monitor radon gas in buildings. To prevent high-radon levels occurring in new buildings it is a requirement to install passive preventive measures in all new buildings and to continuously monitor radon levels in all buildings.
- Future planning applications that are located within 700m of the Seveso Sites require referral to the Health & Safety Authority (HSA) for technical advice in order to reduce the risk and limit the consequences of major industrial accidents. Any site located in the SDZ within 700m from the Seveso II site: Trans-Stock Warehousing and Cold Storage Limited, Christendom, Ferrybank will be required to be referred to the HSA.
- Traffic is a key pressure on air and noise environment in the area. The NQ SDZ is currently subject to high levels of noise due to its proximity to the Dock Road. The Planning Scheme has the potential to reduce and/or exacerbate this issue if, managed/ not managed appropriately. All planning applications within the SDZ should seek to minimise noise, vibration and air pollution levels from traffic and impact to existing and future populations that can be associated with incompatible land uses.
- Noise sources from transport such as from the Dock Road and future transport infrastructure will need to be considered as part of future planning proposals.
- The Planning Scheme should seek to implement best practice in the provision of appropriate drinking water to service the NQ SDZ.
- The Planning Scheme should, where possible and appropriate, include/ and/ or promote the inclusion of specific policies/ objectives regarding the provision and maintenance of adequate and appropriate wastewater treatment infrastructure to service zoned lands and developments in a planned and co-ordinated fashion.
- There may be impact from the Planning Scheme due to higher buildings, overshadowing and / or wind tunnel effects.

5.4 Water Resources and Flooding

The following sections provide an overview of the existing water resources and issues considered as part of the Draft Planning Scheme. This includes, water status and quality, aquifer classification, groundwater vulnerability and flooding. Flooding more comprehensively dealt with in the Draft Strategic Flood Risk Assessment (SFRA) contained as a separate document to the Draft Planning Scheme. Section 5.6.7 Material Assets addresses infrastructure and utilities to include water supply and wastewater treatment facilities.

Ireland has an abundance of surface water resources including river channels, lakes, estuaries and coastal waters, the most notable of these within the plan area being the River Suir. The state of Ireland's groundwater and surface water is assessed based on a water quality monitoring programme designed to support the implementation of the Water Framework Directive river basin planning process.

5.4.1 Hydrology

Since 2000, Water Management in the EU has been directed by the Water Framework Directive (WFD) 2000/60/EC which was transposed into Irish law under the European Communities (Water Policy) Regulations 2003 (S.I. No. 722/2003). The WFD requires all Member States to protect and manage their water resources based on the natural geographic boundaries, i.e. the river catchment or basin. The WFD establishes a common framework for the sustainable and integrated management of all waters covering groundwater, inland surface waters, transitional waters and coastal water.

The WFD is now in its draft second cycle. The North Quays SDZ is within the new National River Basin District (NRBD), which was formed from the merger of the Eastern, South Eastern, South Western, Western and Shannon River Basin Districts from the 1st Cycle of the WFD. The draft second cycle RBMPs sets out the status of waters in the River Basin District (RBD); the proposed environmental objectives and the draft programme of measures to achieve those objectives by 2021. The National River Basin District is divided into 40 catchment units. The SDZ is located in the Suir Unit of Management (UoM), No 16.

According to the South East River Basin District Management Plan in order to meet the requirements of the Water Framework Directive, water quality in Waterford Estuary needs to be restored to 'good' by 2021. It states groundwater quality in the River Suir needs to be restored to 'good' by 2027.

The Environmental Protection Agency (EPA) monitors river water quality as part of the Water Framework Directive (WFD). The EPA transitional water quality status of the 'Middle Suir Estuary' for 2010-2015 is designated as 'poor', a decrease in quality compared to a status of 'moderate' in 2010-2012 for the same location. Further downstream the Lower Suir Estuary (Cheekpoint) is designated as 'moderate' for 2010-2015. The EPA has designated the River Suir as nutrient sensitive. The latest trophic status assessment (2010-2012) indicates that the Middle Suir Estuary is eutrophic. The groundwater bodies located on northern and southern extents of the River are designated as 'Groundwater in Nutrient Sensitive Areas'.

There are a number of tributaries and streams that flow into the River Suir close to the NQ SDZ. The Luffany River is located approximately 50 metres east of the SDZ. It flows from the northern banks into the River Suir. At time of writing there is no water quality information available from the EPA for this river. St. John's River flows from the south banks of the River Suir and is reported as being of poor status. The EPA has designated St. John's River as 'at risk' of deteriorating or being at less than 'good' status in the future.

By 'risk' it is meant that there is an overall risk that a waterbody will not achieve good ecological or good chemical status/potential at least by 2021. To examine risk, the various pressures acting on the waterbody are identified along with any evidence of impact on water status. Depending on the extent of the pressure and its potential for impact, and the amount of information available, the risk to the water body is placed in one of four categories: 1a at risk; 1b probably at risk; 2a probably not at risk; 2b not at risk.

In general, the WFD requirements are to ensure that waters achieve at least good status/potential by 2015, and that their status does not deteriorate. Extended timescales have been set for certain waters due to technical, economic, environmental or recovery constraints. Extended timescales are usually of one

planning cycle (6 years, to 2021) but in some cases are two planning cycles (to 2027). Having identified the status of waters as part of the RBMPs, the next stage is to set objectives for waters. Objectives consider waters that require protection from deterioration as well as waters that require restoration and the timescales needed for recovery. Four default objectives have been set initially:-

- Prevent Deterioration
- Restore Good Status
- Reduce Chemical Pollution
- Achieve Protected Areas Objectives

These objectives are refined based on the measures available to achieve them, the latter's likely effectiveness, and consideration of cost-effective combinations of measures.

5.4.2 Hydrogeology

Groundwater is defined as the water stored underground in formations of saturated rock, sand, gravel, and soil. Surface water and groundwater are intimately linked to each other within the hydrological cycle, and groundwater is an important source of water for rivers, streams, and lakes. The Geological Survey of Ireland (GSI) reports that the NQ SDZ is within 'poor aquifer' bedrock which is generally unproductive except in local zones.

The GSI uses a matrix comprising four groundwater vulnerability categories to classify aquifer vulnerability. These categories are; extreme, high, moderate and low. The categories are based on the thickness of overburden which provides some reduction for contaminants migrating toward the groundwater table from the surface or near sub-surface. Where the surface is less than three metres thick, the aquifer is considered extremely vulnerable as the potential for contamination to reach the aquifer is extremely high. On the other hand, where the overburden is greater than 10 metres thick and has a low permeability the vulnerability is considered low.

The North Quays area is located within the Mullinavat groundwater body and is identified as having moderate groundwater vulnerability. Plunkett Train Station and part of the western portion of the SDZ are located on 'extreme' ground water vulnerability area. The South Quays has 'moderate' groundwater vulnerability located on the Waterford groundwater body.

5.4.3 Flooding

Waterford Flood Alleviation Scheme has addressed flood areas through the construction of flood defences along the south quays of the River Suir from Grattan Quay to Adelphi Quay and to the north bank of the St. John's River as far as the Courthouse in 2010.

The Waterford City Development Plan 2013-2019 identifies that the site is within Flood Zones A and B illustrated in Figure 5.5 below. The Flood Risk Management Guidelines (2009) define these Zones as follows:

"Flood Zone A – where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);

Flood Zone B – where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding).

Flood Zone C – where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all areas of the plan which are not in zones A or B". (DEHLG, 2009)

As already stated (Section 2.5), the requirement for Strategic Flood Risk Assessment (SFRA) is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

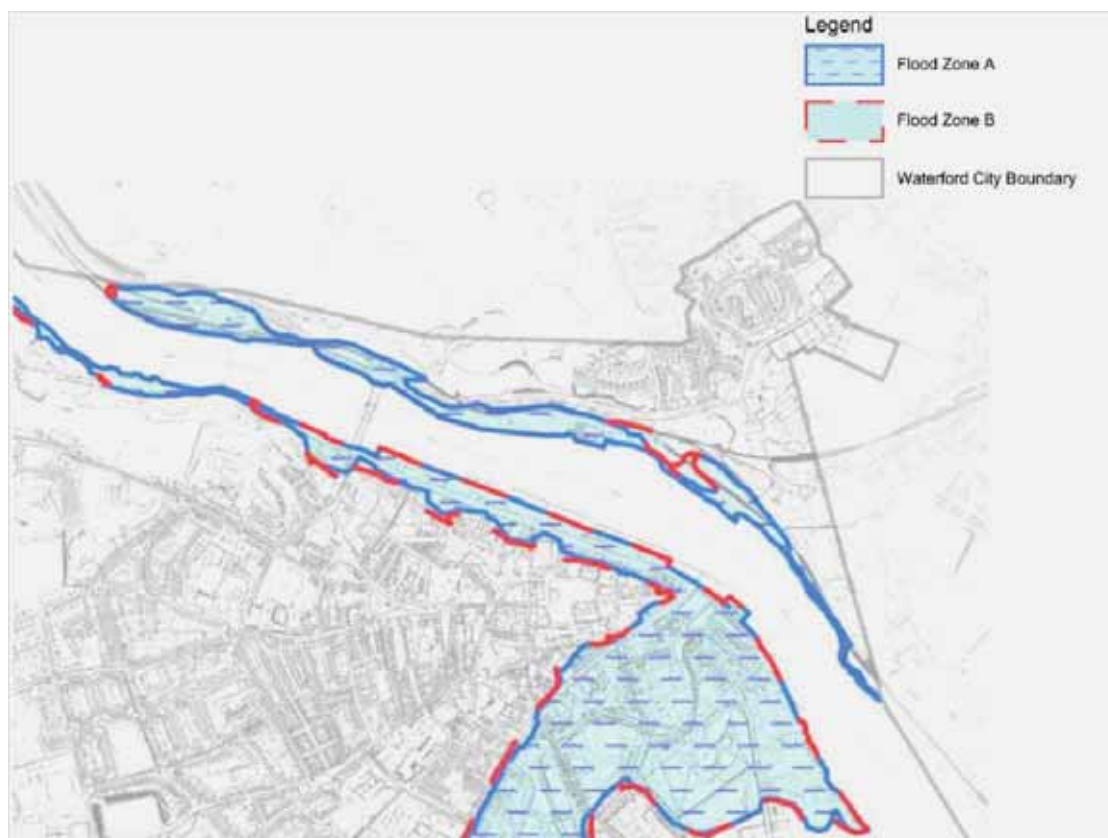


Figure 5.5 Flood Zones A & B Source: Waterford City Development Plan 2013-2019, Flood Zones (Extract)

The Office of Public Works (OPW) Fluvial and Tidal Flood Extent Map 2015 indicates that the entire NQ SDZ, as well as areas on the South Quays, are subject to Fluvial and Tidal flood events. The flood events extend across the entire upstream channel and downstream as far as Kings Channel. The design flood level (0.5% AEP) for the River Suir through Waterford City is 3.2m OD. Flood defences are already in place for the South of the River Suir and the design level of defence was set at a conservative level of at least 0.5m above the flood level (due to tidal influence). In this regard the "Suir CFRAM Study, Hydraulics Report, Draft Final July 2015" recommends a minimum flood defence level of 3.7m OD for the River Suir Quays. Nonetheless, the "Planning System and Flood Risk Management Guidelines for Planning Authorities" 2009 recommends that all residential properties shall be within Flood Zone C. Currently the site lies in Flood Zone A & B. An SFRA has been undertaken as part of the development of the Draft Planning Scheme and has informed the SEA process.

The guidance goes on to state that “*development can exacerbate the problems of flooding by accelerating and increasing surface water run-off, altering watercourses and removing floodplain storage.*” It is now recognised that flood risk management must be treated as a central issue in the development of an area. The guidelines state that flooding:

“When it impacts on human activities, it can threaten people, their property and the environment. Assets at risk can include housing, transport and public service infrastructure, and commercial, industrial and agricultural enterprises. The health, social, economic and environmental impacts of flooding can be significant and have a wide community impact.”

This guidance also requires the planning system to:

- *Avoid development in areas at risk of flooding by not permitting development in flood risk areas, particularly floodplains, unless where it is fully justified that there are wider sustainability grounds for appropriate development and unless the flood risk can be managed to an acceptable level without increasing flood risk elsewhere and where possible, reducing flood risk overall;*
- *Adopt a sequential approach to flood risk management based on avoidance, reduction and then mitigation of flood risk as the overall framework for assessing the location of new development in the development planning processes;*
- *Incorporate flood risk assessment into the process of making decisions on planning applications and planning appeals;*

In the case of land use plans, SFRAs and site-specific FRAs shall provide information on the implications of flood risk as a result of the Draft Planning Scheme.

5.4.4 Existing Environmental Problems/Issues/Threats

The EPA's 'State of the Environment Report' (EPA 2016) details that there has been no improvement in Ireland's river water quality or transitional and coastal water quality over the past six years. The most widespread water problem in Ireland continues to be elevated nutrient concentrations (phosphorous and nitrogen), arising primarily from human activities such as agriculture and waste water discharges from human settlements. Eutrophication is anticipated to increase due to human population growth and increase in agricultural output and will need to be managed carefully.

The targeted improvement for surface waters through the first river basin planning cycle was not achieved; therefore a radically different approach is needed in the second cycle. Whilst nutrient inputs from the agriculture sector have fallen, eutrophication due to agriculture and municipal sources remain the two most important suspected sources of pollution for rivers. Excessive siltation has also become a cause for concern as there is increasing evidence that the physical condition (hydromorphology) of surface waters may be as important to maintaining healthy ecosystems as the quality of the water sustaining them.

5.4.5 Likely Effects on Water Resources

As part of the SEA process, there are a number of likely significant impacts identified in relation to water resources and flooding, these include:-

- Developments during both during construction and operation are likely to have a significant adverse effect on the river water quality of the Lower River Suir if unmitigated. The Planning Scheme through specific provisions should seek to

comply with the WFD and restore and protect river water quality of the Lower River Suir.

- The impacts of nutrient enrichment and the process of eutrophication is a major concern in the marine environment and will be required to be considered as part of waste water treatment system of the NQ Planning Scheme and future proposals.
- Careful consideration of design and development in flood zones and future flood events will be considered throughout the development of the SDZ Planning Scheme and will be subject to a site specific flood risk assessment and proposed mitigation as part of the SFRA.
- The treatment of sewage and industrial waste water (water that is discharged to sewers) continues to be one of the principal pressures on water quality in Ireland. Despite ongoing improvements in urban waste water treatment plants and the effluent discharged is not up to standard in many locations (EPA, 2016). This should be addressed as part of the Planning Scheme.
- Fisheries resources deliver economic and social benefits to the Irish economy which will require to be protected against any likely impacts caused by development or contaminants that may enter water course as a result of development.
- Appropriate measures should be proposed in the Planning Scheme to ensure the continued protection and status of groundwater source.

5.5 Air and Climatic Factors

Air quality monitoring in Ireland is undertaken largely to implement EU Directives on smoke and sulphur dioxide (SO₂), lead, ozone (O₃) and nitrogen dioxide (NO₂) and to assess compliance with national quality standards. These are set to protect human health and the environment. Ireland is divided into four zones for the purpose of monitoring. The Directive on Ambient Air Quality and Cleaner Air for Europe (the CAFE Directive 2008/50/EC; and the fourth Daughter Directive 2004/107/EC) contains the current standards for air quality pollutants along with requirements for each Member State on monitoring, assessment and management of ambient air quality. The EPA is Ireland's national competent authority and currently manages a nationwide monitoring programme, delivering real time information to the public (EPA 2017a). The most recent annual report on air quality "Air Quality Monitoring Annual Report 2015" (EPA 2016), details the range and scope of monitoring undertaken throughout Ireland. Air quality in Ireland is generally of a high standard across the country. Waterford lies in Zone C 'Other Cities and large Towns'.

The EPA reports that the current air quality of Waterford City is good (EPA 2017b). The index is based on information from monitoring instruments at representative locations in the region and may not reflect local incidents of air pollution.

NO_x refers to the two pollutants: nitric oxide (NO) and nitrogen dioxide (NO₂). The EPA report entitled '*Air Quality in Ireland 2015- Key Indicators of Ambient Air Quality*' (2015) that Nitrogen oxides (NO_x) were below the annual limit value in 2015. The closest monitoring locations are at Kilkenny Seville Lodge and Enniscorthy, Co. Wexford. As you can see from the Figure below, Zone C levels started to spike in 2013 but have been declining since 2014.

With regard to NO₂, continuous monitoring data from the EPA in the Zone C monitoring stations of Kilkenny Seville Lodge, Portlaoise and Mullingar show that current levels of NO₂ are below both the annual and 1-hour limit values with average

long term annual mean concentrations ranging from 4 to 16 $\mu\text{g}/\text{m}^3$ from 2011 to 2015. Based on these results, a conservative estimate of the background NO_2 concentration in the region of the proposed development in 2017 is 10 $\mu\text{g}/\text{m}^3$.

2015 Results and trends

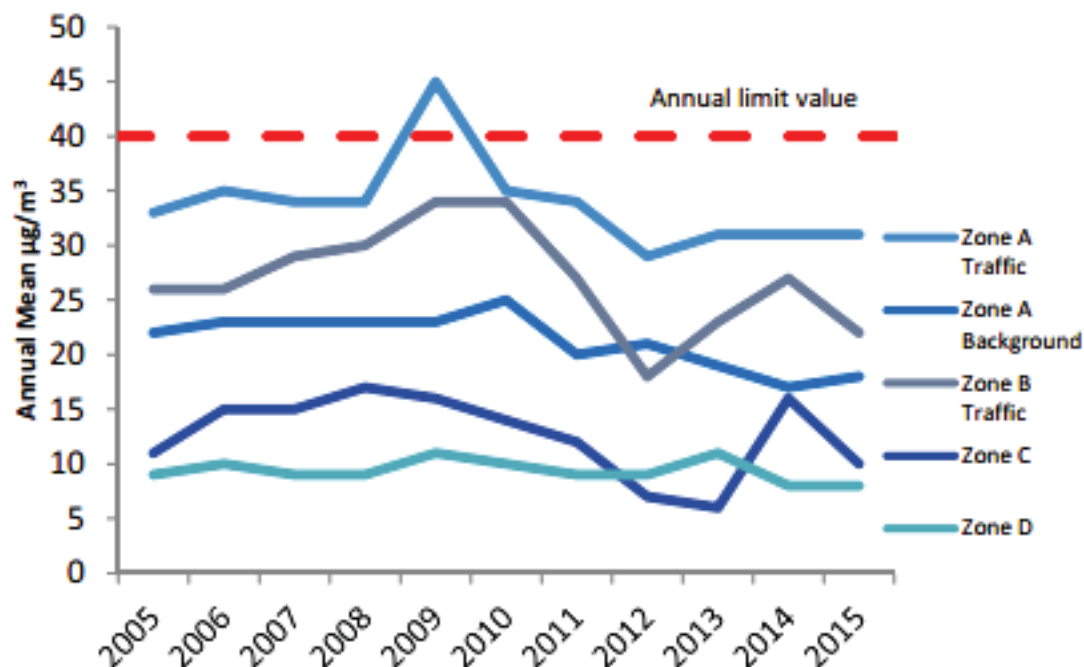


Figure 2.1 Trend in NO_2 concentrations for zones in Ireland 2005 - 2015

Figure 5.6 Trend in NO_2 Concentrations for Zones in Ireland 2005-2015 (EPA, 2015)

However, the EPA predicts that, “due to our continued reliance on fossil fuelled combustion engine transport, NO_2/NO_x levels will remain a problem pollutant in our Irish towns and cities. They go on to state that “In fact, the problem will likely be exacerbated with the continued increase in economic activity, as NO_x concentrations would be expected to rise accordingly, coupled with favourable meteorological conditions for the build-up of NO_2 , it is probable that we will see exceedances of the NO_2 limit value in the near future..... A more certain route to mitigating the problem of NO_x , is for individuals to prioritise public transport and alternative modes of transport over use of the private motor car.” (EPA, 2015)

5.5.1 Climate

The national policy position for Climate Change establishes a vision for Ireland of low-carbon transition based on an aggregate reduction in carbon dioxide (CO_2) emissions of at least 80% (compared with 1990 levels) by 2050 across the electricity generation, built environment and transport sectors; and, in parallel, an approach to carbon neutrality in the agriculture and land use sectors, including forestry, that does not compromise capacity for sustainable food production.

The adoption of the Paris Agreement on climate change in December 2015 provides an ambitious, legally binding framework for global action on climate change with the aim of holding the increase in the global temperatures to well below 2°C above pre-

industrial levels and to pursue efforts to limit the temperature increase to 1.5°C. To achieve this vision there will be requirements to reduce our dependency on fossil fuels for energy, heating and transport, radically improving energy efficiency and preparing for the inevitable consequences of climate change such as flooding.

Ozone levels in Ireland are lower than those in mainland Europe but can exceed the WHO air quality guideline values. Ozone increases in Ireland are highly influenced by transboundary emissions and can affect those who suffer from respiratory conditions. In terms of CO, based on EPA data, a conservative estimate of the background carbon monoxide concentration in Waterford in 2017 is 0.6 mg/m³, this is well below the limit value of 10 mg/m³ (EPA 2016).

In terms of benzene, the average annual mean concentration in Zone C locations of Mullingar and Kilkenny for 2012 to 2015 was 0.20 µg/m³. This is well below the limit value of 5 µg/m³ (EPA 2016). 2012 to 2015 annual mean concentrations ranged from 0.09 – 0.5 µg/m³. Based on this EPA data, a conservative estimate of the background benzene concentration in Waterford in 2017 is 0.5 µg/m³.

With regard Particulate Matter (PM₁₀ and PM_{2.5}), levels are still below EU levels, however the WHO air quality guideline levels are exceeded in some areas of Ireland. The main source of PM in Ireland is agriculture, while the domestic use of solid fuel and diesel fuelled vehicular traffic are the principal sources in urban settings.

Continuous PM₁₀ monitoring carried out at the Zone C based on EPA (EPA 2016) results, a conservative estimate of the background PM₁₀ concentration in the region of the proposed SDZ in 2017 is 20 µg/m³.

Existing Environmental Problems/Issues/Threats

The key issue involving the assessment of the effects of implementing the Planning Scheme on air and climatic factors relates to greenhouse gas emissions arising from transport and energy efficiency in buildings. Land-use planning contributes to the number and length of journeys that can occur in any given place. By providing options that reduce journey times and include more sustainable modes of transport, populations can reduce greenhouse gas emissions by shifting away from relying on the private car. There are also positive impacts in relation to air and noise pollution and more efficient and sustainable use of land, infrastructure and service provision.

As already discussed, flooding is influenced by climatic factors. The implications of climate change with regard to flood risk in relevant locations will be considered as part of the SFRA for the Planning Scheme. The EPA has published a report "Integrating Climate Change into Strategic Environmental Assessment" (2015) which provides guidance for climate change proofing of land use plan provisions. The inclusion of mitigation measures in SEA is seen as a key element of the plan making process.

SFRA of the Planning Scheme and site-specific FRAs will provide information on the implications of climate change with regard to flood risk.

5.5.2 Likely effects on the Air and Climate Environment

- Increased development in the area has the potential to have adverse effects on the road traffic which is a threat to the emissions to air and air quality due to increased congestion and also increase noise levels in the area. The Draft Planning Scheme promotes sustainable travel modes which should reduce the

need to travel by car. However the implementation of the range of measures will be required in order for a modal shift to occur.

- Therefore it is considered there will be likely beneficial impact on the environment due to reduction in green house gas (GHG) emissions and air pollution due to integrated land use and transportation infrastructure which is likely to result in a reduction in need to travel by car.
- Likely to be short-term adverse impacts due to construction related impacts.
- There are challenges of climate change on future land uses on the NQ SDZ and surrounding environment, much of which is within designated Flood Zones. The SFRA will inform flood risk due to the development and provide suitable mitigation measures to counteract this.
- Likely beneficial impact on the environment due to energy efficiency and energy conservation measures as part of planning applications.
- Sources of energy have the potential to increase GHG emissions. There is likely to be a reduction in the use of and dependency on transport based fossil fuels and increase alternative sources of more sustainable energy sources.
- The Waterford Climate Change Strategy (2011) sets out an action plan to offset carbon emissions.
- Energy Consumption in transport as well as buildings should be explored including opportunities such as renewable energy.

5.6 Geology and Soils

Soil is a non renewable natural resource – providing food, biomass and raw materials. The redevelopment of brownfield sites such as the NQ SDZ will reduce the need to develop greenfield sites and thus reduce soil sealing. Soils can also act as 'carbon sinks'. Sealing of soils reduces their capacity as 'carbon sinks'.

The Geological Survey of Ireland indicate that the bedrock of the area is part of the Ballylane Shale Formation, described as green & grey slate with thin siltstone of the Palaeozoic, Lower - Middle Ordovician Age. The subsoil's are identified by the EPA as Peaty Gleys Acidic. The NQ SDZ is identified as being 'made ground'. The Corine land cover 2012 classifies the SDZ as 'discontinuous urban fabric' and 'road and rail networks'.

The NQ SDZ lands are the whole of those lands historically used for port related activities on the northern side of the River Suir and rendered redundant by the transfer of the port activities to a deep water berth at Belview further downstream and the closure of the Irish Agricultural Wholesale Society (IAWS) facility. There may be areas of potential contamination at the site associated with derelict industrial buildings and storage sheds associated with the historic Port of Waterford prior to its relocation 6km downstream plus activities associated with railway operations. Results from geotechnical investigations will inform the environmental assessment of any existing environmental problems as part of the future development proposals on the site and will inform mitigation measures as part the plan making process and the SEA.

5.6.1 Existing Environmental Problems/Issues/Threats

The EPA State of the Environment report (2016) states: Soils, land cover and landscapes are resources that need to be protected, monitored and managed. Population increase and settlement growth are the principal causes of land use changes in urban areas and can lead to soil sealing. This has implications for soil

quality and therefore forward strategic planning and new infrastructure are needed to ensure that growth is sustainable and does not add to the environmental pressures that are already evident.

5.6.2 Likely Effects on the Soils and Geology Environment

- Likely beneficial impact on soil resources due to reuse / regeneration of existing brownfield sites in an urban environment.
- Planning proposals or inclusion of green infrastructure / open spaces as part of the Planning Scheme may reduce soil sealing through Sustainable Urban Drainage System (SUDS) and other landscaping measures.
- There may be significant adverse impact if contaminated land is found to be present on site which could impact on groundwater, surface water, species and habitats which depend on these water resources. If found to be present, there will be a requirement for remediation of the contaminated lands, and associated waste management to include the protection of groundwater, water quality and biodiversity including the designated Lower River Suir SAC. Remediation measures may require a licence from the EPA under the Waste Management Act 1996 for treatment and or removal or disposal sites under strict internationally accepted standards.

5.7 Material Assets

Material assets are taken to include infrastructure and utilities including rail, road, water supply, the electric grid, gas network and wastewater treatment facilities. It also includes economic assets such as lands, coastal and water resources which support fisheries and tourism industry.

5.7.1 Transport Infrastructure

The NQ SDZ has significant transport infrastructure on site and / or within close proximity, namely; it is accessible by road (Dock Road dual carriageway), rail and river. The North Quays SDZ is bound to the south by the River Suir, and to the north by the Dock Road (R711) - a regional dual carriageway connecting Waterford City with the N29 (a national primary road – it connects the Port of Waterford at Belview, County Kilkenny to Waterford City), located 4.7km to the northeast. The Rosslare to Waterford rail line traverses the site in an east west direction, however this was last in use for cement and fertilizer transport 1995 and an application for planning permission to develop the railway as a greenway is currently with An Bord Pleanála.

Plunkett Train Station is located to the west of the site and serves Kilkenny, Dublin, Clonmel and Limerick. A railway freight line runs from Waterford to Belview Port and Rosslare. The rail passenger service to New Ross closed in 1963. The National Primary route N25 (National Primary, E30 Euroroute) ran through Waterford City up until 2009, when a bypass including a 475m cable-stayed bridge across the River Suir was completed 2.5km to the north of the city. The R711 serves traffic travelling from the N25 into the city from the east, while the N680 connects the N25 to the west of the city.

The River Suir is an active navigation channel. The existing users include fishing, commercial users and tourists.

There are a number of existing policies and objectives that support the development of public transport infrastructure at Waterford's North Quays. Specific objectives of relevance to the future development of the NQ SDZ are those included as part of the Waterford City Development Plan 2013-2019, PLUTS Strategy 2004, and Ferrybank-

Belview Local Area Plan 2009 which include a range of transport objectives. These include supporting the development of a bridge over the Suir, development of green routes and cycling infrastructure and the development of a riverside walk along the boundary of the NQ SDZ.

The Ferrybank - Belview Local Area Plan 2009 (currently under review) identifies specific objectives in the vicinity of North Quays SDZ to include: land use, transport and natural heritage objectives including protected views and open space objectives. These will be considered as part of the SEA process.

The Waterford City Quays and marina berths are subject to maintenance dredging by plough dredging to maintain the navigation channels. Disposal of dredge material is regulated by the Dumping at Sea Acts 1996 and 2004 and permitted by the Department of Agriculture, Food and the Marine. Dumping at Sea licences issued by the EPA, report that licences were issued to Waterford City Council in 2011 and Port of Waterford Company in 2014, to dredge at locations in front of both the North and South Quays in the River Suir. The application in 2011 was to facilitate the Tall Ships entering the Harbour in 2013/2014.

5.7.2 Drinking Water

There are no drinking water protection zones identified in Waterford City. Irish Water report that the drinking water supply zone is in the East Waterford Regional area. The drinking water quality is generally good for this area (Irish Water 2017). However, there are exceedances reported for three parameters: *Clostridium perfringens*, *Cryptosporidium* and total coliforms.

The site is bounded by a water main pipe network with 250mm and 150mm pipes. Irish Water has confirmed to the Development Agency that there is sufficient capacity within the system to serve the site. It is proposed that water capacity and water quality will be addressed as part of future planning applications.

5.7.3 Wastewater Treatment Services

There is currently no suitable wastewater drainage on site. Future proposed developments are required to be connected into the existing Ferrybank pump station which has been sized to take account of potential development on the North Quays. Future water and waste water treatment services are required to be addressed with Irish Water at pre-planning stage.

5.7.4 Surface Water Drainage

There is no existing storm water drainage network on site. Existing outfalls for lands to the North are required to be maintained. The Draft Planning Scheme proposals state that all existing connections from north of the site will be maintained and continue to outfall directly to the River Suir. No additional connections to the existing surface water drainage system will be made. Contaminated surface water such as oil/fire water/detergents will be intercepted and stored appropriately for future treatment and disposal. New surface water drainage networks will be required as part of any new development. Considerations with regard to attenuation for Fire fighting and emergency services will also be required to be considered as part of future development proposals for the site.

5.7.5 Utilities

Two 110kv lines run through the north of Waterford City and a number of 38kv substations are located around the city. A 220kv line runs across South Kilkenny

connecting Great Island on Waterford Estuary to Cork. A gas line runs from Clonmel to Waterford City and to Tramore.

The supply of energy to the site should address measures to reduce energy consumption and incorporate renewable energy sources.

5.7.6 Telecommunications

There is currently no broadband service on the site. High Speed Fibre Broadband services (1GB/sec) are expected to be delivered to the site by an extension of the Metro Area Network (MAN) ring from the Train Station to SDZ.

5.7.7 Fisheries

There are no designated shellfish waters within the SDZ area or within 1km of this SDZ. The Shellfish Water Directive (2006/1113/EC) applies to Waterford Harbour (Cheekpoint, Arthurstown/Creadon) located downstream of the site.

5.7.8 Tourism

The maintenance and conservation of the City's cultural heritage is essential in order to maintain an irreplaceable resource, sense of identity for the City and as a source of visitor interest and tourism revenue. The sense of place within the historic core of Waterford is considered an asset and a reference point for future growth and development. There is a need to maintain the vibrancy of the historic core and avoid isolation of new development but rather link it to the existing historic core.

5.7.9 Existing Environmental Problems/Issues/Threats

- The car is still the dominant choice of transport in Ireland, Waterford City and in the Ferrybank ED. Transport is a significant contributor to Ireland's greenhouse gas emissions. Air pollutants released from transport are a key public health issue. A key challenge of the Planning Scheme is to increase passenger numbers by bus, rail and sustainable transport (cycling and walking) in order to reduce car dependency and associated environmental effects.
- Promoting energy conservation, energy efficiency and use of alternative energy sources is a key national policy objective and should be promoted as part of the Planning Scheme.
- Drinking water supply, water quality, conservation and affordability are ongoing national issues affecting the environment and the population that depend on it.

5.7.10 Likely Effects on Material Assets Environment

Many of the impacts are unknown but have the potential to lead to adverse impacts across EPOs:

- Due to the significant quantities of new development in the area of the Planning Scheme, the existing capacity of the wastewater infrastructure could potentially have significant adverse impacts on the environmental receptor water, if not satisfactorily addressed.
- Construction and development in general can impact on water quality. Failure to comply with the EU Water framework Directive may result in reduction to water quality. Compliance is required to ensure and maintain at least good ecological status to receiving waters.
- Increased demand for good quality clean drinking water supply will be required to be addressed as part of the Planning Scheme.

- Waste and wastewater collection system and appropriate discharge that respects the WFD requirements and conservation objectives of the Lower River Suir SAC will require to be addressed as part of the planning applications.
- Likely improvement in sustainable transport due to integrating transport options and promoting more sustainable travel patterns to include the rail network, walking and cycling.
- Likely increase in tourism capacity and connectivity as a result of future planning proposals.
- Ensuring the protection and continued use of the River as a navigation channel for existing and future users i.e. navigation / mooring/ berthing facilities and dredging considerations.
- Ensuring the protection of water quality and fisheries resource.
- Likely increase in waste levels as a result of future proposed developments during both construction and operation.

5.8 Cultural Heritage

Cultural heritage includes architectural and archaeological heritage. Waterford is rich in the diversity and quality of the archaeological monuments and landscapes within the City. Protected Structures are defined as being of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, and these include town and country houses, railway stations, churches, bridges and mileposts etc. Archaeological remains can be found in riverine, lacustrine and in estuarine and marine- foreshore, inter-tidal, and underwater environments.

The Strategic Development Zone (SDZ) is located immediately west of Recorded Monument WA009-008--- Religious House which is subject to statutory protection in the Record of Monuments & Places, established under Section 12 of the National Monuments (Amendment) Act 1994. The upstanding parish church of Kilculiheen at this site is within a large subrectangular graveyard and is the possible site of an Arroasian convent founded as a priory of St Mary de Hogges (Dublin) by Dermot Mac Murrough in 1151.

The Hennebique Building and Free standing crane on the North Quays are identified as buildings / structure of Architectural Heritage and are included as part of the National Inventory of Architectural Heritage.

The North Quays has the potential to be of high archaeological potential not least as working quays in their own right and with the River Suir being the focus for maritime traffic over an long period. There is high potential that previously unknown or unrecorded riverine/underwater archaeological heritage could be retained within those areas. From an archaeological perspective the quays represent existing physical evidence for our industrial heritage, but their use and the vessels, goods, buildings, structures and features associated with their use support and supplement their cultural significance. There is potential that the remains of shipwrecks could be located within proximity to the quays that could be disturbed or impacted by any proposed works, while previously unknown underwater archaeological heritage could remain buried beneath the quays awaiting discovery. The Infomar Shipwrecks Database records the SS Harvard which occurs further downstream of the SDZ in the River Suir.

The NQ SDZ overlooks the historic south quays which contain numerous protected structures and is designated as an Architectural Conservation Area (ACA). This area

is also included as part of a Zone of Archaeological Potential which extends into parts of the Lower River Suir. The Waterford City Development Plan 2013-2019 identifies a number of Zones of Archaeology Potential. Zones 20, illustrated in Figure 5.9, skirts the NQ SDZ eastern boundary. In this area, but outside of the NQ SDZ, stands Abbey Church and graveyard, both of which are listed as Protected Structures.



Figure 5.9 Zone of Archaeological Potential and ACAs (Extract from Map A)
Source: Waterford City Development Plan 2013-2019

5.8.1 Likely Effects on the Cultural Heritage Environment

- Considering the riverside and intertidal environment and scale of development being proposed (8.23 hectares), there is the potential for previously unidentified archaeological including underwater archaeological remains to be discovered during the course of development works.
- Potential that the remains of shipwrecks could be located within proximity to the quays that could be disturbed or impacted by any proposed works, while previously unknown underwater archaeological heritage could remain buried beneath the quays awaiting discovery.
- A key challenge will be the regeneration and development of the built environment whilst promoting the cultural heritage of the area, such as they become 'place making' elements of the future and existing communities.
- High quality contemporary designs that respect the protected structures and character of the adjacent South Quays ACA will enhance the special aesthetic qualities of the area.

5.9 Landscape

The landscape of Waterford City is defined by the River Suir Waterway Corridor. A Landscape Character Assessment has not been prepared for either the Waterford City or County Development Plans. The topography of the NQ SDZ is primarily flat land which gradually rises in a northerly direction. Further north from the NQ SDZ the topography rises sharply to the north-west with steep slopes along the Quays to the west of Rice Bridge near Plunkett Railway Station. To the south-east of the site there is an attractive natural landscape following the course of the river including significant trees surrounding Abbey Church (WCC and Loci, 2008).

A landscape character assessment, as part of the North Quays Urban Design Framework 2008, identifies a number of distinct Landscape Character Areas identified in Figure 5.10.

The significant urban spaces include:

- The train station forecourt and promontory;
- The train station underpass and promontory;
- The ramped access from Dock Road;
- The bridge landing and promontory;
- The main civic space and promontory connecting Ferrybank and the waterfront;
- The eastern 'beacon' and connection to the riverfront; and
- A riverfront space at Frank Cassin Wharf.



Figure 5.10 Landscape Character Areas, North Quays Urban Design Framework 2008 Source: Urban Design Framework Plan 2008

5.9.1 Protected Vistas

The Waterford City Development Plan 2013-2019 supports the protection of a number of vistas identified in The North Quays Urban Design Framework 2008 (Figures 5.11 and 5.12). Three axial views were identified from the south to the north:

- Parnell Street/ The Mall past Reginald's Tower to Abbey Church
- Broad Street/ Barronstrand St to Sion Hill House punctuated by the Clocktower on the waterfront (it is believed that the entrance to Sion Hill House was intentionally placed on this axis by its original Merchant owners)
- Bridge Street over Rice Bridge

Travelling from the north, the gateway to the city is experienced as the view from the intersection of Ross Road, Abbey Road and Fountain Street, lining up the Cathedral and Reginald's tower. A similar perspective of the South Quays can be viewed from Rockshire Road. As noted previously, the view along the axis of Sion Hill House and the Clocktower has historical significance. In general however, the constantly inspiring and arresting view of the south quay façade can be enjoyed at any point along the front of the North Quay. The façade of the South Quays is also revealed as one approaches the city along the N25 from New Ross nearing Plunkett Station.

It is an objective of the Waterford City Development Plan 2013 - 2019 to maintain these views during the lifespan of the Plan.

Development of public infrastructure options will be required to be cognisant of these views as well as those identified in the Belview-Ferrybank LAP 2009 (currently under review).



Figure 5.11 Significant Views Source: North Quays Urban Design Framework Plan 2008

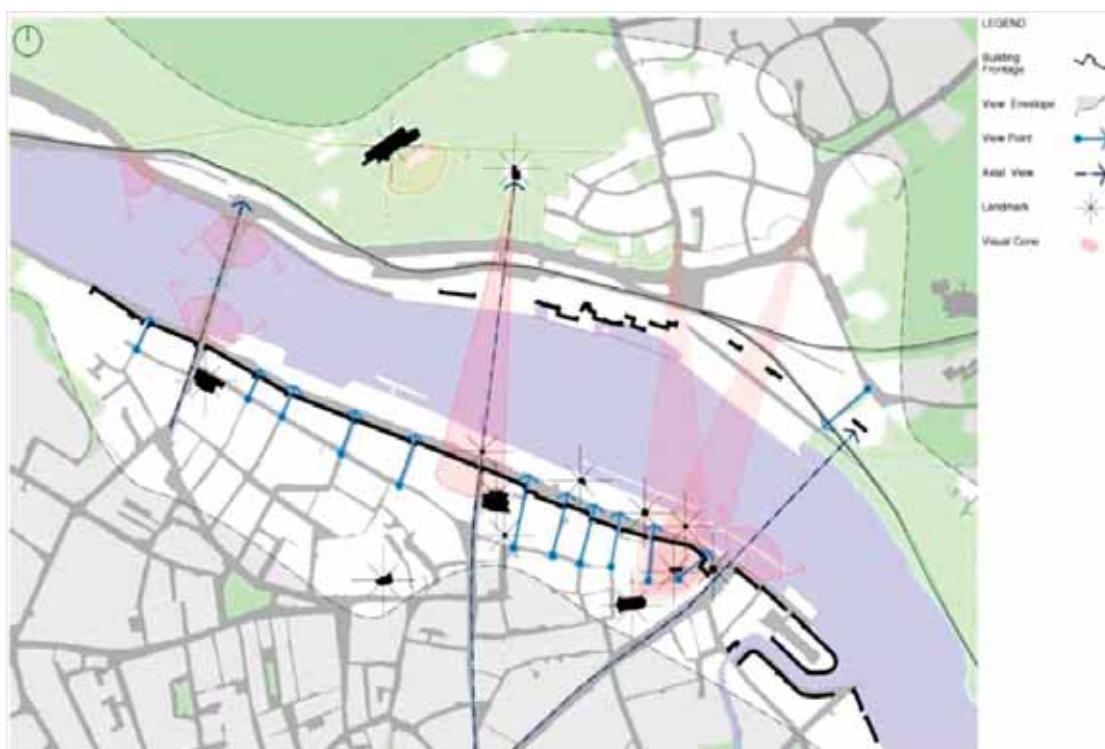


Figure 5.12 Visual Analysis Source: North Quays Urban Design Framework Plan 2008

5.9.2 Existing Environmental Problems/Issues/Threats

The European Environment Agency advice that “compact urban development and resource efficient approaches to the built-environment can provide opportunities to alleviating environmental pressures and enhance human wellbeing and also protect from the impacts of climate change” (EEA, 2015). The challenge is to design a future urban environment with public appeal that incorporates climate-proofing aspects, along with green areas and wild spaces for wildlife and people, while also meeting the needs of the population (EPA, 2016).

5.9.3 Likely Effects on the Landscape Environment

- From future developments will change the landscape in the area and therefore proposals should be sympathetic to the riverscape in terms potential impacts associated with design and building height, as well as impacts on the historic setting, zoned of archaeological potential, ACAs and protected structures.
- Future development and landscape design and choice of plant species has the potential to impact positively on existing ecological corridors, blue and green infrastructure.
- Green infrastructure will have the potential to provide links to existing, historic and future heritage as well as contribute to the overall landscape and biodiversity of the City.
- Integration of the Waterford to New Ross Greenway into the Planning Scheme has the potential to provide an ecological corridor to support local biodiversity.
- Future development proposals have the potential to impact on significant views in the City and surrounding environs.

5.10 Inter-relationships Between Environmental Receptors

The interactions and inter-relationships between the SEA environmental receptors is an important consideration for the environmental assessment and a requirement of the SEA Directive. These potential inter-relationships will be taken into account throughout the assessment process. While all environmental topics interact with each other to some extent, it is considered at this stage that the most significant inter-relationships are between the water environment, biodiversity, landscape, soil, material assets and population and human health. Table 5.5 summarises the various environmental topic interrelationships by way of a matrix.

Table 5.5 Environmental Topic Interactions Matrix

| INTERACTIONS | Biodiversity, Flora & Fauna | Population and Human Health | Landscape | Water Resources | Soils & geology | Material assets | Cultural Heritage | Air & Climate |
|-----------------------------|-----------------------------|-----------------------------|-----------|-----------------|-----------------|-----------------|-------------------|---------------|
| Biodiversity, Flora & Fauna | | | | | | | | |
| Population and Human Health | | | | | | | | |
| Landscape | | | | | | | | |
| Water Resources | | | | | | | | |
| Soils & Geology | | | | | | | | |
| Material Assets | | | | | | | | |
| Air & Climate | | | | | | | | |
| Cultural Heritage | | | | | | | | |

6.0 ENVIRONMENTAL PROTECTION OBJECTIVES

The Environmental Protection Objectives are methodological measures which are originally developed from international, national, regional and county policies which generally govern Environmental Protection Objectives (EPOs) and against which the likely significant environmental effects of the proposed Planning Scheme can be tested.

The current EPOs from Waterford City Development Plan 2013-2019 has been used as a building block to develop the EPOs for the SEA. Table 6.1 below lists the EPOs under each environmental topic – some have been modified slightly reflecting the specific characteristics of the plan area. The EPOs can also be influenced by the comments from the statutory environmental authorities at SEA Scoping stage.

The EPOs are used in this ER to assess any likely significant effects on the environment and also the alternative options (outlined in Section 7). The EPOs are used as standards against which the provisions of the Planning Scheme can be evaluated in order to help identify areas in which likely significant positive or adverse impacts are likely to occur on that EPO.

Table 6.1 Environmental Protection Objectives

Biodiversity, Flora and Fauna

B1: Protect, conserve and enhance habitats, species and areas of national and local importance, including aquatic habitats and species and promote the sustainable management of habitat networks.

Population and Human Health

P1: Facilitate a good standard of health for Waterford's population through ensuring high quality residential, recreational and working environments that are based on sustainable landuse and travel patterns.

Water Resources

W1: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contaminants to waters.

W2: To reduce and manage the risk of flooding.

Soils

S1: Protect, improve and maintain the quality of soils in the interests of avoiding environmental degradation in water quality and biodiversity.

Air and Climate

AC1: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey.

AC2: To limit adverse impacts of climate change through the use of sustainable energy sources.

Cultural Heritage

C1: To protect, conserve and enhance cultural heritage features of the plan area including the built environment, settings and known and unknown archaeological assets.

Landscapes

L1: Protect and conserve the quality, character and distinctiveness of the River Suir waterway corridor and minimise negative visual impacts.

Material Assets

MA1: Maintain sustainable access to assets such as open spaces, water resources, wastewater, drinking water, drainage and all other physical and social infrastructure.

The close connection with the EPOs of the current City Development Plan is to facilitate ease of monitoring of EPOs throughout the lifetime of the Planning Scheme

and beyond. Table 9.2 outlines a list of indicators and targets that will be used to monitor each EPO. These monitoring measures have been taken and adapted where required from the Waterford City Development Plan to facilitate ease of monitoring of the Planning Scheme.

6.1 EPO's and the Assessment of the Draft Planning Scheme

As already stated the EPOs from the existing SEA ER for the Waterford City Development Plan 2013-2019 listed in Table 6.1 above will be used to assess the likely significant impacts of the elements of this Draft Planning Scheme on the environment. These include the assessment of the alternative options considered in Section 7 below.

Section 8 of this ER then examines the elements of the determined preferred option in more detail and where further significant effects have been identified as part of this option, which cannot be discounted by the current Environmental Protection Objectives (EPOs) listed in the Plan, additional mitigation measures (policies / objectives / changes to the Draft Planning Scheme) are recommended. Section 9 details the review of the proposed mitigation and monitoring.

7.0 ASSESSMENT OF ALTERNATIVES

7.1 Introduction

Article 5 of the SEA Directive requires the plan making authority to consider reasonable alternatives are identified, taking into account the objectives and the geographical scope of the Planning Scheme. The alternatives are required to be described and evaluated for their likely significant effects on the environment. The alternatives are required to be reasonable, realistic, capable of implementation and set at the appropriate level at which the Planning Scheme will be implemented, operating within the planning hierarchy i.e. the higher the level of the plan the more strategic the options which are available.

This chapter summarises the environmental assessment of the alternatives to the Planning Scheme. Under Schedule 2 of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, Article 12 (h) it is stated that the following should be included in an environmental report of this nature: *“an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information”*.

The Development Agency engaged the expertise of a number of consultants including engineers, architects, planners and environmental scientists in order to address the unique constraints of the site and to inform the process of creating a practical, realistic and achievable planning scheme. One of the main goals of the Development Agency was to deliver a Planning Scheme that will generate key elements of development to include the provision of mixed uses development including residential, retail and employment opportunities coupled with a development of a transport hub and new sustainable transport bridge, connecting the North Quays with the South Quays. The purpose of this section of the SEA is to examine the reasonable alternatives available to the Development Agency.

7.2 Consideration of Alternatives During the SDZ Plan Making Process

Alternatives can be considered throughout the plan making process. Figure 7.1 is a simplified illustration of the key steps in SEA, Appropriate Assessment (AA) and the plan making process. The steps highlighted in blue indicate consideration of alternatives throughout the process.

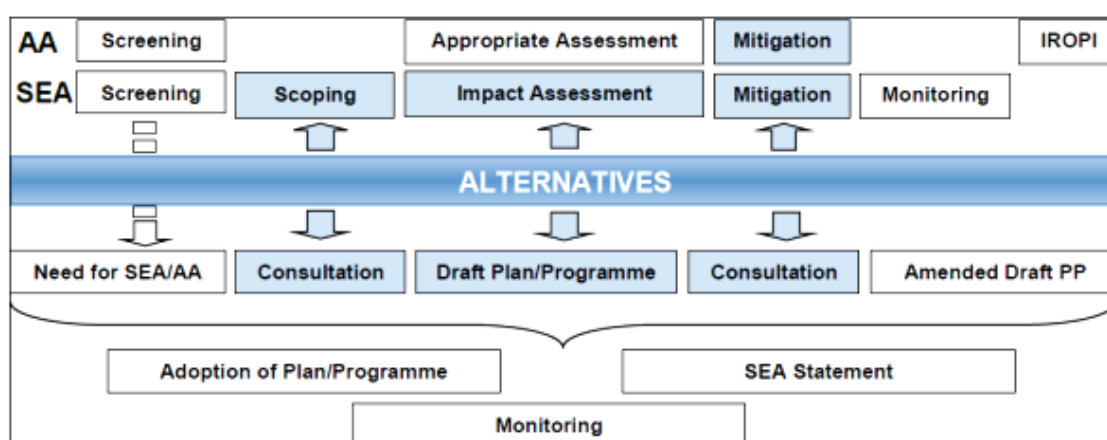


Figure 7.1 Simplified Illustration of the Key Steps in SEA, Appropriate Assessment (AA) and the Plan Process (EPA, 2015)

7.3 Assessment Methodology

As a mechanism of measuring the effects of each alternative on the environment, the alternatives will be tested against the Environmental Protection Objectives (EPOs) developed in Section 6 above, taking into account the objectives and the geographical scope of the Plan.

The Development Scenarios are given an assessment ratings ranging from 'Major Significant Adverse Impact' (XX) to 'Major Significant Beneficial Impact' √√ on the status of the Environmental Protection Objective and an associated explanatory text is provided for each alternative against each of the individual Environmental Protection Objectives (EPOs). Alternative Development Scenarios can also have an unknown impact as well as a neutral or insignificant impact. In these cases, the degree of significance of effects occurring cannot be fully determined at this level of decision making due to the lack of exact detail available with regard to the type, nature or scale of development(s) that will be implemented under the Planning Scheme. For these cases, the alternative may have a combined rating with major adverse, beneficial impacts and/ or rated as 'unknown/ uncertain impact'. Table 7.1 provides an explanation of the ratings used for the assessment.

While it will not always be possible to eliminate all potentially significant adverse effects in balancing Planning Scheme Options the SEA at least helps to clarify the likely consequences of such choices, and makes specific provision for mitigation measures where some adverse impacts cannot be avoided which is then considered by the policy making team. The results of the assessment will assist in determining the most practical reasonable and feasible option (preferred option) required to meet the objectives of the Plan. The Do Nothing scenario was not considered a reasonable alternative and therefore was not considered. Section 7.4 presents the results for the alternatives assessment.

Table 7.1 Likely Significant Effect of the Alternatives – Assessment Matrix

| | |
|----|---|
| √√ | Major Significant Beneficial Impact on the status of the Environmental Protection Objective |
| √ | Likely Significant Beneficial Impact on the status of the Environmental Protection Objective |
| 0 | Neutral or an Insignificant Impact on, the status of the Environmental Protection Objective |
| ? | Unknown / uncertain impact |
| X | Likely Significant Adverse Impact on the status of the Environmental Protection Objective – likely to be mitigated. |
| XX | Major Significant Adverse Impact on the status of the Environmental Protection Objective – unlikely to be mitigated fully |

Each of the alternatives is assigned an impact colour based Table 7.2 below in order to clear illustrate the preferred option under each of the EPOs as follows.

Table 7.2 Traffic Light Colour Coding of Alternatives

| Key to Traffic Light Colour Coding of Alternative |
|---|
| Preferred Alternative |
| Least Preferred |
| Equal or no difference in rating between two or more Alternatives |
| Lowest Scoring of the Alternatives |

The three alternative scenarios have been assessed against the Environmental Protection Objectives (EPOs) set for each of the eight environmental receptors developed in Section 6 and outlined in Table 6.1. The alternatives are evaluated using compatibility criteria to determine how they would be likely to affect the status of the EPOs. The alternatives are also assessed for interactions which may cause effects on specific components of the environment and are given an assessment rating. Table 7.3 contains the detail of the evaluation of the alternatives as tested against each of the EPOs.

7.4 Description of Alternatives Assessed

The three alternative development scenarios assessed by the SEA team that were considered by the Development Agency are outlined below:

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

All three development scenarios allow for the provision of mixed uses including residential, retail and employment opportunities (at varying levels) coupled with a transport hub and a new sustainable transport bridge over the Lower River Suir, connecting the North Quays with the South Quays. All scenarios provided for a riverfront walkway and were deemed to have the capacity to adequately cater for the services required i.e. drainage, utilities, water supply and waste water infrastructure. The three alternatives are described in more detail below. From the outset the Development Agency were focused on developing a Planning Scheme that is socially, environmental and economically viable and that responds to the existing and future needs of Waterford City from a national and local context.

Alternative 1 – High Density Development

This alternative maximises the quantum of built development across the site by using the greatest possible surface area and creating high density retail/commercial and residential developments. This alternative would provide 300-400 residential units in conjunction with high density commercial development. Based on a household size of 2.2 people (for apartment living) this scenario could support a population of between 660 - 880 people. In this scenario building heights of up to 70 metres OD can be accommodated in all Development Zones with the potential to provide landmark building(s) up to 80 metres OD subject to design justification. The overall net developable area is increased by providing an open space provision of a maximum of 15% across the site to include public plazas and a riverside promenade. The higher density development reduces space available for pedestrian and cycle connectivity throughout the site.

Alternative 2 – Medium Density Development – Preferred Option

This alternative provides for a medium quantum of retail /commercial /residential development across the site. This alternative would provide 200-300 residential units in conjunction with high density retail and commercial development. Based on a household size of 2.2 people (for apartment living) this scenario could support a population of between 440 - 660 people. A height restriction of 35m is applied to the Central Development Zone, consistent with previous heights on the site, whilst a height restriction of 60 metres OD is applied to the Eastern and Western Development Zones. A 70m landmark building may be considered subject to design justification. This scenario allows for a minimum of 20% open space to be provided across the site to include public plazas and a riverside promenade.

Alternative 3 – Low Density Development

This alternative would provide for development across the site at lower densities. The focus of this alternative is to provide a larger portion of residential units in the form of conventional family homes with limited capacity for retail and/ or commercial development to take place. Conventional family homes could be provided (2-3 storeys) at densities of 30 per Hectare and would provide approximately 240 units. Based on national average household size of 2.7 persons this would result in a population of 648 persons. This scenario results in less available floor space for retail and commercial activity and therefore, potential for employment activities/ job creation is reduced as part of a new urban quarter. The building heights on the site would be restricted to 10 metres OD in the Central Development Zone and to 15 metres OD in the Eastern and Western Development Zones. Open space possibilities are increased under this alternative with a minimum of 25% open space which would include a riverside promenade along the site. It would also allow for sufficient capacity to develop pedestrian and cycling infrastructure throughout the site.

Table 7.3 Assessment of Alternatives

| Environmental Receptor EPO | Alternative 1 – High Density Development | Alternative 2 – Medium Density Development – Preferred Option | Alternative 3 – Low Density Development |
|--|---|--|---|
| Biodiversity, Flora and Fauna | √ and X | √ and X | √√ and X |
| B1: Protect, conserve and enhance habitats, species and areas of national and local importance, including aquatic habitats and species and promote the sustainable management of habitat networks. | <p>The site is a brownfield site and currently has limited biodiversity therefore the introduction of open spaces, landscaping and greening proposals that include supporting native flora and fauna will have the potential to increase the biodiversity value of the site over time across all scenarios. All options assessed have the potential to resulting adverse effects on the Lower River Suir SAC during construction stages however these are expected to be short-term and likely to be mitigated against at project stage.</p> <p>The low-density scenario would be expected to have the least impact over time due to reduced extent of construction activities. This scenario also results in greater opportunities for biodiversity to be enhanced across the site with the minimum 25% open space provision as opposed to the other scenarios, high density: maximum 15%, Medium density: minimum 20%. Therefore, the low density scenario is the preferred option in relation to biodiversity.</p> | | |
| Population and Human Health | √ and XX | √√ and X | √ and X |
| P1: Facilitate a good standard of health for Waterford's population through ensuring high quality residential, recreational and working environments that are based on sustainable landuse and travel patterns. | <p>All scenarios assessed have the potential to benefit the population and human health of the area. The development of the North Quays will result in the creation of a regeneration catalyst for the City and region. The site is currently uninhabited therefore all proposals will increase the future population of the City, however all proposals are also likely to have short-term adverse effects during the construction phase of the development. The three alternatives are assessed in more detail below.</p> <p>High Density Scenario</p> <p>The high-density scenario would contribute extensively to the future growth of the city due to the provision of 300 to 400 residential units as well as some commercial and retail development. However, the space available to provide green infrastructure and pedestrian and cycling infrastructure would be more limited in this scenario.</p> | | |

| Environmental Receptor EPO | Alternative 1 – High Density Development | Alternative 2 – Medium Density Development – Preferred Option | Alternative 3 – Low Density Development |
|---|---|--|---|
| | <p>It was considered that there would be increased pressure on the existing and planned transport infrastructure under this scenario which would have adverse effects on the environment across other EPOs. In addition the density, scale and height of developments across the site would impact adversely on neighbouring properties and create a counterbalance rather than complimentary function to the existing city centre unlikely to be mitigated fully.</p> <p>Medium Density Scenario</p> <p>This alternative would contribute to the sustainable growth of the city and allow for appropriate levels of development to take place. The proposed residential development is between 200 and 300 units and is in line with the core strategy of Waterford City Development Plan (2013-2019). This alternative provides for a medium quantum of retail, commercial, residential development across the site. The height restrictions are generally in keeping with the previous heights on site and therefore proposals are not likely to unduly impact on neighbouring properties and the existing city centre. This scenario allows for sustainable integration between land use, public transport, pedestrian and cycle infrastructure.</p> <p>Low Density Scenario</p> <p>This alternative allows for a low-density, low scale development with a large proportion of family homes (conventional 2 to 3 story houses), a minimum of 25% open space resulting in limited retail and /or commercial development. Based on national average household size of 2.7 persons this would result in the provision of accommodation of a future population of 648 persons, however this alternative would provide limited long-term employment opportunities in this city centre location. It would also reduce the potential for the North Quays to be a catalyst for economic development and growth of the Waterford City. The additional quantum of comparison retail required by the city could not be accommodated in this alternative. The planned transport infrastructure would not be economically viable or sustainable given the low density and limited amount of development mix proposed. It would not be considered a compact city centre development and could result in the continued support of reliance on private cars and associated congestion, noise and air quality impacts. Furthermore, this alternative would reduce capacity to levy development contributions.</p> | | |
| Water Resources | 0 and ? | 0 and ? | 0 and ? |
| W1: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contaminants to waters. | <p>All development scenarios have the potential to impact water quality standards in the South East River Basin Management Plan particularly during construction phases. It is expected that with the application of mitigation measures, these potential adverse impacts can be avoided, reduced and mitigated against. All development scenarios have the opportunity to provide effective measures to manage fluvial (river), coastal, and pluvial (urban runoff), flooding while championing the concept of multi-functional greenspace and landuse to generate multiple benefits for the environment, society, and the economy. The application of blue and green infrastructure and SuDS will be particularly relevant in this regard. Therefore all development scenarios are rated as equal as the specific development proposals will determine the exact benefits that will be derived, based on proposals put forward as part of planning applications.</p> <p>It is expected that the development of the site will improve and reduce discharges of pollutants and contaminants leaving the site over the</p> | | |

| Environmental Receptor EPO | Alternative 1 – High Density Development | Alternative 2 – Medium Density Development – Preferred Option | Alternative 3 – Low Density Development |
|---|--|--|---|
| | <p>long-term with the application of suitable mitigation measures. This will provide the opportunity to maintain and improve the water quality of the South East River Basin.</p> <p>The high-density development scenario will result in increased levels of construction activities over and above other scenarios and reduce the area available for treatment of surface run-off on site. However, SuDs can be applied in the form of green and blue infrastructure / (roofs) e.g. rain water harvesting, etc and opportunities for SuDs.</p> <p>The medium density scenario and low density scenarios are similar in that they allow for adequate SuDs and surface water treatment before leaving the site. However, both may have short-term adverse impacts on water quality during the construction phase likely to be mitigated.</p> | | |
| W2: To reduce and manage the risk of flooding. | 0 and ? | 0 and ? | 0 and ? |
| | <p>The site is located on a flood zone A and B therefore all scenarios have the potential to impact the flood regime. A Strategic Flood Risk Assessment (SFRA) has been carried out on the site. It found that with the application of the recommendations, future developments can take place on the site. The SFRA recommends that each planning application is subject to site specific flood risk assessment, therefore exact impacts are unknown at this stage of the assessment but are considered to be equal for the purposes of the alternatives assessment.</p> | | |
| Soils | √√ | √√ | √√ |
| S1: Protect, improve and maintain the quality of soils in the interests of avoiding environmental degradation in water quality and biodiversity. | <p>The development is located on a brownfield site with a history of Port related activities and therefore there is potential for contaminated land to occur during construction activities. Subject to the application of suitable mitigation measures during the construction phase there is the potential to remediate contaminated land and therefore improve and maintain the quality of soils and avoid environmental degradation in water quality and biodiversity. Therefore, all scenarios are expected to improve soil resource.</p> <p>The low-density scenario has the potential to provide for more soil resources to be introduced into the site due to the highest open space provision (minimum of 25%) however it is expected that as the site is 'made ground' and the type of open space to be delivered is unknown i.e. park land, paved area, etc, therefore all scenarios score equally.</p> | | |
| Air and Climate | √√ and X | √√ | XX |
| AC1: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey. | <p>All development scenarios will assist in improving travel choice and accessibility to the north keys, city centre and wider area mainly through the provision of a transport hub and the sustainable transport bridge linking the north quays to the south quays</p> <p>High density</p> <p>It is expected that the high density scenario would place pressure on the existing and planned transport options. This scenario would also reduce the areas available for pedestrian and cycling infrastructure and reduce pedestrian/ cycling permeability making it less attractive as a mode of transport.</p> <p>Medium density</p> <p>The existing and proposed levels of public transport infrastructure will be able to accommodate the levels of development proposed in this</p> | | |

| Environmental Receptor EPO | Alternative 1 – High Density Development | Alternative 2 – Medium Density Development – Preferred Option | Alternative 3 – Low Density Development |
|--|---|--|---|
| | <p>scenario. It allows for adequate pedestrian and cycling infrastructure to be provided in an attractive urban environment thereby supporting these modes of transport over the private car. This scenario allows for sustainable integration between land use and public transport.</p> <p>Low density The low-density scenario, based on providing conventional homes and limited retail/commercial development, would not provide the mix of development and critical mass required to support the development or economic viability of the transport interchange and required investment in infrastructure. The lack of employment opportunities provided on the site would lead to a greater need to commute longer distances from the site rather than permitting working and living environments to be located within close proximity. This in turn could lead to supporting the reliance on the private car, thereby increasing journey times, traffic congestion, noise and air quality issues in the area.</p> | | |
| AC2: | √√ | √√ | √ |
| To limit adverse impacts of climate change through the use of sustainable energy sources. | The planning scheme supports the use of sustainable energy provision across all development scenarios. The precise significance of impacts will be dependent on proposals put forward at planning application stage. However, it is expected that the high and medium density options have a greater potential to increase sustainable energy options such as the provision of district heating and result in greater return from energy saving measures from the site to the population. | | |
| Cultural Heritage C1: | XX | XX | XX |
| C1: To protect, conserve and enhance cultural heritage features of the plan area including the built environment, settings and known and unknown archaeological assets. | All scenarios have the potential to impact on cultural heritage features of the plan area including the built environment, their settings, known and unknown archaeological assets. It is expected that the high density scenario would have the greatest impact and the low-density option the least impact however this is dependent on specific development proposals and cannot be established at this strategic level of assessment. | | |
| Landscapes | √ and X and ? | √√ and X and ? | √ and X and ? |
| L1: Protect and conserve the quality, character and distinctiveness of the River Suir waterway corridor and minimise negative visual impacts. | <p>All development scenarios will change the character of the landscape and result in visual impacts. It is considered that the planning Scheme will improve the landscape from the current derelict site to an urban quarter of high quality design. Therefore, it is expected that with good design, all development proposals could contribute to enhancing the landscape of the area. This will be subject to assessment at planning application stage as part of the design details.</p> <p>The development of the North Quays provides opportunities to create new focal points and positive visual impacts through quality design and use of appropriate materials and finishes. All scenarios allow for the provision of a riverside walkway/ boardwalk along the river edge which will create a new public corridor, enhancing the view of the River Suir waterway corridor.</p> <p>High Density In the high-density option, building heights are between 60m OD and 70m OD (greater than previous building heights) and will create a greater visual impact over the other scenarios particularly for Neighbouring residents in the northern environs of the city.</p> <p>Medium Density The medium density scenario would result in building heights between</p> | | |

| Environmental Receptor EPO | Alternative 1 – High Density Development | Alternative 2 – Medium Density Development – Preferred Option | Alternative 3 – Low Density Development |
|--|---|--|---|
| | <p>35m OD to 60m OD consistent with previous building heights on the North Quays. This range will provide for sustainable quality of development and create a strong urban quarter reflective of the previous building heights on site and build on the existing city centre.</p> <p>Low Density</p> <p>In the low-density scenario the building heights are within 15m OD and 20m OD, significantly less than the previous building heights and therefore will improve views for those in the north looking south i.e. Neighbouring residents and those in the northern environs. However, these reduced heights may not be considered to be in keeping with the previous landscape character of the site.</p> | | |
| Material Assets | √ and X ? | √√ and X and ? | √ and X and ? |
| MA1: Maintain sustainable access to assets such as open spaces, water resources, wastewater, drinking water, drainage and all other physical and social infrastructure. | <p>All three options proposed will place additional demands on the waste water, drinking water, drainage and all other physical and social infrastructure.</p> <p>Policy makers of the planning scheme consider that there is sufficient capacity to deliver drainage, utilities, water and waste water for all the development scenarios. During the construction phase of all scenarios it is expected that there will be adverse impacts on the traffic environment.</p> <p>The high density scenario will have the greatest demand on all resources and have fewer opportunities for SuDs, Green infrastructure and social infrastructure to be provided for on site.</p> <p>The medium density scenario allows for a range and mix of uses which will ensure a vibrant and thriving community and assist in the provision of sustainable physical and social infrastructure.</p> <p>The low density scenario would provide benefits in terms of capacity of onsite drainage and provision of SuDs while also increase possibilities for pedestrian and cycling infrastructure. However, for the long term, it would lead to high infrastructure costs and potentially impact on the maintenance and quality of the social infrastructure provided.</p> | | |

A summary of the assessment ratings is provided in Table 7.4 below.

Table 7.4 Summary of Alternatives Assessment

| Environmental Receptor EPO | Alternative 1 – High Density Development | Alternative 2 – Medium Density Development | Alternative 3 – Low Density Development |
|--|---|--|---|
| Biodiversity, Flora and Fauna: B1 | √ and X | √ and X | √√ and X |
| Population and Human Health: P1 | √ and XX | √√ and X | √ and X |
| Water Resources: W1 | 0 and ? | 0 and ? | 0 and ? |
| W2 | 0 and ? | 0 and ? | 0 and ? |
| Soils: S1 | √√ | √√ | √√ |
| Air and Climate: AC1 | √√ and X | √√ | XX |
| AC2: | √√ | √√ | √ |

| Environmental Receptor EPO | Alternative 1 – High Density Development | Alternative 2 – Medium Density Development | Alternative 3 – Low Density Development |
|-------------------------------|---|--|---|
| Cultural Heritage: C1 | XX | XX | XX |
| Landscapes: L1 | √ and X and ? | √√ and X and ? | √ and X and ? |
| Material Assets: MA1 | √ and X and ? | √√ and X and ? | √ and X and ? |

It is clear from above assessment that all three options have the potential to create beneficial and adverse impacts on the environment protection objectives (EPOs). However, the above assessment demonstrates that Alternative 2 - medium density option has the greatest capacity to deliver the planning scheme objectives while also resulting in the least potential for adverse impacts on the environment and builds on the future sustainability of the site when compared with the other two alternatives. It also had the greatest beneficial impacts across a greater number of the EPOs than any of the other alternatives assessed. Most importantly, it is the most practical and feasible option capable of being implemented in the Waterford City context. The medium density alternative responds to the core planning scheme goals and objectives and addresses issues of sustainability, whilst avoiding the potential for adverse impacts associated with the high and low density options. Therefore, Alternative 2 Medium density development is deemed to be the preferred planning scheme option.

8.0 EVALUATION OF DRAFT PLANNING SCHEME PROVISIONS

8.1 Introduction

In accordance with the SEA Planning Guidelines (2004), SEA seeks to improve the quality of the plan-making process by:

- Raising awareness of the environmental impacts of plans: while it will not always be possible to eliminate all potentially significant negative effects in balancing policy options, SEA at least helps to clarify the likely consequences of such choices, and makes specific provision for mitigation measures where some negative impacts cannot be avoided.
- Encouraging the inclusion of measurable targets and indicators: which will facilitate effective monitoring of implementation of the plan, and thus make a positive contribution to subsequent reviews.

8.2 Strategic Environmental Assessment Methodology

In accordance with best practice methodology, the assessment of the likely significant effects on the environment of implementing the Draft Planning Scheme for the North Quays SDZ was carried out using an accepted and commonly used methodology of creating an assessment matrix. The assessment matrix comprises the 'policies and objectives' on one axis and the Environmental Protection Objectives (EPOs) on the other, developed earlier in the SEA process, outlined in Table 8.2. In this case, the policies and objectives are replaced with 'Goals', 'Vision(s)', 'Specific Objectives' and supporting text from the Draft North Quays Draft Planning Scheme.

This SEA of the NQ SDZ Draft Planning Scheme is primarily an objectives-led exercise. The Strategic Environmental Objectives above are used in the environmental assessment of the proposed measures contained in the Draft Planning Scheme for the SDZ. The assessment systematically assesses each action or proposal as part of the Draft Planning Scheme under each of the environmental topics in order to establish the likely significant effects on the environment. The EPOs are used as standards against which the provisions of the Draft Planning Scheme can be evaluated in order to help identify areas in which likely significant beneficial or adverse impacts are anticipated to occur on that EPO.

Where the likely significant effects are identified as part of the Draft Planning Scheme, initially the Draft Planning Scheme and current Waterford City Development Plan 2013-2019 are checked for the existence of environmental protection measures which could potentially mitigate these effects. Where it is found that the Planning Scheme lacks in these, additional mitigation measures will be recommended where necessary. Mitigation measures are proposed, in order to prevent, reduce and as fully as possible offset any significant effects on the environment. (These are further detailed in Section 9).

8.3 Assessment of Significance of Effects

The significance of the policy impact on the individual EPO is given an assessment rating. This rating is based on the Table 8.1 below and ranges from 'Likely significant beneficial impact on the status of the EPO' to 'Major significant adverse impact on the status of the EPOs'. Provisions can also have an unknown impact as well as a neutral or insignificant impact.

In some cases, the degree of significance of effects occurring cannot be fully determined at this level of decision making due to the lack of exact detail available

with regard to the type, nature or scale of development(s) that will be implemented under the Draft Planning Scheme. For these cases, the provision(s) is rated as 'unknown / uncertain impact'. In some cases, rating are combined where it is not clear from the provision(s) being assessed what the likely significant impact will be, in these cases suggested amendments may also be provided in order to reduce this uncertainty.

While it will not always be possible to eliminate all potentially significant adverse effects in balancing policy options the SEA at least helps to clarify the likely consequences of such choices, and makes specific provision for mitigation measures where some adverse impacts cannot be avoided which is then considered by the policy making team. Where any significant adverse impacts are identified the SEA team checks for suitable mitigation measures contained in the Waterford City Development Plan 2013-2019 and where appropriate additional mitigation is proposed as part of the SEA process, contained in Section 9 of this ER. These measures are proposed in order to prevent, reduce and as fully as possible offset these effects on the environment.

Table 8.1 Likely Significant Effect on the Environment - Assessment Matrix

| | |
|----|---|
| √ | Likely Significant Beneficial Impact on the status of the Environmental Protection Objective |
| 0 | Neutral or an Insignificant Impact on, the status of the Environmental Protection Objective |
| ? | Unknown / uncertain impact |
| X | Likely Significant Adverse Impact on the status of the Environmental Protection Objective – likely to be mitigated. |
| XX | Major Significant Adverse Impact on the status of the Environmental Protection Objective – unlikely to be mitigated fully |

Table 9.1 outlines a list of indicators and targets that will be used to monitor each EPO. These monitoring measures have been taken and adapted from the Waterford City Development Plan 2013-2019 to facilitate ease of monitoring of the Draft Planning Scheme.

Table 8.2 Environmental Protection Objectives

Biodiversity, Flora and Fauna

B1: Protect, conserve and enhance habitats, species and areas of national and local importance, including aquatic habitats and species and promote the sustainable management of habitat networks.

Population and Human Health

P1: Facilitate a good standard of health for Waterford's population through ensuring high quality residential, recreational and working environments that are based on sustainable landuse and travel patterns.

Water Resources

W1: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contaminants to waters.

W2: To reduce and manage the risk of flooding.

Soils

S1: Protect, improve and maintain the quality of soils in the interests of avoiding environmental degradation in water quality and biodiversity.

Air and Climate

AC1: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey.

AC2: To limit adverse impacts of climate change through the use of sustainable energy sources.

Cultural Heritage

C1: To protect, conserve and enhance cultural heritage features of the plan area including the built environment, settings and known and unknown archaeological and assets.

Landscapes

L1: Protect and conserve the quality, character and distinctiveness of the River Suir waterway corridor and minimise negative visual impacts.

Material Assets

MA1: Maintain sustainable access to assets such as open spaces, water resources, wastewater, drinking water, drainage and all other physical and social infrastructure.

(Adapted from the Waterford City Development Plan SEA Process).

References in the Assessment Matrix

W2* – Subject to the application of the recommendations and mitigation measures proposed in the Strategic Flood Risk Assessment.

NIR** – Subject to the application of the mitigation measures proposed in the NIR.

The details of the Draft Planning Scheme proposals are assessed in the Matrix table below. The SEA Suggested Amendment sections outline recommended additions to the text of the Draft Planning Scheme in green, while text that red strike through i.e. ~~red strike through~~ is recommended to be removed.

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|
| CHAPTER 1 : INTRODUCTION | | | | | | | | | | | |
| Vision for the North Quays | | | | | | | | | | | |
| 1.9.1 | To create a sustainable, compact extension to the City Centre that will serve a future population of a 83,000 people | | | | | | | | | | |
| SEA Commentary: | | | | | | | | | | | |
| The Government Order S.I.30 of 2016 outlines the opinion that the development of the NQ SDZ site is of economic and social importance to the State. The NFP states a target population figure of 83,000 over a 25 year period therefore the proposed Vision is consistent with higher level policy. | | | | | | | | | | | |
| 1.9.2 | A regeneration catalyst for the City and region and the establishment of a sustainable modern city quarter. | | | | | | | | | | |
| SEA Commentary: | | | | | | | | | | | |
| <p>This Vision is expected to have significant beneficial impacts to the population of Waterford City as a centre of urban regeneration and sustainability. The development of this site reduces the need to develop greenfield sites, reducing the potential adverse impacts on biodiversity and sealing of finite soil resources. The strategic city centre location of the site and sustainable transport option reduces the reliance on the private car as a mode of transport which is positive in terms of sustainability and particularly health and well-being EPOs.</p> <p>The Draft Planning Scheme provides a high level of flexibility that will inform the regeneration of the site however it is not known the precise phasing of development and therefore adverse impact due to construction activities could occur over an extended period of time. Due to the likely scale of development required to deliver this Vision it is likely that there will be some direct, indirect, temporary or short-term adverse impacts on the biodiversity, population, water quality and flood regime which are likely to be mitigated at planning application stage. The regeneration of this brownfield quays site will result in improvements to existing uncontrolled run-off and potential for contaminated materials entering the River.</p> <p>The future development of the site involves relying on a number of contributing factors such as economic conditions and availability of funding streams in order to realise this regeneration however in the long-term the regeneration is likely to result in long-term beneficial impacts across all EPOs. However, it is recognised that there is a level of uncertainty with regard to the specific environmental impacts at this strategic level of assessment based on above considerations. It is clear from this Vision that sustainability is embedded into the Draft Planning Scheme.</p> | | | | | | | | | | | |
| 1.9.3 | Creation of an integrated multi-modal transport hub designed to sustainably meet the access requirements of The City | | | | | | | | | | |
| SEA Commentary: | | | | | | | | | | | |
| <p>The associated text contained as part of this Vision for a 'A transport hub' includes details of a number of specific projects that will be subject to site-specific planning applications and the requirement to undertake Appropriate Assessment and site specific flood risk assessments and /or Section 50 application from the OPW as appropriate. The construction and phasing of these projects, separately and in-combination, may lead to short-term direct and in-direct adverse impacts on biodiversity, population, disturbance of soils and associated water quality impacts. However, these adverse impacts are likely to be mitigated at planning application stage through the implementation of the Planning Scheme specific objectives and existing planning policies and objectives of the Waterford City Development Plan (WCDDP).</p> <p>Long-term adverse impacts are possible with regard to impacts on cultural heritage i.e. unknown archaeological resources subject to development details. The developments are likely to change and improve the character the landscape over the long-term.</p> <p>The creation of a 'transport hub' will require the development of the necessary supporting physical and 'soft' behavioural infrastructure supports in order to maximise the uptake in 'Smarter', more integrated modes of transport in the SDZ, Waterford City and in the wider South East Region into the future. This Vision, if delivered upon has the potential to create significant positive lifestyle, health and environmental benefits to area and wider south east region. Likely benefits include reduction in commuting times and associated stress levels, reduction in congestion and improving opportunities for sustainable and active transportation modes, reduction in car related pollution such as noise and air.</p> <p>Given the location and existing use of the site, there may be opportunities to incorporate river based transport as part of the transportation Vision. This would permit the seamless integration of walking, cycling, public transport including bus and rail infrastructure with and river based transport which could also support the regeneration and tourism potential of the site.</p> <p>In short, the development of a quality transportation hub is very ambitious and must be coupled with quality service provision and maintenance regime that will positively influence and encourage a cultural and physical 'modal' shift in Waterford City and its environs. Furthermore, due to the location of the transportation hub within an existing city centre location it is expected to support and promote the viability of mixed use developments proposed on the site.</p> | | | | | | | | | | | |
| 1.9.4 | Building on the context and the riverside location of the site to create a high quality urban quarter as a natural extension of the City Centre | | | | | | | | | | |
| SEA Commentary: | | | | | | | | | | | |
| <p>The Goals of the Draft Planning Scheme are supported by the specific objectives and are considered to be the overarching tool in the future decision making process which will be implemented in the form of the Compliance Statement for all planning applications (PSAI 1). This will ensure each planning application demonstrates how each development complies with the Draft Planning Scheme vision, goals and specific objectives which will contribute towards delivering on the Vision to create a high quality urban quarter that integrates with the existing city centre.</p> | | | | | | | | | | | |
| 1.10 | Principal Goals | | | | | | | | | | |
| <ul style="list-style-type: none">To create a strong and complementary extension of the City CentreTo form a sustainable, smart connected urban area of regional significance acting as a gateway to the City.Provide a dynamic new economic engine for the City and Region.To promote the expansion of the City Centre to the north of the River Suir in a manner that enhances and supports balanced and sustainable growth in Waterford City and encourages its vitality and viability.To link the north and south side of the city by providing a new sustainable transport bridge crossing and improve accessibility and connectivity by creating an environment that facilitates internal pedestrian and cycle movements.To provide a rich and diverse mix of uses where a sustainable balance of retail, working, living and recreation can be achieved.To develop a design led scheme of high quality architectural merit.To balance the employment, retail and commercial base of the North Quays with the future residential growth of the City and the South East Region.To provide a sustainable transport hub on the North Quays.To provide for sustainable patterns of movement and access with priority for pedestrians, cyclists and public transport.To promote quality design of the spaces between and around buildings, the public realm that connects the various elements of the North Quays together including the wider hinterland.To create a safe, accessible and socially cohesive environment where people of all ages and abilities can live, work and relax. | | | | | | | | | | | |

| Details of Draft Planning Scheme Proposals | | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
|--|--|------|----|----|-----|----|-----|-----|----|----|-----|
| <ul style="list-style-type: none"> To provide sustainable infrastructure and services for future populations. To provide for the protection, enhancement and improvement of the natural environment, including the avoidance of adverse effects on European sites, particularly the Lower River Suir SAC and the River Barrow and River Nore SAC. To create a sustainable urban environment, which respects its natural, historic and cultural heritage. To provide sustainable solutions that address and manage the risk of flooding and climate change. To promote the incorporation of resource energy efficiency and waste management into the area. | | | | | | | | | | | |

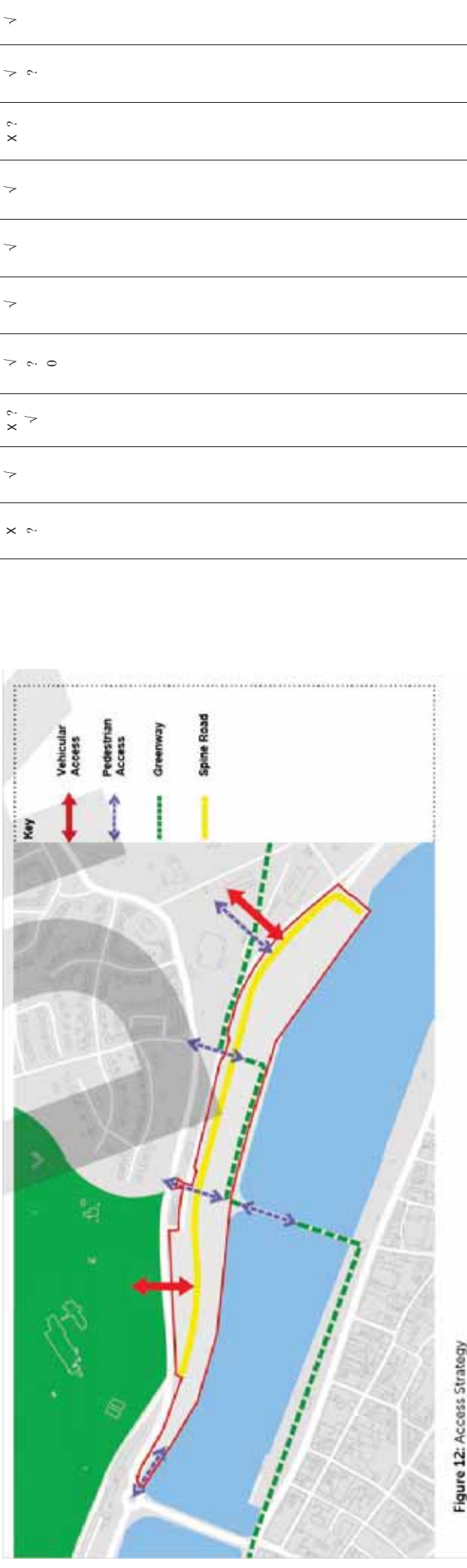
The principal goals are supported by attainable steps referred to as specific objectives throughout the planning scheme.

SEA Commentary:

For the most part, the Goals are strategic in nature and likely to have a significant beneficial impact across the social, economic and environmental aspects of the area. This is particularly evident across improvements in the transport infrastructure, focus on quality design, protection, enhancement and improvement of the natural environment and the wide range of sustainable infrastructure provisions which will be beneficial to new and existing communities in the area. The Goals also include specific projects such as the provision of a transport interchange and sustainable transport bridge. These projects could result in long-term and/or short-term adverse impacts on the environment likely to be mitigated as project stage through the appropriate planning and environmental assessments i.e. EIA, AA, Flood Risk Assessment.

CHAPTER 3 : PHYSICAL & SOCIAL INFRASTRUCTURE

3.a.1 Access Strategy



SEA Commentary:

The Access Strategy provides a multi-modal strategy that facilitates the development of a variety of modes of transport and movement options through and within the site including walking, cycling and vehicular access. A Traffic Impact Assessment (TIA) has been undertaken in order to inform the Access Strategy. A Strategic Flood Risk Assessment has informed the preparation of the Draft Planning Scheme and concludes no significant adverse impacts as a result of the Draft Planning Scheme however projects will be required to produce site-specific flood risk assessments to ensure there is no increase in flooding.

The Access Strategy indicates two vehicular entry points from the Dock Road and includes five pedestrian access points ensuring pedestrian permeability is provided for through the site from Rice Bridge, Dock Road and connecting to the northern environs and across the River Suir. It includes the development of a 'Greenway' through the SDZ and across the proposed bridge. The proposed 'Greenway' will facilitate direct connection with the planned Greenway to New Ross facilitating safe walking and cycling access to the City Centre from New Ross which will have beneficial impact on the population, health and well-being factors.

The Access Strategy facilitates improved travel choice to existing and future populations which will have beneficial impacts on population, reduce greenhouse gas emissions to air and access to physical and social infrastructure. The construction of a spine road which will provide for access to parking areas, loading and unloading, waste management and all such development related traffic and will ensure services are provided in a co-ordinated manner across the site. The rationalisation of vehicles use of the site will help to create a pedestrian and bicycle friendly environment.

The construction activity associated with the provision of such infrastructure is likely to have adverse impacts in the short term across the B1, W1, P1, EPOs likely to be impacted at project stage. All planning applications will be required to undertake Appropriate Assessment to assess the impacts on Natura 2000 sites. Long-term beneficial impacts are expected to be created for P1, W1, S1, AC1, L1 and MA1. The significance of the impacts will be assessed at project stage planning application and/or an Environmental Impact Assessment (EIA) and/or an Appropriate Assessment as appropriate.

3a.2 Parking



The construction ac-

The construction activity associated with the provision of infrastructure such as car parking may have short term adverse impacts on biodiversity, population, water quality. There will be long-term adverse impacts on historic, archaeological and cultural heritage features on site. The significance of impacts are more appropriately assessed at project stage planning application and/or an Environmental Impact Assessment (EIA) and/or an Appropriate Assessment as appropriate. The recommendations of PLUTS and any such revisions will be key to addressing any likely impacts and changes in traffic flow as a result of the development of the SDZ and associated infrastructure as part of the wider development of the City. From an environmental sustainability perspectives it is welcomed that the "the Planning Authority will positively consider some relaxation of the relevant Watford City minimum development management standards for car parking if realistic and feasible alternatives are submitted at planning application stage e.g. integrated land use planning and Smarter Travel plans." This statement in the Draft Planning Scheme reinforces the support for sustainable modes of transport and supporting the behavioural change requirements needed to deliver modal shift away from the private car. The location of the car park in the central zone may detract from the pedestrian friendly environment of the area however it will support the multi-modal function of the transport hub, thereby improving travel choice and accessibility to/ from Watford City. The Draft planning Scheme has incorporated the SFRA recommendations into its design. The application of site-specific flood risk assessments for all planning applications will address specific flooding issues. The regeneration of the site will have beneficial impacts on soil resources, air and climate factors over the long-term.

Details of Draft Planning Scheme Proposals

3a.3 Traffic Assessment

Figure 16 Access Strategy



Figure 16: Access Strategy

SEA Commentary:

Similar to the previous assessments (3a.2), the construction activity associated with the provision of physical infrastructure including bridges, roads and introduction of additional traffic by car, rail and bus services to the site is likely to have short-term adverse impacts on biodiversity, water quality. It is likely to have long-term impacts on historic, archaeological and cultural heritage, landscape and visual impacts which are more appropriately assessed at project stage detailed planning application and/or an Environmental Impact Assessment (EIA) and/or an Appropriate Assessment as appropriate. There are likely to be long term beneficial and/or unknown impacts on population as a result of the development of the site including increased numbers of cars accessing the city centre site from the Dock Road. The development of the site will provide improved connectivity, access and travel choice, through the provision of a multi modal transport hub, supporting Smarter Travel policies and reducing the need for vehicular access to both the North Quays and the City Centre. The relocation of the train station will improve accessibility to the city, improving the journey times, amenity and safety for pedestrians. The relocation of the train station together with the provision of the sustainable transport bridge will ensure all parts of the site are within 5 to 10 minutes walking distance and the city centre has improved safe access to the train station, within 10 to 15 minutes walking distance. The TIA and PLUTS will be key to informing developments take place in a sustainable manner as part of an integrated transportation solution for the City.

| B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
|--------|-------------|-------------|--------|----|-----|--------|--------|--------|-----|
| X ? | ✓ X ? | X ? ✓ | ✓ ? | ✓ | ✓ | 0 ? | X ? | ✓ ? | ✓ |

Details of Draft Planning Scheme Proposals

3a.6 Transport Hub

Figure 19 Transport hub & Access Strategy



Figure 19: Transport hub & Access Strategy

SEA Commentary:

The transport hub and proposed Access Strategy will provide improved travel options to people to include; the relocation of the train station, development of an opening bridge that will act as a sustainable transport bridge across the River Suir and the provision of green routes across the site. The proposed bridge will provide access to pedestrians, cyclists and a designated bus service permitting various modes of access to the site. The bridge will also provide viable transport options through the provision of a bus service reducing the need for a private car especially for short-trips within the city centre. The bridge will improve direct connectivity between the South Quays and the North Quays as well improving permeability and integration between existing and planned residential areas i.e. Ferrybank/ northern environs and the wider area resulting in likely benefits to population and human health indicators across the city. The proposed bridge will also act as a green route connecting with existing and planned green routes across the city supporting the AC1 EPO. The site will also facilitate the extension of the Waterford New Ross Greenway across the site, permitting safe access for pedestrians, cyclists and the proposed city centre bus service across the river. The spine road will provide limited vehicular access to the site from the Dock Road while also facilitating access to car parking areas, retail and commercial activity proposed on the site. The provision of integrated transport infrastructure and quality services will be critical to delivering this Strategy. It is likely that all adverse impacts identified will be short-term during the construction stages and any unknown impacts will be addressed at planning application stage.

3a.8 Future proofing of Transportation Needs

| | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|
| PSI 1: | To develop and promote a modal shift away from the private car use towards increased use of sustainable integrated multi modal transportation network to include walking, cycling public transport integrating bus and rail infrastructure. All future planning applications shall demonstrate how they seek to implement the actions contained in the Government's "Smarter Travel, A Sustainable Transport Future 2009-2020". | 0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| PSI 2: | To support and facilitate the development of an integrated public transport network with efficient interchange between transport modes, to serve the existing and future needs of all ages in association with relevant transport providers, agencies and stakeholders and to facilitate the integration of walking and cycling with public transport. | 0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| PSI 3: | To require a standard workplace travel plan for any development that employs over 100 people in accordance with the "National Transport Authority the preparation of workplace travel plans- a guide for implementers". | 0 | ✓ | 0 | 0 | ✓ | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| PSI 4: | To provide a cycle and sustainable transport bridge across the river to form part of strategic cycling and walking routes. | X | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | ? | ✓ |

SEA Commentary PSI4:

The provision of improved access to the SDZ will support the sustainable development of the site. Unknown long-term or short-term impacts are likely on B1, AC1 that may be present in the Lower River Suir. Impacts on L1 (landscape and visual) will result due to the introduction of new features into the River Suir landscape and wider development of the area will change in landscape construction of the sustainable transport bridge, impacts will be determined at the appropriate project stage through EIA, AA as appropriate.

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|--|--|--------|--------|--------|--------|----|-----|-----|----|----|-----|
| | | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
| PSI 5: | To create and support a well-designed network of pedestrian infrastructure to promote and facilitate walking and cycling; provide priority for pedestrians and cyclists within the North Quays and linking with the surrounding walking and cycling networks in Waterford/Kilkenny environs, including the Waterford/New Ross Greenway. | ✓ ? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PSI 6: | To require provision of good quality end of trip facilities to encourage walking and cycling such as secure and weather-proof bike stands, lockers, showers, changing and drying rooms. | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ |
| PSI 7: | To provide appropriate levels of car parking and cycle parking to serve a range of uses in accordance with the Waterford City Development Plan car parking standards (as amended by Variation No 1 to the Waterford City and County Development Plan). Reduction in car parking standards may be considered appropriate where alternatives means of sustainable transport are being provided for within the site. | 0 | ✓ | 0 | 0 | 0 | ✓ | ? | 0 | 0 | ✓ |
| SEA Commentary: There is an opportunity to provide for sustainable energy charging points as part of the car parking provisions which will have lead to further beneficial impacts on AC2, P1 (air and noise). | | | | | | | | | | | |
| SEA Suggested Amendment: PSI 7: To provide appropriate levels of car parking and cycle parking to serve a range of uses in accordance with the Waterford City Development Plan car parking standards (as amended by Variation No 1 to the Waterford City and County Development Plan). Reduction in car parking standards may be considered appropriate where alternatives means of sustainable transport are being provided for within the site. Planning applications should incorporate electric vehicle charging points across the site. | | | | | | | | | | | |
| PSI 8: | To promote best practice mobility management and travel planning. | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ |
| SEA Commentary: Overview of 'Future proofing of Transportation Needs' objectives: All objectives have a focus on sustainable and integrated transportation which has the potential to impact across the site and the future development of Waterford City. There is likely to be many beneficial impacts across the EPOs including benefits to health and well-being, emissions to air, noise, environment and materials assets. Where unknown or uncertain impacts are identified, these are more appropriately assessed a site-specific planning application stage i.e. EIA, AA or site specific flood risk assessment, as appropriate. | | | | | | | | | | | |
| 3b.1 Environmental Infrastructure | | | | | | | | | | | |
| Specific Objectives | | | | | | | | | | | |
| PSI 10: | To achieve best practise and innovations in SuDS design as part of the planning scheme, including the successful coordination of surface water management with ecology and amenity functions of open space and landscaped areas. All planning applications shall be accompanied by a surface water drainage plan which will include proposals for the management of surface water within sites in accordance with requirements as listed in Section 3b.1.3 above, protecting the water quality of the existing water bodies and ground water sources, and retrofitting best practice SuDS techniques on existing sites, where possible. | ✓ | ✓ | ✓ | ✓ | ✓ | 0 | ✓ | 0 | ✓ | ✓ |
| SEA Commentary: The specific objectives relating to surface water and in particular the SuDS components provide the opportunity for development proposals to efficiently manage, rainwater, fluvial and surface water on site and limit adverse impacts on the receiving environment including to the Lower River Suir SAC and groundwater resources. The application of green and blue infrastructure features throughout the site will assist in this regard. | | | | | | | | | | | |
| SEA Suggested Amendments: PSI10 To achieve best practise and innovations in SuDS design as part of the planning scheme, including the successful coordination of surface water management with ecology and amenity functions of open space and landscaped areas. All planning applications shall be accompanied by a surface water drainage plan which will include proposals for the management of surface water within sites in accordance with requirements as listed in Section 3b.1.3 above, protecting the water quality of the existing water bodies and ground water sources, and retrofitting best practice SuDS techniques on existing sites, where possible. Design and implementation of SuDS shall be in keeping with best practice as detailed in CIRIA 753 'The SuDS Manual'. | | | | | | | | | | | |
| PSI 11: | To ensure the protection of surface and ground water quality in the plan area and surrounding areas. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 0 | ✓ | ✓ |
| PSI 12: | Contaminated surface water such as oil/fire water/detergents will be intercepted and stored appropriately for future treatment and disposal | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 0 | ✓ | ✓ |
| 3b.1.4 Flood Management | | | | | | | | | | | |
| PSI 13: | There will be a requirement for a site specific flood risk assessment for planning applications for the SDZ. The flood risk assessment will consider the impact of the proposed development in accordance with the 'The Planning System and Flood Risk Management' (DEHLG & OPW, 2009). No development shall be allowed that contradicts the recommendations of the SFRA for the North Quays or increases the flood risk to existing developments within the SDZ. As part of the applicants' site specific flood risk assessment a justification test will not be required as this has been completed as part of the Waterford North Quays SFRA. | ✓ X | ✓ X | ✓ | ✓ | ✓ | ✓ | ✓ | 0 | 0 | ✓ |
| SEA Suggested Amendments: PSI 13: There is will-be a requirement for a site specific flood risk assessment for all planning applications for the SDZ. The flood risk assessment will consider the impact of the proposed development in accordance with the 'The Planning System and Flood Risk Management' (DEHLG & OPW, 2009). No development shall be allowed that contradicts the recommendations of the SFRA for the North Quays or increases the flood risk to existing applicants' site specific flood risk assessment a justification test will not be required as this has been completed as part of the Waterford North Quays SFRA. | | | | | | | | | | | |
| PSI 14: | Basements, below 4.42m OD shall only be utilised for vehicle parking and storage and ancillary services all access points to basements shall be defended to a level of 4.42m OD. Basements shall be lined with impermeable sealants as to restrict groundwater ingress and pumping stations should also be installed. | 0 | ✓ ? | ✓ ? | ✓ ? | ✓ | ✓ | 0 | 0 | 0 | ✓ |
| SEA Commentary on Flood Management: The SDZ site is within a flood zone and defence area. The specific objectives above ensure that each application is subject to a site specific flood risk assessment and the recommendations of the SFRA. It is likely that some of the conflicts identified above will be mitigated by measures arising out of separate consent procedures. Furthermore, these objectives provide for infrastructure and utility development at the North Quays, in combination with the implementation of other provisions from the Draft Planning Scheme which is expected to contribute towards the overall sustainable development of the SDZ. | | | | | | | | | | | |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|---|---|------|----|----|-----|----|-----|-----|----|----|-----|
| 3b.2 | Utilities and ICT | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
| Telecommunications | | | | | | | | | | | |
| PSI 15: | It is an objective to require future applications to include details of the proposed network at planning application stage. | 0 | ✓ | 0 | 0 | ✓ | ✓ | ✓ | 0 | 0 | ✓ |
| PSI 16: | To require the use of ducting for information communication technology within individual new residential and commercial developments. | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ |
| PSI 17: | To facilitate the development of accessible Wi-Fi zones within the planning scheme area. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| 3b.4 Waste Management | | | | | | | | | | | |
| PSI 18: | To require all development within the North Quay will comply with the waste policy as set out in the Waterford City Development Plan 2013-2019 in accordance with the waste management hierarchy of waste prevention, waste recycling energy recovery and disposal. At planning application stage proposed development will have to show regard for refuse collection/recycling composting etc at suitable locations where required. | 0 | ✓ | ✓ | ✓ | ✓ | 0 | ✓ | 0 | 0 | ✓ |
| Any development that promotes significant quantities of new development in the absence of adequate measures to protect the environment or capacity in the water or wastewater infrastructure could potentially have significant adverse impacts on the environmental receptor water. | | | | | | | | | | | |
| Suggested new Specific Objective: It is envisaged that future water and waste water treatment services will be addressed with Irish Water at pre-planning stage. It is understood that future proposed developments will be required to be connected into the existing Ferrybank pump station which has been sized to take account of potential development on the North Quays. Potential impacts to water quality both surface water and ground water will be required to be considered. Ground investigations currently taking place on the site will inform potential contaminated land issues and any mitigation required to ensure protection of water resources and waste management. A specific objective is required to address the potential issues arising on soil, ground and surface water contamination if potentially contaminated soils are not managed appropriately – both during construction and longer term. Removal of contaminated soils from sites and remediation of the site will lead to a long term beneficial impact on the soil resources, groundwater and surface water bodies in the area. | | | | | | | | | | | |
| Insert new specific objective: PSI XX: All potentially contaminated land shall be dealt with in accordance with waste management legislation prior to redevelopment. | | | | | | | | | | | |
| 3b.5 Biodiversity | | | | | | | | | | | |
| PSI 19: | Any plan or project with the potential to give rise to significant direct, indirect, secondary impacts or through indirect or cumulative impact, on a Natura 2000 site(s) shall be subject to an Appropriate Assessment in accordance with Article 6 of the EU Habitats Directive (92/43/EEC) and associated legislation and guidelines informing decision making. All proposals are required to consider the mitigation measures contained in the Natura Impact Report of the Draft Planning Scheme. | ✓ | ✓ | ✓ | 0 | ✓ | 0 | 0 | 0 | 0 | ✓ |
| PSI 20: | All development should include proposals on how they address the natural heritage in terms of conservation, management, and improvements to the local biodiversity in the urban environment. Developments shall incorporate landscaping and other design features that have the potential to improve or enhance existing natural habitats, ecological corridors and blue and green infrastructure. | ✓ | ✓ | ✓ | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ |
| PSI 21: | All development proposals will be encouraged to include the planting of appropriate native flora to support and develop habitats for both terrestrial and aquatic fauna. Planting should, as far as possible, be limited to native plant species and enhance the riverine and riparian environment and protect the native flora and fauna in the area. | ✓ | ✓ | ✓ | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ |
| PSI 22: | All future proposals shall ascertain the extent, if any, of invasive species, and implement measures to control or, where possible, eradicate them from the relevant site. | ✓ | ✓ | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ |
| SEA Commentary: Including biodiversity specific objectives helps promote connectivity of existing and new habitats and the enhancement of ecological corridors (blue and green), improve delivery of quality public open space both that serves a recreational/ amenity as well as biodiversity, flora and fauna function. The inclusion of PSI 19 ensures the protection of the conservation objectives of the Lower River Suir SAC any other Natura 2000 site that may be impacted upon as a result of future development proposals. | | | | | | | | | | | |
| 3b.6 Community | | | | | | | | | | | |
| 3b.6.3 Healthcare facilities | | | | | | | | | | | |
| PSI 23: | To promote the development of community, health, childcare and other community and social facilities as part of the mixed land-use policy for the SDZ. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| 3b.6.4 Play Areas | | | | | | | | | | | |
| PSI 24: | To include purposefully designed play areas as part of future planning applications on the North Quays. | 0 | ✓ | 0 | 0 | ✓ | 0 | 0 | 0 | 0 | ✓ |
| PSI 25: | To require an indoor recreational space within the residential area providing an inviting place for informal recreation. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| CHAPTER 4 : PLANNING STRATEGY | | | | | | | | | | | |
| 4.1 Introduction | | | | | | | | | | | |
| PSS 1: | All future planning applications shall comply with the relevant Waterford City Development Plan policies and objectives. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SEA Commentary: The inclusion of the reference to the Waterford City Development Plan policies and objectives ensures additional mitigation in relation to all aspects of the environment can be relied upon if not specifically stated within the Draft Planning Scheme itself. | | | | | | | | | | | |
| SEA Suggested Amendment: | | | | | | | | | | | |
| PSS 1: | All future planning applications shall comply with the relevant Waterford City Development Plan policies and objectives (and any subsequent revisions). | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PSS 2: | All future planning applications shall have regard to: • Design Standards for new Apartments, Best Practice Urban Design Manual. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|---|--|--------|----|----|-----|----|-----|-----|----|----|-----|
| | | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
| <ul style="list-style-type: none"> Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (2015) Department of the Environment, Community and Local Government. Smarter Travel – A Sustainable Transport Future 2009-2020. | | | | | | | | | | | |
| SEA Commentary Architecture, high quality design and construction practices have the potential to address key sustainability issues across the social, economic and environmental spectrum e.g. energy efficiency, resource efficiency, water minimisation, climate change, health and well-being for individuals and communities. The inclusion of the requirement for future planning applications to have regard to the listed documents ensures that the wide range of policies and objectives contained within the Development Plan can be brought to bear in relation to implementing the Draft Planning Scheme and ensuring all future planning applications work towards the protection and improvements across all EPOs. Inclusion of have regard to Government Guidance on best practice guidance in relation to residential development and smarter travel considerations will ensure future planning applications have regard to these documents. The inclusion to insert additional text incorporates changes to these documents are provided for as part of the Draft Planning Scheme into the long-term. | | | | | | | | | | | |
| SEA Suggested Amendment: PSS 2: All future planning applications are required to have regard to: <ul style="list-style-type: none"> Design Standards for new Apartments, Best Practice Urban Design Manual (2015) Department of the Environment, Community and Local Government, and any subsequent revisions/ updates. Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (2015) Department of the Environment, Community and Local Government and any subsequent revisions/ updates. Smarter Travel – A Sustainable Transport Future 2009-2020 and any subsequent revisions/ updates. | | | | | | | | | | | |
| 4.3 Land Uses | | | | | | | | | | | |
| PSS 3: To foster a rich mix of retail, commercial, residential, cultural and leisure activities to support a vibrant enlivened urban quarter. | | 0 | ✓ | 0 | 0 | ✓ | ? | ? | ✓ | ✓ | ✓/? |
| SEA Commentary: | | | | | | | | | | | |
| PSS 3 To foster a sustainable rich mix of retail, commercial, residential, integrated transport, cultural and leisure activities to support a vibrant enlivened urban quarter. | | | | | | | | | | | |
| PSS 4: To provide a mix of uses throughout the SDZ site that that will create active and animated spaces both day and night, respecting the unique biodiversity of the area. | | X ? | ✓ | 0 | 0 | 0 | 0 | ? | ✓ | ✓ | ✓/? |
| SEA Commentary: | | | | | | | | | | | |
| Public open spaces and lighting features are often associated with animating spaces during both day and night. Lighting features close to the Lower River Suir SAC should consider potential impacts on biodiversity (e.g. otters, bat fauna) due to light spill. Public lighting could be provided from sustainable energy sources and also endeavour to reduce light spill/ light pollution in the urban environment. | | | | | | | | | | | |
| SEA Suggested Amendment: | | | | | | | | | | | |
| PSS 4 To provide a mix of sustainable uses throughout the SDZ site that that will create active and animated spaces both day and night, respecting the unique biodiversity of the area. | | | | | | | | | | | |
| PSS 5: To ensure an appropriate level of active ground floor uses to make a positive contribution to the street level activity and ensure passive surveillance. | | 0 | ✓ | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ |
| SEA Suggested Amendment: | | | | | | | | | | | |
| PSS 5 To ensure an appropriate level of active ground floor uses to make a positive contribution to the street level activity and ensure passive surveillance across the site. | | | | | | | | | | | |
| PSS 6: To provide a range of supporting uses such as local convenience shops, restaurants, cafés and leisure, health care and financial services within the SDZ area. | | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| 4.3.1 Retail | | | | | | | | | | | |
| PSS 7: To provide a maximum of 30,000 sqm of net retail comparison floorspace. | | 0 | ✓ | 0 | 0 | ✓ | ? | 0 | ? | ? | ✓ |
| SEA Suggested Amendment: | | | | | | | | | | | |
| PSS 7: To provide a maximum of 30,000 sqm of net retail comparison floorspace in accordance with Guidelines for Planning Authorities Retail Planning (2012), Department of the Environment, Community and Local Government and/ or any subsequent revisions. | | | | | | | | | | | |
| 4.3.2 Office | | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | 0 | ✓ |
| PSS 8: To facilitate a range of office types taking into account of the demand for flexible and dividable floor plates. | | | | | ? | | | | | | |
| 4.3.3 Residential | | | | | | | | | | | |
| SEA Suggested Recommendation: | | | | | | | | | | | |
| In order to ensure a mix of residential units is delivered across the site, in line with requirements of the City and Government Policy, the text contained in the Draft Planning Scheme text could be included as part of a specific objective (Section 4.3.3) as part of a Specific Objective of the Planning Scheme as follows: | | | | | | | | | | | |
| PSS X The following mix is a requirement of the draft planning scheme: | | | | | | | | | | | |
| <ul style="list-style-type: none"> Maximum of 25-30% comprise of 1 bedroom apartments Maximum of 10-12% of units comprise of studio apartments Maximum of 50-60 % comprise of 2 bedroom apartments Maximum of 15-18% comprise of 3 bedroom apartments | | | | | | | | | | | |
| PSS 9: To promote a residential population of circa 500 to 600 population in the North Quays, by providing high quality adaptable homes and quality residential choices for a range of household types inclusive of single occupants, students, young couples, families, the elderly and those with special needs. | | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| PSS 10: To promote sustainable higher densities and quality innovative designs achieving generous standards of residential amenity for residents, including spacious and adaptable interiors, high quality natural lighting, good storage facilities, private open space amenity and car parking/bicycle parking. | | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|--|---------|----|----|-----|----|-----|-----|----|----|-----|--|
| | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 | |
| PSS 11: To seek a successful interaction between the residential scheme, streets and public realm to foster a true sense of neighbourhood and encourage interaction between residents. Opportunities for animated ground floors, homes with own door access, private landscaped terraces and a successful integration with communal and public open space shall be encouraged. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ | |
| PSS 12: To promote socially balanced communities through the implementation of Part V (as amended) in accordance with the Waterford City Development Plan. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ | |
| PSS 13: To promote sustainable land use patterns by integrating sustainable modes of travel and transportation into the design of residential developments. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ | |
| PSS 14: Apartment standards are to be in accordance with the Waterford City Development Plan and the "Sustainable Urban Housing – Design Standards for New Apartments- Guidelines for Planning Authorities". | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | |
| PSS 15: Promote the implementation of supporting community, social, economic, cultural health and education facilities in tandem with the completion of new residential development. | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ | ✓ | 0 | ✓ | |
| 4.3.4 Hotel and Conference Centre (200-300 bed) | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ | |
| PSS 16: To facilitate the development of a high quality hotel and conference centre on the North Quays. | | | | | | | | | | | |
| 4.3.5 Tourism/Cultural development | | | | | | | | | | | |
| PSS 17: To facilitate the development of tourism/cultural development on the North Quays with associated tourism related retail. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | ✓ | 0 | ✓ | |
| PSS 18: To facilitate where possible berthing facilities for recreational /leisure vessels and appropriate amenity provision reflecting the cultural heritage of the area. | ? | ✓ | 0 | 0 | 0 | ✓ | 0 | ✓ | 0 | ✓ | |
| 4.3.6 Public Open Space | ✓ | ✓ | 0 | 0 | 0 | ✓ | 0 | ✓ | 0 | ✓ | |
| The Draft Planning Scheme requires that a minimum of 20% public open space is provided for throughout the scheme to include a minimum 10 metre wide riverside promenade/s (exception to this may be permitted at certain locations if justified in a design statement). | | | | | | | | | | | |
| SEA Commentary: It is recommended that the text above is made into a Specific Policy Objective. Proposed changes are as follows: | | | | | | | | | | | |
| SEA Recommendation The Draft Planning Scheme requires that a minimum of 20% public open space is provided for throughout the scheme to include a minimum 10 metre wide riverside promenade/s (exception to this may be permitted at certain locations if justified in a design statement). The public space shall contribute to the local biodiversity and create a mix of well designed active and passive open spaces throughout, in accordance with Specific Objectives in Section 3b.5 Biodiversity. Further guidance can be referred to in: "Green City Guidelines: Advice for the protection and enhancement of biodiversity in medium to high-density urban developments" (2008) | | | | | | | | | | | |
| PSS 19: To develop a hierarchy of inter-connected hard and soft open spaces, recreation and landscaped areas, walking and cycling priority routes, through the SDZ area that support local biodiversity and development of ecological corridors as far as practical. | ✓ | ✓ | 0 | 0 | 0 | ✓ | 0 | ✓ | 0 | ✓ | |
| PSS 20: To provide a minimum of 20% public open space to include a minimum 10 metre wide riverside promenade/s that contributes to local biodiversity in accordance with specific objectives in Section 3b.5 Biodiversity. | ✓X ? | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ? | ✓ | |
| SEA Commentary: This proposal will be subject to site-specific assessment and environment control measures in compliance with the Draft Planning Scheme and with Article 6(3) of the Habitats Directive Article 6(3) and the requirements of the Water Framework Directive. | | | | | | | | | | | |
| PSS 21: To provide a public plaza at the landing point of the sustainable transport bridge. Pedestrian connectivity to the Dock Road should be provided at this location. | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ? | ✓ | |
| SEA Suggested Amendment: | | | | | | | | | | | |
| PSS 21: To provide a public plaza at the landing point of the sustainable transport bridge. Pedestrian and cycling connectivity to the Dock Road is required to should be provided at this location. | | | | | | | | | | | |
| PSS 22: To provide a public plaza at the eastern portion of the site on the Frank Cassin Wharf. Pedestrian connectivity to the northern environs of the city is required to should be provided through the proposed plaza. | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ? | ✓ | |
| PSS 23: To promote the integration of community, cultural and recreational development, through the provision of generous landscaped amenity areas and public realm. | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ | |
| PSS 24: The size and animation of open spaces, to include both hard and soft landscaping shall be related to the height of the adjoining buildings in order to achieve satisfactory levels of sunlight and daylight. | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ | |
| PSS 25: To seek the provision of a wide range of both active and passive recreation for various age groups and abilities. | 0 | ✓ | 0 | 0 | ? | ✓ | 0 | 0 | ✓ | ✓ | |
| SEA Commentary: All landscaping shall be designed according to PSI 21 of the Section 3b.5 Biodiversity of the Draft Planning Scheme. | | | | | | | | | | | |
| 4.3.7 Supporting Issues | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | 0 | ✓ | |
| PSS 26: To encourage a wide range of supporting and complimentary uses throughout the North Quays in tandem with the main land use objectives. | | | | | | | | | | | |
| 4.4 Extent of Development | | | | | | | | | | | |
| PSS 27: To deliver a maximum quantum of 150,000 sqm of city centre type development in the Planning Scheme area. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 0 | 0 | 0 | ✓ | |

Details of Draft Planning Scheme Proposals

Table 1: Extent of Development

| Land Use | Minimum Net Floor Area | Maximum Net Floor Area |
|---|------------------------|------------------------|
| Retail (Comparison) | 20,000sqm | 30,000sqm |
| Food and Beverage | 5,000sqm | 7,000sqm |
| Office | 10,000sqm | 15,000sqm |
| Hotel and Conference Centre | 10,000sqm | 15,000sqm |
| Tourism/Cultural/Enterprise/Light Industry/Community Facilities | 10,000sqm | 15,000sqm |
| Residential | 200 units | 300 units |

SEA Commentary: The land use proposals provide for a mixed use development to take place which is broadly consistent with the Government Order S.I. 30 of 2016. In general, the minimum and maximum gross floor areas reflect the desired gross floor areas required to deliver the selected alternative for the SDZ. It is likely there will be short term adverse effects during construction stages on: B1, P1 and W1 however these are likely to be mitigated at planning application stage. Each planning application will be required to be consistent with the Planning Scheme Vision, Goals and Specific Objectives as well as the relevant Waterford City and County Council policies and objectives at planning application stage. There is insufficient detail at this level of assessment to determine the significance of these impacts across the EPOs and as such these are more appropriately assessed at project level stage through the appropriate planning and environmental assessments i.e. EIA, AA, Flood Risk Assessment.

SEA Queries:

A split between the landuse types including the sqm available for light industry as part of the land use category including: Tourism/ Cultural/ Enterprise/ Community is required. The nature and type of light industrial activities that will be permissible / considered suitable should be clearly outlined as part of the Planning Scheme in order to adequately consider the likely potential effects on the environment. The total sqm available for residential development will provide clarity in relation to minimum and maximum sqm available for this landuse. Population growth and housing provision on brownfield sites is a key national objective for Waterford City included as part of the NPF. The Planning Scheme could indicate the minimum and maximum densities to be achieved on the site/ areas of the site and suitable locations for low/high/ medium density development. More guidance in relation to this can be found in Residential density guidelines (1999), Sustainable Residential Development in Urban Areas (Cities, Towns & Villages), Government of Ireland, 2009, and Design Standards for New Apartments, DECLG, 2015 or any such revisions.




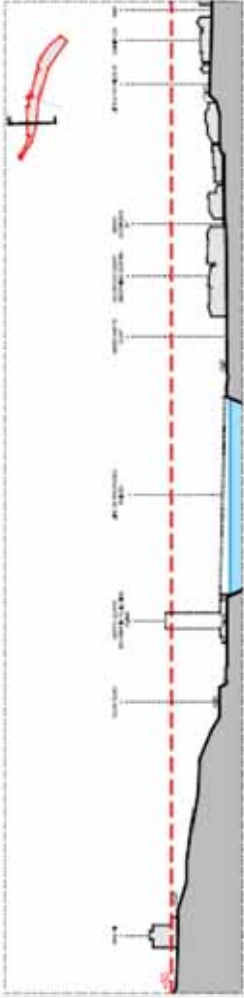


Figure 23: Development Zones

Details of Draft Planning Scheme Proposals

SEA Commentary:

The Development Zones Figure reflects the proposed Development Zones of the North Quays SDZ and permissible heights. Due to the broad nature of the development proposals presented, it is not possible to determine exact impacts on biodiversity, B1, P1, W1, AC1, C1, L1 but it is expected that development of the SDZ will contribute to enhancing the currently derelict site and benefit all EPOs over the long-term. There is insufficient detail at this level of assessment to determine the significance of these impacts across many of the EPOs and as such these are more appropriately assessed at project level stage through the appropriate planning and environmental assessments i.e. EIA, AA, Flood Risk Assessment and application of the other Specific Objectives and proposed mitigation measures contained in the SEA including Design Statements for high buildings. Application of Specific Objective relating to Design and Visual Impact Assessment in relation to heights will be particularly relevant in relation to the block format/ structure and the creation of a sense of openness and punctuation relating to future development of the zones.


| Details of Draft Planning Scheme Proposals | | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
|---|-------|------|----|----|-----|----|-----|-----|----|----|-----|
| 4.5 | Views | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | ✓ | 0 |
|  <p>Figure 25: Views with contextual images</p> <p>South to North (A) Bridge Street (B) Barronstrand Street (C) The Mall (D) Panoramic view from South Quays to North Quays North to South (E) Western approach to Rice Bridge (F) Rockshire Road (G) Panoramic view from North Quays to South Quays</p> <p>It is generally recognised that the most significant views are those generally available from the north to the south and vice versa from any point on the river's edge. It is the objective of the draft planning scheme that these views will be retained as the defining views of the City.</p> | | | | | | | | | | | |
| SEA Commentary: Consideration could be given to including these views as a specific objective SEA Suggested Amendment: To safeguard, protect, preserve, and enhance existing listed views while supporting the creation of new focal points in the landscape, respects culture of the site and scenic nature of the River Suir waterway corridor. | | | | | | | | | | | |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|---|-----------------|--------|---------|----|-----|----|-----|-----|--------|--------|-----|
| 4.6 | Building Height | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
| PSS 28: Applications for high-rise buildings over 60m OD shall be accompanied by a design statement as part of the assessment criteria for high buildings. | | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| PSS 29: High buildings must make a positive contribution to the city skyline, city structure and topography, in accordance with Section 13.9.1 of the Waterford City Development Plan 2013 - 2019. | | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| 4.7 Massing | | | | | | | | | | | |
| PSS 30: High quality development will be achieved by adhering to development management standards set out in the Waterford City Development Plan, such as daylight, provision of private and public space, privacy and overlooking. | | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | 0 | ✓ |
|  <p>Figure 26: Context Section at Western Development Zone</p>  <p>Figure 27: Context Section at Central Development Zone</p>  <p>Figure 28: Side Section at Eastern Development Zone</p> | | 0 ? | ✓ /? | 0 | 0 | ✓ | ✓ | 0 | X ? | ✓ ? | 0 |

SEA Commentary:

The regeneration of the North Quays is of strategic importance to the State. The Massing Figures above indicate the largest block is within the Central Development Zone. It also illustrates that massing reduces at the western and eastern development zones while heights are permitted to increase. The Central Development Zone, is illustrated as a large mass structure with limited obvious permeability provided within this area. However, based on specific objectives as part of the Draft Planning Scheme, it is expected that designs will be of high architectural design, including a variety of podiums and levels that will respect the natural forces (i.e. wind tunnelling, south facing aspect, etc) and will positively address neighbouring properties in terms of visual impacts and overlooking. These supporting objectives are expected to positively address the constraints of the site, environmental and social aspects, including; permeability, travel choice, impacts to neighbouring properties, landscape and visual. However, all proposals are expected to have long-term adverse impacts on potential cultural heritage resources (C1) during construction stages.

Where unknown impacts are identified, it is considered that there is insufficient detail at this level of assessment to determine the significance of impacts across the EPOs and as such these are more appropriately assessed at project level stage through the appropriate planning and environmental assessments i.e. EIA, AA, Flood Risk Assessment. The requirement to complete Design Statement and Visual Impact Statement, (as part of a separate specific objective of the Draft Planning Scheme) any likely overlooking/ overshadowing issues will be addressed. Overall, with the exception of potential adverse impacts on C1, the regeneration of this city centre brownfield site is expected to have long-term beneficial impacts across all other EPOs, for site and the City as a whole.

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|---|---|---------------|-------------|--------|-----|----|-----|-----|-------------|-------------|-----|
| 4.9 | Public Realm | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
| PSS 31: | Develop a high quality public realm through provision of appropriate public open space, surface treatments, street lighting, furniture and public art. | ✓ ? | ✓ | 0 | 0 | ✓ | ✓ | 0 | ? | ✓ | ✓ |
| SEA Suggested Amendment: PSS 31: Develop a high quality public realm through the provision of appropriate public open space, surface treatments, street lighting, furniture and public art that promotes the North Quays as a modern innovative urban quarter while also respecting its rich historical past and cultural heritage. Reference should be made to Design Manual for Urban Roads and Streets (2013), Department of Transport, Tourism and Sport and Environment, Community and Local Government. | | | | | | | | | | | |
| 4.10 | Urban Form | | | | | | | | | | |
| PSS 32: | Promoting the development of a legible urban structure with a well defined network of routes and spaces for pedestrian, cyclist and vehicular movement. | 0 | ✓ ? | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| SEA Suggested Amendment: PSS 32: Promoting the development of a legible urban structure with a well defined network of routes and spaces for pedestrian, cyclist and vehicular movement as well as creating safe, comfortable, unique neighbourhood developments. | | | | | | | | | | | |
| PSS 33: | Creating new routes which contribute to ease of movement and connect existing spaces, circulation patterns and public transport. | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | 0 | ✓ |
| PSS 34: | Provide for integration and connections with the wider urban area and the city in generally. | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | 0 | ✓ |
| PSS 35: | Provision to optimise permeability and access for pedestrians. | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | 0 | ✓ |
| |  | X** ✓ ? | ✓ ? ? | ? ? | 0* | ✓ | ✓ | 0 | X ? ? | ✓ ? ? | ✓ |
| SEA Commentary: The Schematic Masterplan reflects the proposed urban form of the North Quays SDZ. Due to the broad nature of the development proposals presented, it is not possible to determine impacts across all EPOs particularly, B1, P1, W1, C1, L1 but it is expected that there will be both adverse, mainly during construction stages, and long-term beneficial impacts as a result of future developments. In general, the Schematic Masterplan illustrates development proposals that will take place mainly in the Central Development Zone. Open space provisions in illustrated in the western and eastern development zones. It is likely that amenity, play areas and public open spaces will be provided here. It is not clear the exact locations that retail, commercial and residential developments or if this is proposed to be developed across the site. The Central Development Zone will contain the proposed transport hub which will contribute to delivering a regeneration catalyst as part of the Vision of the Draft Planning Scheme. Generally, on the grounds of sustainability, the objective should be to optimise the density of development in response to type of site, location and accessibility to public transport. "Existing public transport nodes or locations where good public transport can be provided that are close to employment and a range of urban amenities including parks/waterfronts, shopping and other services, are also particularly suited to apartments. (Sustainable Urban Housing: Design Standards for New Apartments, DECLG 2015)" The provision of residential development and in particular higher density proposals should take into account all levels of sustainability (social, economic and environmental), appropriate accessibility by public transport and the objectives of good design. Residential development close to public transport hubs also helps support the efficient use of, and investment in, public transport. The provision of a mix of well designed and constructed land uses across the SDZ site should contribute to meeting environmental sustainability objectives and would contribute towards enlivening the new urban quarter proposed and neighbourhood development throughout the day and night. Application of Specific Objective PSAs will be particularly relevant in relation to the block format/ structure and the creation of a sense of openness and punctuation relating to future proposals. | | | | | | | | | | | |
| 4.11 | Sustainability | | | | | | | | | | |
| PSS 36: | To promote reduced energy consumption and to provide for sustainable means of energy where feasible and appropriate. | 0 | ✓ | 0 | 0 | 0 | 0 | ✓ | 0 | 0 | 0 |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|---|--|--------|---|---|---|---|---|---|---|---|----|
| Chapter 5 Architectural Strategy | | | | | | | | | | | |
| 5.1 Architecture | | | | | | | | | | | |
| 5.1.1 Architectural Vision | | | | | | | | | | | |
| PSA 1: All applications are required to submit a Design Statement and Visual Impact Assessment as part of planning applications with supporting illustrative material and description of proposed development demonstrating how it has been developed having regard to the built heritage context, topography and landscape character of the site. | | | | | | | | | | | |
| PSA 2: To create a sense of place, character and identity for the North Quays that can be used to brand a new vision for the city. | | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ✓ |
| PSA 3: To seek to generate and support vibrancy and activity in the public domain. | | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ✓ |
| PSA 4: To create an urban quarter of scale and mass while also acknowledging the existing city on the south bank. This can be achieved by creating a lively, varied and balanced compositional approach that counterpoints the south quays. | | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| SEA Suggested Amendment: | | | | | | | | | | | |
| PSA 4: To create an sustainable urban quarter of scale and mass while also acknowledging the existing city on the south bank. This can be achieved by creating a lively, varied and balanced compositional approach that counterpoints the south quays. | | | | | | | | | | | |
| PSA 5: To create a sense of openness and punctuation. This can be achieved through a variety of building forms, heights and breaks between and within blocks. A singular monolithic or repetitive block structure with long, unrelieved elevations facing the waterfront or transverse routes will not be considered appropriate. Height and form variation will be encouraged reflecting the diversity of building usage and type, while avoiding a monolithic or repetitive appearance to the river side or the Dock Road facades. Appropriate set back and terracing may be utilised to achieve best advantage of views and aspect. Indentations in the transverse direction would help create protected areas from the wind funneling along the river. | | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| PSA 6: To address the need for flood protection and change in levels across the site by incorporating car parking with retail, commercial and residential development above. The interfaces between buildings and public spaces to be carefully considered bearing in mind this transverse level change. There is a significant design opportunity to create a lively and varied public realm that will call for innovative solutions | | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ | 0 | ? | ✓ |
| PSA 7: All landmark buildings should achieve an exceptionally high quality design and finish. The ground floor of buildings should contain active uses to ensure a continuous degree of movement around the site. | | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | ? | ✓ |
| 5.1.2 Connectivity & Porosity | | | | | | | | | | | |
| PSA 8: Proposed layouts must demonstrate high standards of permeability prioritising walking and cycling routes that are direct, safe and secure. Major barriers to pedestrian/cycle movement must be avoided. Layouts shall be designed to ensure that defensible space is defined by buildings, which in turn provide passive supervision of the public realm. | | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ |
| PSA 9: To provide pedestrian crossings over the railway line opposite the proposed new sustainable transport bridge and also in the vicinity of the Rockshire Road intersection. The architectural expression of these crossings should be considered with respect to the overall scheme and the design concept outlined in the Design Statement. | | 0 | ✓ | 0 | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓? |
| SEA Commentary: | | | | | | | | | | | |
| Clarification required. It is unclear what Design Statement is being referenced here. | | | | | | | | | | | |
| PSA 10: To require that development within the Planning Scheme area is consistent with the development of the Waterford greenway extending to New Ross. | | 0 | ✓ | 0 | 0 | 0 | 0 | ✓ | 0 | ? | ✓ |
| SEA Suggested Amendment: | | | | | | | | | | | |
| PSA10: To require that development within the Planning Scheme area is consistent with, and connected to the development of the Waterford greenway extending to New Ross. | | | | | | | | | | | |
| PSA 11: Consideration should be given to connectivity at upper levels as well as the main pedestrian level. | | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| PSA 12: The opportunity to provide an indoor/covered protected route within the development should be considered at planning application stage. | | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ✓ |
| 5.1.3 Podiums | | | | | | | | | | | |
| PSA 13: Podium levels will vary between approx. 6m OD and approx. 9m OD. The higher podium level which forms the floor of the retail block/s should not generally extend beyond the central retail development area and the public plaza terminating the eastern end of this zone. The transition between the podium levels can extend laterally and will be considered at planning application stage. | | ? | ✓ | 0 | 0 | ? | ✓ | ✓ | 0 | 0 | ? |
| PSA 14: Particular consideration should be given to the treatment of the faces of the podium/s at the river edge. There should be a design strategy proposed that is practical and aesthetically considered. One approach may be to face the lower plinth that addresses the river with a neutral type finish to create a continuous visual 'line' along the length of the quays and upper plinths recessed and brightly finished as part of the active promenade. | | X ? | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PSA 14: Particular consideration should be given to the treatment of the faces of the podium/s at the river edge. There should be a A design strategy is required at planning application stage proposed that is practical, ecological and aesthetically considered. One approach may be to face the lower plinth that addresses the river with a neutral type finish to create a continuous visual 'line' along the length of the quays and upper plinths recessed and brightly finished as part of the active promenade. | | | | | | | | | | | |
| PSA 15: The interplay between the plinth levels should be used to create variety and spatial interest connecting the levels. Depending on the location, there should be steps, ramps, planting, artwork, seating, lighting and other public realm treatments. | | ✓ ? | ✓ | 0 | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ |
| SEA Commentary: Design of plinths and podiums located close to the River Suir shall be cognisant of minimising impacts on the Lower River Suir SAC and shall be in accordance with Section 3b.5 Biodiversity of the Draft Planning Scheme. | | | | | | | | | | | |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|--|--------|-------|--------|-------|--------|-------|-------|--------|-------|-------|---|
| 5.1.4 Promenades | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 | |
| PSA 16: Minimum of 10 metres is required between the edge of the building and waterfront. Exceptions to this may be permitted at certain locations if justified in the Design Statement. The planning scheme allows for a possible cantilevered walkway/boardwalk extending 5 metres over the river. Such proposals will be detailed at planning application stage. | X ? | ✓ | X ? | 0 | ✓ ? | ✓ | 0 | 0 | ✓ | ✓ | |
| SEA Commentary: The effects of any proposed cantilevered promenade/riverside walkway/boardwalk and possible effects on Lower River Suir SAC conservation objectives is more appropriately assessed at planning application stage and Appropriate Assessment process. Construction details and methodology will determine the significance of impacts, short-term or long-term on the SAC, water resources, soil contamination, known/ unknown archaeological features. A cantilevered walkway/boardwalk is expected to have beneficial impacts on the population, reduce need to develop on more soil resources, contribute positively to the landscape and visual and social infrastructure of the area. All applications shall be subject to the requirements of Section 3b.5 of the Draft Planning Scheme and Mitigation measures contained in the NIR to ensure no adverse impacts on any Natura 2000 site(s). | | | | | | | | | | | |
| PSA 17: Promenade/s should have a high level of amenity including seating, street furniture, greening and public lighting – preferably bespoke design elements and high quality, durable materials. | ✓ ? | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 ? | ✓ | ✓ | |
| PSA 18: Promenade/s should feel safe and have zones that are protected from the elements during wind and inclement weather. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ | ✓ | |
| 5.1.5 Edges & Massing | | | | | | | | | | | |
| PSA 19: New facades and blocks will provide a fresh and innovative response to today's needs, while carefully considering the site and its relationship to the South Quays, creating a dialog which respects and shows an affinity with its historic neighbour while affirming its own unique identity. There should be significant visual breaks in the north and south facades expressed both as gaps between buildings and as movement in the horizontal and vertical plane within building blocks. | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | ✓ | ? | ✓ | |
| PSA 20: Given the greater scale in terms of individual buildings compared with those on the South Quays an overall balanced and compositional approach for all of the building forms is required to create variety, diversity and also a sense of unity for the entire development. This would act to mitigate the larger volumes necessary to achieve the required floor plates, and also to set a relevant typology for the North Quays that does not mimic or overpower the fine grain of the South Quays. | 0 | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | 0 | ✓ | 0 |
| PSA 21: The interface with the Dock Road presents a significant design challenge that must consider a series of changing levels, the rail line and dual carriageway. Buildings addressing Dock Road must consider lively facades and pedestrian access at key locations with good connections to Ferrybank. | 0 | ✓ | 0 | ? | ✓ | ✓ | 0 | ? | 0 | ✓ | |
| 5.1.6 Central Development Zone | | | | | | | | | | | |
| PSA 22: To be of outstanding design, create a unique identification with the city and North Quays, be of civic scale, serve to attract people over the sustainable transport bridge and animated in its night time appearance. | ? | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ | 0 | |
| PSA 23: Large scale urban design qualities should include an identifiable and varied form, height and functionality with individuality generated by reflecting interior uses. The overall composition should be broken up in form by transverse breaks through to the Dock Road elevation to alleviate massing. These may be glazed or open. The principal break must be from the sustainable transport bridge to Dock Road and part of this could be glazed over and form the significant interior public space of the retail block. Many retail developments require large continuous floor plates containing shop floor, interior circulation and services – and it is recognised that much of the central development zone will be devoted to retail. However, appropriate design can create exciting opportunities for a civic scale that also can deliver a variety of grain. | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ✓ | 0 |
| PSA 24: Riverfront facade/s to be relieved and activated visually to address overall massing. This can be achieved by stepping the facade/s in the vertical and horizontal plane. Drama could be included by integrated, creative envelope treatment of roof and walls. These facades can also be activated by the considered use of innovative lighting, signage and information technology. Sustainable technology components (high performance glass, brissoileil, canopies, pv panels would be appropriate given its southerly aspect) and would further enliven the facades. | ? | 0 | 0 | 0 | 0 | 0 | ✓ | 0 | ✓ | 0 | |
| PSA 25: Fine grain urban design qualities particularly to the waterfront should include: no long inactive elevations, night time activities, human scale, creative public realm, street furniture and lighting. Sufficient openings onto the riverside promenade must bring human scale and activity to the riverside walkway. While not every retail unit needs to be accessed from the promenade – there should be public real solutions in the intermediate zones between accesses to enliven these areas. | ? | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ | ✓ | |
| PSA 26: The Dock Road facade need to be activated, lively and have a design purpose. It should not read as a barrier, but introduce the northern suburbs and traffic along Dock Rd to the city centre. | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | ✓ | ✓ | |
| PSA 27: Dock Road facade massing can be mitigated by lower structures of the transport hub such as station/gateway building, platform and drop off glazed canopies which can run the full length of the rail platform. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ | 0 | |
| PSA 28: Dock Road elevation must be relieved visually to address its overall massing. This can be achieved by stepping the facade/s in the vertical and horizontal dimension, the use of breaks and change in material. Drama could be included by innovative envelope treatment (roof and walls). This facades should be activated by use of innovative lighting, large scale signage and electronic media, green walls and artwork. | 0 | 0 | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ | 0 | |
| SEA Commentary: The riverside facade shall take account of the Lower River Suir SAC in its design, ensuring that night time lighting proposals and facade designs do not impact on the SAC. Proposals beside the SAC should be in accordance with Section 3b.5 of the Draft Planning Scheme and landscape design proposals. | | | | | | | | | | | |
| 5.1.7 Transport Hub | | | | | | | | | | | |
| Specific Objectives: PSA 29: Design of central development zone block/s to be considered in tandem with the bridge and gateway structure. There is an opportunity to seamlessly link the structures on both sides of the railway line and form a dramatic entrance to the development. The design solution could incorporate various | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ | 0 | |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|---|---|-------------|--------|----|-----|----|-----|-----|-----|----|-----|
| | forms of shelter including tensile structures, canopies and amenity structures. | | | | | | | | | | |
| | | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | L1 | MA1 |
| PSA 30: | There will be vertical circulation at each end of the rail platform to provide access to the bridges across the railway line; the eastern crossing in the vicinity of the Rockshire Road and the western opposite the sustainable transport bridge. These routes and their associated public realm areas should be seamlessly integrated into the development with clear way-finding. | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | 0 | 0 |
| 5.1.8 Eastern Development Zone | | | | | | | | | | | |
| Specific Objectives | | | | | | | | | | | |
| PSA 31: | Building forms should optimizes views to the river, solar aspect and shelter from the winds. | 0 | ✓ | 0 | 0 | 0 | 0 | ✓ | 0 | ✓ | 0 |
| PSA 32: | The Eastern access road will be at the high podium level where it joins the North Quays. There is an opportunity for the buildings to connect podium levels and create a varied and pleasant public realm utilizing this change of level | 0 | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | 0 | ✓ |
| PSA 33: | The buildings in this zone should read as a component of the overall composition and should be varied in height and form. Tallest building/s will be at the western end of the development zone. | 0 | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ? | 0 |
| PSA 34: | Berthing of cruise liners should be accommodated in this zone and there should be a larger provision of public realm adjacent to the river at this point. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| SEA Commentary: | | | | | | | | | | | |
| Due to the proximity of the SDZ site to the Trans-Stock Warehousing and Cold Storage Limited, located in Christendom, Ferrybank, on the north bank suburb of the River Suir at an approximate distance of 600m from the SDZ. The SEA proposes a specific objective that all planning applications within 700m from this Seveso site will be required to consult with the Health and Safety Authority. | | | | | | | | | | | |
| SEA Suggested Amendment: Insert new Specific Objective as follows: | | | | | | | | | | | |
| PSA XX All planning applications within 700m of the Seveso site require referral to the Health & Safety Authority for technical advice in order to reduce the risk and limit the consequences of major industrial accidents. | | | | | | | | | | | |
| 5.1.3 Future Views | | | | | | | | | | | |
| Views from south: | | | | | | | | | | | |
| View A: General panoramic view from the South Quays spanning from Rive Bridge to Reginalds Tower. There should be a compositional balance of the development from these multiple viewing points. | | | | | | | | | | | |
| Views from north: | | | | | | | | | | | |
| View B: From the intersection of the New Ross Road, Abbey Road and Fountain Street, there is a visual link with Christ Church Cathedral and Reginald's Tower; this is a fine high level initial view of the city towards the Viking Triangle which could be accounted for in placing the buildings in order to maintained glimpsed views of this aspect. | | | | | | | | | | | |
| View C: From Fountain Street towards The Rockshire Road intersection. This is a key nodal point in the development looking towards the transportation hub. | | | | | | | | | | | |
| View D: Dock Road approaching the development from the west – this view will traverse the north side of the development. | | | | | | | | | | | |
| Specific Objective: | | | | | | | | | | | |
| PSA 35:To consider the above and address in design statement. | | | | | | | | | | | |
| 5.2 Landscaping/ Public Spaces | | | | | | | | | | | |
| 5.2.1 Public Realm | | | | | | | | | | | |
| PSA 36: | To develop two principle nodal public realm spaces – one at the proposed sustainable transport bridge landing and the second opposite the eastern end of the central retail zone in the vicinity of the Rockshire Road access. Each space should have a distinct character, act as a meeting/focal point in the development and have an integrated design solution. | ✓ X ? | ✓ | 0 | 0 | 0 | ✓ | 0 | 0/? | ✓ | ✓ |
| PSA 37: | The bridge landing area should act as a gateway to the development from the City's retail spine and gives access to the central retail zone and public transport hub. It should allow for the turning of the City Centre bus from the South Quays which should be incorporated seamlessly into the public realm solution. A public realm scheme for this node should consider the use of sculpture and water. | ✓ X ? | ✓ | 0 | 0 | 0 | ✓ | 0 | 0/? | ✓ | ✓ |
| PSA 38: | The plaza at the eastern end of the central development zone can be at the high podium level and should facilitate views towards the Viking Triangle and Reginalds Tower. | 0 | ✓ | 0 | 0 | ✓ | 0 | 0 | ✓ | ✓ | ✓ |
| PSA 39: | To develop an integrated public realm scheme for the North Quays which addresses elements including street furniture, hard landscaping finishes, bin storage and services including public lighting. | ✓ X ? | ✓ ? | 0 | 0 | 0 | 0 | 0 | 0 | ✓ | ✓ |
| SEA Suggested Amendments: | | | | | | | | | | | |
| PSA 39: | To develop an integrated public realm scheme for the North Quays which addresses elements including street furniture, hard and soft landscaping finishes, bin storage, bicycle parking and services including public lighting. | | | | | | | | | | |
| PSA 40: | To require public open spaces to be retained generally free from development save for possible small scale kiosks, and public infrastructure where appropriate subject to normal planning controls. | 0 ? | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| PSA 41: | To require public open spaces and civic spaces to be fully accessible to all users, with clear way finding and be composed of high quality/durable materials. Proposed plazas will be designed in a legible and clear manner, incorporating landscaping and public art, while facilitating pedestrian and cycle circulation. | 0 | ✓ | ✓ | 0 | ✓ | ✓ | 0 | 0 | ✓ | ✓ |
| PSA 42: | To require a comprehensive landscaping scheme to include details of hard and soft landscaping proposals including tree species and the use of soft | ✓ | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ | 0 |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | |
|--|---|--------|----|----|-----|----|-----|-----|----|-----|
| | | B1** | P1 | W1 | W2* | S1 | AC1 | AC2 | C1 | MA1 |
| | boundaries to demarcate /define private open space. | ? | | | ? | | | | | |
| PSA 43: | To promote a child centred approach to public open space areas and to provide adequate recreation and play facilities that satisfy local needs and the projected population of the North Quays taking into account surrounding communities. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ |
| SEA Commentary: Child centred approach would be consistent with Universal Design Principles and will ensure public open spaces are accessible to all ages. | | | | | | | | | | |
| 5.2.2 Greening | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 0 | 0 | ✓ |
| Specific Objectives: | | | | | | | | | | |
| PSA 44: | To require future development proposals to build a 'green' strategy into the fabric of the development and to submit proposals in relation to green infrastructure at planning application stage. | | | | | | | | | |
| PSA 45: | To maximize planted areas to avail of the southerly exposure and to create protected areas to shield plants and people from the elements and particularly the prevailing winds which funnel down the river. | ✓ | ✓ | 0 | 0 | ✓ | ✓ | 0 | 0 | ✓ |
| PSA 46: | To require the use of appropriate planting for the site conditions. It may not be possible for instance to plant significant areas of large mature trees therefore the use of alternative maritime hardy plants would be appropriate in raised planters. | ✓ ? | ✓ | 0 | 0 | ✓ | 0 | 0 | 0 | 0 |
| PSA 47: | To require contemporary design solutions where the hardscape and softscape complement one another with the use of colour, texture, form in the planting selection. | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | ✓ |
| PSA 48: | To maximise and exploit the changes in levels across the site and to form these transitions as green zones. | ✓ | ✓ | ✓ | 0 | ✓ | 0 | 0 | 0 | ✓ |
| PSA 49: | To require clear delineation of the boundaries and transitions between private space, communal space and public space. | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PSA 50: | To agree with Waterford City and County Council detail specifications of work for all public open space and green infrastructure. | ✓ | ✓ | ✓ | 0 | ✓ | 0 | 0 | 0 | ✓ |
| | | ? | | | | | | | | |
| SEA Commentary: All greening and landscaping proposals shall as far as possible, be limited to native plant species while enhancing and protecting the native environment, flora and fauna as outlined in PSI21. Further measures as outlined in Section 3b.5 Biodiversity of the Draft Planning Scheme will also assist in this having a beneficial impact on the biodiversity EPO in this regard. | | | | | | | | | | |
| 5.3 External Materials, Finishes and Technology | | | | | | | | | | |
| 5.3.1 Palette and Approach | | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ✓ |
| Specific Objectives: | | | | | | | | | | |
| PSA 51: | To promote the use of an appropriate palette of colours and materials suitable to the site setting. | | | | | | | | | |
| PSA 52: | To promote the use of appropriate and sustainable materials such as glass and other high quality complementary materials. | 0 | ✓ | 0 | 0 | ✓ | 0 | 0 | 0 | ✓ |
| PSA 53: | To avoid the excessive use of any material that might become oppressively dominant. | 0 | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | ✓ |
| PSA 54: | To promote creative proposals in lighting and display technologies. | ? | ✓ | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SEA Suggested Amendment: To promote sustainable and creative proposals in lighting and display technologies, while respecting the unique biodiversity of the area, particularly light spill toward the lower River Suir SAC. All external lighting should be downlighting and should be time limited where possible. Lighting should be avoided in sensitive wildlife areas and light pollution avoided. | | | | | | | | | | |
| PSA 55: | To require any future application to consider signage, branding and lighting at the outset as part of the overall design approach and submit details at the application stage, including an assessment of potential impacts of light pollution on the immediate and wider environment | ✓ ? | ✓ | 0 | 0 | 0 | 0 | 0 | ✓ | 0 |
| PSA 56: | To require any future planning application to consider and submit proposals for the careful detailing of the interface with the street (including selection of floor levels, the design of entrance features, use of paving materials and lighting proposals). | ✓ ? | ✓ | 0 | 0 | ? | 0 | 0 | 0 | ? |
| PSA 57: | Facades at street level require to be detailed with regard to human scale and tactile quality. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PSA 58: | To apply the current design philosophy and the high quality design of the public realm within the existing medieval City Centre to all future development on the North Quays. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ✓ | ✓ |
| PSA 59: | All future planning applications to comply with with "Nearly Zero Energy Buildings" (NZEB) standards. | 0 | ✓ | 0 | 0 | 0 | ✓ | 0 | 0 | ✓ |
| 5.4 Sustainability | | | | | | | | | | |
| 5.4.1 Sustainable Urban Form /Building Design | | | | | | | | | | |
| SEA Commentary: There are no specific objectives for this topic. There is potential to create specific objectives from the existing text from the Draft Planning Scheme as follows: PSA XX Each building within the development shall have advanced computer modelling undertaken, with the end goal of optimising the performance levels from building fabric / M&E services and as a means of reviewing the integration and performance of the buildings within the whole development. PSA XX Sustainable urban forms and building design is demonstrate how they seek to: <ul style="list-style-type: none"> • Create a sustainable built environment taking into account the local natural environment and the River Suir SAC. • Create a sustainable environment through the design of efficient buildings and construction methods. • Maximise potential of southerly exposure and investigate the feasibility for renewable energy and incorporate into development proposals. | | | | | | | | | | |

| Details of Draft Planning Scheme Proposals | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|
| <ul style="list-style-type: none"> Provision of sustainable urban drainage systems. Proposals for water harvesting in future developments Waste recycling facilities etc <p>PSA XX Sustainable urban forms should ensure that an appropriate microclimate is established between buildings. Buildings should receive adequate levels of light, ventilation, and passive solar energy while minimising heat loss, exposure and shading.</p> <p>PSA XX Layout and design will seek to minimise overshadowing or loss of sunlight and daylight both to existing and proposed/new buildings as well as public spaces, whilst taking care not to unduly weaken any sense of enclosure required to create a high quality urban environment.</p> | | | | | | | | | | | |
| <p>5.4.2 Energy Efficiency</p> <p>Specific Objectives</p> <p>PSA 60: To comply with all the objectives of the current Waterford City Plan in relation to sustainable energy.</p> <p>SEA Suggested Amendment:</p> <p>Specific Objectives</p> <p>PSA 60: To comply with all the objectives of the current Waterford City Plan in relation to sustainable energy and the Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (2017) or any subsequent revisions.</p> | | | | | | | | | | | |
| <p>PSA 61: To promote reduced energy consumption and to provide for sustainable means of energy where feasible and appropriate.</p> | | | | | | | | | | | |
| <p>PSA 62: To support sustainable energy initiatives and to facilitate where possible new and innovative technologies within the Draft Planning Scheme area.</p> | | | | | | | | | | | |
| <p>SEA Suggested Amendment:</p> <p>PSA 62: To support sustainable energy initiatives and to facilitate where possible new and innovative technologies within the Draft Planning Scheme area.</p> | | | | | | | | | | | |
| <p>6.0 Actions & Implementation</p> <p>There is uncertainty in relation to phasing and implementation of the Planning Scheme. If development is piecemeal and prolonged there is likely to be longer-term adverse impacts on certain EPOs which are best assessed at the planning applications stage including EIA, AA and Flood Risk Assessment processes as required.</p> | | | | | | | | | | | |
| <p>6.3 SDZ Applications</p> <p>In determining whether planning permission should be refused or granted, development proposals within the North Quays SDZ will be considered under the following:</p> <ul style="list-style-type: none"> The principal goals The Planning Scheme urban form and land uses The specific objectives contained within the Planning Scheme | | | | | | | | | | | |
| <p>SEA Suggested Amendment:</p> <p>In determining whether planning permission should be refused or granted, development proposals within the North Quays SDZ will be considered under the following:</p> <ul style="list-style-type: none"> The Vision for the North Quays & principal goals. The Planning scheme urban form and land uses. The specific objectives contained within the Planning Scheme. | | | | | | | | | | | |
| <p>PSAI 1: Any future planning application on the North Quays SDZ shall be consistent with the vision, goals and specific objectives as set out in this planning scheme.</p> | | | | | | | | | | | |
| <p>PSAI 2: Any future planning application on the North Quays SDZ shall be accompanied by a Compliance Statement illustrating how the development complies with the planning scheme.</p> | | | | | | | | | | | |
| <p>SEA Commentary:</p> <p>The development of a Compliance Statement will assist the decision makers in determining the consistency of all future development proposals with the adopted Planning Scheme. It will also ensure all future proposals demonstrate how they address issues of sustainability from the outset.</p> | | | | | | | | | | | |

8.4 Summary of Assessment of Matrix – Likely Significant Effects

The following sections present the summary of the assessment of likely significant effects of the Planning Scheme completed in the matrix above. The Three overarching Visions of the North Quays SDZ Planning Scheme are:

- *To create a sustainable, compact extension to the City Centre that will serve a future population of 83,000 people.*
- *A regeneration catalyst for the City and Region and the establishment of a sustainable modern city quarter.*
- *Creation of an integrated multi-modal transport hub designed to sustainably meet the access requirements of The City.*

A number of Principal Goals are identified as part of the Planning Scheme which are supported by attainable steps referred to as 'specific objectives' contained in the six Chapters of the Draft Planning Scheme. The six Chapters are: Chapter 1 Introduction; Chapter 2 Site Context; Chapter 3 Physical and Social Infrastructure; Part a: Access and Connectivity, Part b: Environmental and Social Infrastructure; Chapter 4: Planning Strategy; Chapter 5 Architectural Strategy; Chapter 6 Actions and Implementation.

"In determining whether planning permission should be refused or granted, development proposals within the North Quays SDZ will be considered under the following:

The principal goals:

- *The Planning Scheme urban form and land uses*
- *The specific objectives contained within the Planning Scheme"*

Two specific objectives, PSAI 1 and PSAI 2 are seen as the key policy tools that will be used by decision makers in order to ensure that the future implementation and delivery of the Planning Scheme is consistent with the Planning Scheme. These Specific Objectives will ensure that the appropriate environmental and sustainability considerations are addressed in the Compliance Statement to accompany all planning applications.

PSAI 1: Any future planning application on the North Quays SDZ shall be consistent with the vision, goals and specific objectives as set out in this planning scheme.

PSAI 2: Any future planning application on the North Quays SDZ shall be accompanied by a Compliance Statement illustrating how the development complies with the planning scheme.

These Specific Objectives will ensure that the required planning and environmental assessments are completed as part of future planning applications as appropriate in compliance with EU, National and local policy. These will include; Site Specific Flood Risk Assessment, Appropriate Assessment and Environmental Impact Assessment as appropriate, and any other supporting studies that will be required to address the specific environmental considerations of the site.

A summary of the assessment undertaken and the significant environmental effects identified is discussed in the following sections under each of the Environmental Protection Objectives (EPOs).

8.4.1 Summary of Assessment and Significant Impacts Identified on Biodiversity, Flora and Fauna

EPO B1: Protect, conserve and enhance habitats, species and areas of national and local importance, including aquatic habitats and species and promote the sustainable management of habitat networks.

The assessment found that the likely significant effects on biodiversity, flora and fauna EPO arising from the implementation of the Draft Planning Scheme will be mainly during the construction phases of developments and associated infrastructure development proposed in the Draft Planning Scheme. A mixed assessment rating has been applied to some objectives assessed. This may include positive, negative and unknown impacts. This mixed rating is due to: the strategic nature of the policy being assessed; the likelihood that the adverse impacts will be short-term - mainly during construction stages; greening and landscaping activities proposed are likely to result in benefits to the local biodiversity of the site in the long-term. Some impacts are classified as unknown due to the lack of detailed information at this level of assessment. However, with the application of planning application, Appropriate Assessment, EIA and Compliance Statement these impacts will be identified and addressed.

Overall, the assessment found that due to the scale of developments proposed, as well as the proximity to the Lower River Suir SAC, proposals have the potential to impact on water quality, noise and lighting impacts on biodiversity during construction and operation phases, as well as give rise to. The Natura Impact Report (NIR) found these have the potential to adversely affect the Conservation Objectives for Twaite Shad, Atlantic Salmon and Otter in the Lower River Suir SAC and the River Barrow and River Nore SAC. However, based on the conclusions of the NIR these will be mitigated at planning application, Appropriate Assessment stages. There is likely to be long-term beneficial impacts on this EPO due to future landscaping and greening proposals which will improve the local biodiversity of the site. The assessment matrix found that there are no major significant adverse effects on this EPO and any likely significant adverse effects are likely to be mitigated through proposals contained in the Draft Planning Scheme and the application of the relevant policies and objectives of the Waterford City Development Plan 2013-2019 (as amended).

8.4.2 Summary of Assessment and Significant Impacts Identified on Population and Human Health

EPO P1: Facilitate a good standard of health for Waterford's population through ensuring high quality residential, recreational and working environments that are based on sustainable landuse and travel patterns.

The assessment found that due to the range of proposals contained in the Draft Planning Scheme there will be long-term beneficial impacts on the population and human health EPO. Due to the significant range of mixed use developments proposed in the Planning Scheme it will provide a range of opportunities and landuse options for the future development of the area, which will support the physical, social and environmental needs of existing and future populations. The proposed investment in physical infrastructure i.e. the transport hub, Greenway, sustainable transport bridge, pedestrian and cycling infrastructure, bus service is likely to benefit a wider population and improve lifestyle factors in the long-term and embed sustainability into the future development of the site. The development of workplace travel plans and the inclusion of end of trip facilities in all new buildings are expected to support both the physical and behavioural changes that are required to support this EPO and deliver on creating a modal shift away from the use of the private car.

Noise and air impacts are likely during construction stages and monitoring of noise impacts particularly from the existing Dock Road will be undertaken as part of the Local Authority Noise Action Plan.

The development of a compact urban quarter that has quality residential units whilst being integrated with mixed uses, sustainable transport and the existing city centre will benefit the existing and future population of the area. The interactions between other EPOs and their specific objectives will also benefit populations. These include measures to support and enhance local biodiversity, flood resilience, green infrastructure, energy efficiency measures, landscaping, provision of essential services i.e. water, waste water, drainage, Wi-Fi zones, utilities etc, and the development of long-term employment opportunities and social infrastructure. Architecture, public realm and quality design measures are seen as key to ensuring the developments are innovative, responsive to today's needs, aesthetically pleasing, high quality and accessible to all in order to create a socially cohesive urban environment and community.

The assessment found there are unknown and / or potential for adverse impacts that may occur however these are likely to be short-term during the construction phase due to noise, dust, vibration associated with construction activities and traffic. Particularly sensitive receptors will include neighbouring properties and those located in the northern environs, however it is likely that these will be mitigated at planning application and construction stages.

The site is located in a high radon area. Radon rises up through the ground to disperse in the air and only becomes a health hazard when it is trapped in buildings. It was considered that an additional specific objective could be included as part of the Planning Scheme objectives to install passive preventive measures in all new buildings and to continuously monitor radon levels in all buildings to ensure no adverse impacts occur.

Due to the proximity of the site to the Trans Stock Warehousing Seveso site, it was also found that an additional specific objective may be required as part of the Planning Scheme in order to highlight the requirement that all future planning applications must consult with the HSA.

Generally, it was found the Draft Planning Scheme is going to promote significant new development to occur in the area. It is likely to have short term adverse impacts on some populations, mainly during construction stages. There are significant long-term beneficial impacts due to the proposals contained in the Draft Planning Scheme to support a public transport hub, walking and cycling infrastructure, green routes, landscaping proposals, the construction of a promenade along the riverfront, energy conservation measures, sustainable and energy efficient housing and the provision of retail and commercial developments to serve the growing population of Waterford over the long-term.

8.4.3 Summary of Assessment and Significant Impacts Identified on Water Resources (W1) and (W2)

EPO W1: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contaminants to waters.

EPO W2: To reduce and manage the risk of flooding.

The Draft Planning Scheme places emphasis on ensuring high quality and sustainable development can be accommodated on the site for future population growth and economic development. The environmental assessment found that future developments proposed could lead to significant adverse, unknown and significantly beneficial impacts on water quality, particularly within the Lower River Suir.

The significant potentially adverse impacts are identified as likely to occur as a result of construction activities associated with new developments, particularly those on, and/ or within close proximity to the Lower River Suir SAC. Policies contained within the Planning Scheme include PSI 10, which refer to the requirement for all planning applications to be accompanied by:- surface water drainage plan, proposals for the management of surface water within sites in accordance with requirements as listed in Section 3b.1.3 of the Draft Planning Scheme. These measure will ensure the protection of water quality of the existing water bodies and ground water sources in the area. The Scheme also provides for objectives for best practice SuDS techniques on existing sites, where possible, while PSI 11 ensures that surface and ground water quality resources are protected. PSI 12 also makes provision for contaminated surface water such as oil/ fire water/detergents which will be intercepted and stored appropriately for future treatment and disposal.

Objectives contained in the Draft Planning Scheme that have the potential for significant, long-term beneficial impacts on this environmental receptor include those that help support and provide for the improvement of water quality in line with the South Eastern River Basin Management Plan. Furthermore, the implementation of SuDS, green roofs, bio retention areas / modified planters, rainwater harvesting, permeable surfacing and swales as part of future development proposals coupled with landscaping, provision of open spaces and parks, green infrastructure and requirements for incorporation of SuDS measures in all developments will be beneficial to this EPO.

The potential negative or unknown impacts are identified as part of the assessment, where construction and operational phases have the potential for negative impacts on water resources. These potential impacts are more appropriately assessed at project stage, either by way of a planning application and / or an Environmental Impact Assessment. The assessment found that ground investigations currently taking place on the site will inform potential contaminated land issues and any mitigation required to ensure protection of water resources and waste management. A specific objective is required to address the potential issues arising on soil, ground and surface water contamination, if potentially contaminated soils are not managed appropriately – both during construction and longer term. It is considered that the addressing any contaminated lands on the site through the appropriate remediation will lead to a long term beneficial impact on the soil resources, groundwater and surface water bodies in the area.

In terms of flood risk management a Strategic Flood Risk Assessment (SFRA) has been undertaken to inform the preparation of the Draft Planning Scheme. No future developments will be permitted to contradict the recommendations of the SFRA. SuDS will also be applied on the site which will reduce run-off rates from newly paved areas and the other supporting policies contained in the Planning Scheme.

8.4.4 Summary of Assessment and Significant Impacts Identified on Soils

EPO S1: Protect, improve and maintain the quality of soils in the interests of avoiding environmental degradation in water quality and biodiversity.

The assessment found that the Draft Planning Scheme will have a significant beneficial or neutral impact on the status of this EPO. It was found that due to the historic activities on the site, there may be significant adverse impact if contaminated land is found to be present on site which could impact on groundwater, surface water, species and habitats which depend on these water resources, affecting other EPOs. The SEA supports the inclusion of an additional specific objective to ensure all potentially contaminated is dealt with in accordance with waste management legislation prior to redevelopment. This will ensure adverse impacts will not impact adversely on the protection of groundwater, water quality and biodiversity including the designated Lower River Suir SAC. Any required remediation measures may require a licence from the EPA under the Waste Management Act 1996 (as amended) for treatment and / or removal. Overall the SEA assessment considers that the regeneration of a brownfield site in a city centre location will result in the preservation of greenfield sites and with the removal of contaminated soils from site and remediation will lead to a long term beneficial impacts on the soil resources, groundwater and surface water bodies in the area.

8.4.5 Summary of Assessment and Significant Impacts Identified on Air and Climate

EPO AC1: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey

It is recognised that by increasing the amount of development in an area at a local level that this has the potential to impact on the amount of road traffic, which would be one of the biggest threats to air quality. However the Draft Planning Scheme has proposed through its Visions, Principal Goals and specific objectives to ensure that compact, sustainable, integrated and complimentary proposals are developed in relation to sustainable travel, such as the transport hub, sustainable transport bridge, bus service, pedestrian and cycling infrastructure and the connection with the Waterford to New Ross Greenway, all of which will support and encourage a modal shift. These wide range and ambitious measures will improve travel choice and accessibility, shorten the length and duration of trips and reduce the need to travel by car while also offsetting any likely adverse impact on air quality created by future developments over the long-term.

EPO AC2: To limit adverse impacts of climate change through the use of sustainable energy sources.

Ambitious objectives are contained within the Draft Planning Scheme that will support the use of sustainable energy sources in all buildings. The Draft Planning Scheme states envisages it will one of the first developments in Ireland that will comply with, "Nearly Zero Energy Buildings" (NZEB) standards, by 2020. Measures contained in the Scheme will have approximately 60% less energy consumption than buildings that are constructed to current Building Regulation Standards.

The range of specific objectives contained in the Draft Planning Scheme are considered to support and minimise adverse impacts on the environment through the implementation of policies on waste management, control of emissions and the promotion of energy efficiency, thereby supporting the implementation of climate change measures contained in the Climate Change strategy for Waterford City.

8.4.6 Summary of Assessment and Significant Impacts Identified on Cultural Heritage

EPO C1: To protect, conserve and enhance cultural heritage features of the plan area including the built environment, settings and known and unknown archaeological and assets.

One of the Draft Planning Scheme Principal Goals is *“To create a sustainable urban environment, which respects it's natural, historic and cultural heritage.”* The Planning Scheme promotes the regeneration of this Brownfield site which is formerly port related lands into a sustainable, compact extension to the city centre that will serve future populations. It recognises the unique setting on the River Suir, and the close proximity to the existing historic city core and South Quays ACA. The Planning Scheme states that it will support the delivery of a scheme of high design merit that will bring a new and exciting interpretation of the quays while respecting its maritime past and the traditional streetscape of the South Quays that has developed over many centuries. Overall, the assessment of the Planning Scheme found to have either a unknown/ uncertain with the potential for long-term significant adverse on the cultural heritage EPO. There are no Record of Protected Structure (RPS) on the site however 'The Hennebique Building' and 'Free standing crane' on the North Quays are identified as buildings / structures of Architectural Heritage and are included as part of the National Inventory of Architectural Heritage(NIAH). The exact impacts on these structures will be dependent on development proposals put forward and cannot be determined at present. In relation to unknown impacts, the North Quays has the potential to be of high archaeological potential due to its historic past as a working quay and being the focus for maritime traffic over a long period. There is high potential that previously unknown or unrecorded riverine / underwater archaeological heritage could be retained within the areas. Construction works have the potential to discover and disturb such features, however these impacts are best assessed at project stage. It is not known if all likely impacts can be mitigated against, therefore an additional mitigation measure is proposed.

8.4.7 Summary of Assessment and Significant Impacts Identified on Landscapes

EPO L1: Protect and conserve the quality, character and distinctiveness of the River Suir waterway corridor and minimise negative visual impacts.

The assessment of the Draft Planning Scheme found that the majority of measures contained therein are likely to have significant beneficial impacts. The Draft Planning Scheme will result in the regeneration and re-imagination of the former port related lands now derelict within this strategic, city centre location. The future developments are expected to dramatically improve the existing landscape, views and visual impact of the River Suir waterway corridor and also of Waterford City as a whole. The adverse or unknown / uncertain impacts identified relate to lack of specific information relating to development proposals which will be informed by design, building height, treatment etc and are best assessed at project stage. Measures contained within the Planning Scheme will facilitate the assessment of impacts and inform mitigation measures at project stage through the requirement to undertake a Design Statement for high buildings, as well as the requirement to submit a Design Statement and Visual Impact Assessment as part of all planning applications. In general, the environmental assessment found that the Planning Scheme will have significant beneficial impacts on landscape EPO. There are a suite of specific objectives outlined as part of the Planning Scheme contained in the various chapters including, Physical and Social Infrastructure, including integrating green infrastructure, biodiversity and use of ecological corridors into future developments will assist in improving the landscape of the area. The Planning Strategy (Chapter 4)

also details views, building heights, consideration of landmark buildings, massing, public realm, and urban form, coupled with the variety of measures detailed in the Architectural Strategy which will all serve to dramatically improve the landscape of the area.

8.4.8 Summary of Assessment and Significant impacts identified on Material Assets

EPO MA1: Maintain sustainable access to assets such as open spaces, water resources, wastewater, drinking water, drainage and all other physical and social infrastructure.

The Draft Planning Scheme was found to have generally significant beneficial, neutral, unknown / uncertain impacts on material assets. The Draft Planning Scheme states Irish Water has confirmed that there is sufficient capacity within the system to serve the site. In relation to foul drainage, the Ferrybank pumpstation has been sized to take account of any potential development on the North Quays. Irish Water has confirmed that there is sufficient capacity within the system to serve the site. The assessment did not identify any specific objectives that have potential for significant adverse impacts on material assets i.e. essential services, water and waste management and all other physical and social infrastructure. Significant beneficial impacts are also expected from the implementation of a number of objectives promoting sustainable technology, accessible Wi-Fi Zones and sustainable technology components across the area.

The Planning Scheme was found to have significant beneficial impacts in relation to facilitating sustainable modes of transport infrastructure and encouraging modal change from the private car. It was also found to adopt a sustainable approach to waste management requiring all developments within the North Quays to comply with waste policy set out in the Waterford City Development Plan 2013-2019 in accordance with the waste management hierarchy of waste prevention, waste recycling energy recovery and disposal. At planning application stage proposed development will have to show regard for refuse collection/recycling composting etc at suitable locations where required.

The Draft Planning Scheme promotes the creation of a mix of uses which is expected to benefit from the transport hub, sustainable transport bridge and improved accessibility and connectivity with existing public transport in association with proposed new walking and cycling facilities that will ultimately improve connectivity throughout the City. The provision of public plazas, a riverside walkway, promenades, podiums, parks and active and passive open spaces will all significantly benefit this EPO and the future resident, workers and tourists to the area.

9.0 MITIGATION AND MONITORING

In accordance with best practice methodology, the assessment of the likely significant effects on the environment of implementing the Draft Planning Scheme for the North Quays SDZ was carried out using an accepted and commonly used methodology of creating an assessment matrix. The assessment systematically assesses each Vision, Goal and Specific Objective and landuse mapping proposals as part of the Draft Planning Scheme under each of the environmental topics and assessed the likely significant effects on the environment. Where likely significant effects are identified during the SEA process, initially the Planning Scheme and current Waterford City Development Plan 2013-2019 are checked for the existence of environmental protection measures which could potentially mitigate these effects, where it is found that the Planning Scheme lacks in these, additional mitigation measures will be recommended where necessary. Mitigation measures are proposed, in order to prevent, reduce and as fully as possible offset any significant effects on the environment and are outlined below in Table 9.1.

Table 9.1 Key Existing and Proposed SEA Mitigation Measures

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|--|---|
| Biodiversity, Flora and Fauna B1: Protect, conserve and enhance habitats, species and areas of national and local importance, including aquatic habitats and species and promote the sustainable management of habitat networks. | <p>Key Proposals in the Planning Scheme include:</p> <p>Goal: <i>"To provide for the protection, enhancement and improvement of the natural environment, including the avoidance of adverse effects on European sites, particularly the Lower River Suir SAC and the River Barrow and River Nore SAC."</i></p> <p>"Specific Objectives:</p> <p>PSI 19: Any plan or project with the potential to give rise to significant direct, indirect, secondary impacts or through indirect or cumulative impact, on a Natura 2000 site(s) shall be subject to an Appropriate Assessment in accordance with Article 6 of the EU Habitats Directive (92/43EEC) and associated legislation and guidelines informing decision making. All proposals are required to consider the mitigation measures contained in the Natura Impact Report of the Draft Planning Scheme.</p> <p>PSI 20: All development should include proposals on how they address the natural heritage in terms of conservation, management, and improvements to the local biodiversity in the urban environment. Developments shall incorporate landscaping and other design features that have the potential to improve or enhance existing natural habitats, ecological corridors and blue and green infrastructure.</p> <p>PSI 21: All development proposals will be encouraged to include the planting of appropriate native flora to support and develop habitats for both terrestrial and aquatic fauna. Planting should, as far as possible, be limited to native plant species and enhance the riverine and riparian environment and protect the native flora and fauna in the area.</p> <p>PSI 22: All future proposals shall ascertain the extent, if any, of invasive species, and implement measures to control or, where possible, eradicate them from the relevant site."</p> <p>Planning Strategy The Draft Planning Scheme mitigates for the potential effects of its</p> |

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|---|---|
| | <p>overall Vision for the North Quays through the Specific Objective: PSS 1: All future planning applications shall comply with the relevant Waterford City Development Plan policies and objectives</p> <p>Key Existing Measures contained in WCDP include: Chapter10 Heritage. Policy 1.14, 1.1.11, 10.4.1, 10.4.2, 10.4.3, 10.4.4, 10.4.5, 10.4.6, 10.4.7, 10.0.1, 10.0.3, 10.0.4, 10.4.2, 10.4.4, 10.4.11, 11.2.1</p> <p>SEA proposed Planning Scheme Measures: Changes are proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |
| <p>Population and Human Health P1: Facilitate a good standard of health for Waterford's population through ensuring high quality residential, recreational and working environments that are based on sustainable landuse and travel patterns.</p> | <p>Planning Scheme Measures: Various measures proposed. The key ones include: Goal:</p> <ul style="list-style-type: none"> • To form a sustainable, smart connected urban area of regional significance acting as a gateway to the City; • Provide a dynamic new economic engine for the City and Region; • To create a safe, accessible and socially cohesive environment where people of all ages and abilities can live work and relax; • To promote the expansion of the City Centre to the north of the River Suir in a manner that enhances and supports balanced and sustainable growth in Waterford City and encourages its vitality and viability; • To balance the employment, retail and commercial base of the North Quays with the future residential growth of the City and the South East Region; • To provide a sustainable transport hub on the North Quays; • To provide for sustainable patterns of movement and access with priority for pedestrians, cyclists and public transport. <p>Water, Noise, Air and Material Assets are covered section below.</p> <p>Key Existing Measures contained in WCDP include: Various Chapters contain policies and objectives throughout the WCDP including: Chapter 1: Strategic Context , Chapter 2: Core Strategy, Chapter 3: Economic Development, etc. to include: OBJ 2.1.11, OBJ 2.1.5, OBJ 6.2.4, OBJ 6.2.7, POL 11.5.7, OBJ 6.2.1, OBJ 6.2.2, OBJ 6.2.3, OBJ 6.2.4</p> <p>SEA proposed Planning Scheme Measures: The SEA proposes various changes in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>Furthermore, SEA team propose Specific Objective:</p> <ul style="list-style-type: none"> • To prevent high-radon levels occurring in new buildings it is a requirement to install passive preventive measures in all buildings and to continuously monitor radon levels in all buildings. |

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|--|--|
| | <ul style="list-style-type: none"> For sites located within the 700m from the Trans Stock Seveso Site/ Major Accidents all planning applications will be required to consult with the HSA at planning application stage. <p>If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |
| <p>Water Resources W1: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contaminants to waters.</p> | <p>Key Planning Scheme Measures: Principal Goals:</p> <ul style="list-style-type: none"> To provide sustainable solutions that address and manages the risk of flooding and climate change; To promote the incorporation of resource energy efficiency and waste management into the area. <p>Specific Objectives:</p> <p>PSI 10: To achieve best practise and innovations in SUDS design as part of the planning scheme, including the successful coordination of surface water management with ecology and amenity functions of open space and landscaped areas. All planning applications shall be accompanied by a surface water drainage plan which will include proposals for the management of surface water within sites in accordance with requirements as listed in Section 3b.1.3 above, protecting the water quality of the existing water bodies and ground water sources, and retrofitting best practice SuDS techniques on existing sites, where possible.</p> <p>PSI 11: To ensure the protection of surface and ground water quality in the plan area and surrounding areas.</p> <p>PSI 12: Contaminated surface water such as oil/fire water/detergents will be intercepted and stored appropriately for future treatment and disposal</p> <p>Key Existing Measures contained in WCDP include: Section 11.5 Water Supply and Drainage Policy to include: POL 11.5.5, POL 11.5.6, POL 11.5.8, POL 11.5.11, POL 11.5.12, POL 11.5.15, POL 11.5.16, POL 11.5.17.</p> <p>SEA proposed Planning Scheme Measures: Various Changes proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details. If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |
| <p>W2: To reduce and manage the risk of flooding.</p> | <p>Planning Scheme Measures: Principal Goal: To provide sustainable infrastructure and services for future populations; Specific Objective:</p> <p>PSI 13 There will be a requirement for a site specific flood risk assessment for planning applications for the SDZ. The flood risk assessment will consider the impact of the proposed development in accordance with the "The Planning System and Flood Risk Management" (DEHLG & OPW, 2009). No development shall be allowed that contradicts the recommendations of the SFRA for the North Quays or</p> |

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|--|--|
| | <p>increases the flood risk to existing developments within the SDZ. As part of the applicants' site specific flood risk assessment a justification test will not be required as this has been completed as part of the Waterford North Quays SFRA.</p> <p>Key Existing Measures contained in WCDP include: POL 11.7.1, OBJ 2.1.10, POL 11.5.10, OBJ 2.1.1, OBJ 2.1.10, OBJ 11.7.1.</p> <p>SEA Key Proposed Mitigation: Refer to the recommendations of SFRA.</p> <p>SEA proposed Planning Scheme Measures: Various Changes proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |
| <p>Soils S1: Protect, improve and maintain the quality of soils in the interests of avoiding environmental degradation in water quality and biodiversity.</p> | <p>Planning Scheme Measures:</p> <p>Key Existing Measures contained in WCDP include: There are no contaminated land/ soil remediation policy/ objectives.</p> <p>SEA Proposed Planning Scheme Measures: Various Changes proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>SEA Key Proposed Mitigation: PSI XX: All potentially contaminated land shall be shall dealt with in accordance with waste management legislation prior to redevelopment.</p> <p>If the suggested amendments are incorporated, adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |
| <p>Air and Climate AC1: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journey.</p> | <p>Planning Scheme Measures: Goal: To provide sustainable solutions that address and manages the risk of flooding and climate change.</p> <p>PSS 2: All future planning applications shall have regard to:</p> <ul style="list-style-type: none"> • Design Standards for new Apartments, Best Practice Urban Design Manual. • Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities(2015) Department of the Environment, Community and Local Government. • Smarter Travel – A Sustainable Transport Future 2009-2020. <p>PSI 1: To develop and promote a modal shift away from the private car use towards increased use of a sustainable integrated multi modal transportation network to include walking, cycling public transport integrating bus and rail infrastructure. All future planning applications shall demonstrate how they seek to</p> |

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|---|--|
| | <p>implement the actions contained in the Government's "Smarter Travel, A Sustainable Transport Future 2009-2020".</p> <p>Key WCDP Existing Measures include: Various interactions across various chapters including Water resources, transport etc. Key policies and objectives include: POL 1.1.11, OBJ 2.1.10, (OBJ 2.1.15), (POL11.8.5), (POL 1.1.6), (OBJ 2.1.11), (OBJ 6.2.3) and (OBJ 6.2.4).</p> <p>SEA proposed Planning Scheme Measures: Various Changes proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |
| <p>AC2: To limit adverse impacts of climate change through the use of sustainable energy sources.</p> | <p>Planning Scheme Measures: 5.4.1 Sustainable Urban Form / Building Design PSA 59: All future planning applications to comply with with "Nearly Zero Energy Buildings" (NZEB) standards.</p> <p>5.4.4 Renewable Energy Specific Objectives: PSA 60: To comply with all the objectives of the current Waterford City Plan in relation to sustainable energy. PSA 61: To promote reduced energy consumption and to provide for sustainable means of energy where feasible and appropriate. PSA 62: To support sustainable energy initiatives and to facilitate where possible new and innovative technologies within the Draft Planning Scheme area.</p> <p>Key WCDP Existing Measures include: POL11.8.1, POL11.8.3, POL11.8.5, OBJ 2.1.15 and POL 1.1.11</p> <p>SEA proposed Planning Scheme Measures: Various Changes proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>SEA Proposed Mitigation: None.</p> <p>If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |
| <p>Cultural Heritage C1: To protect, conserve and enhance cultural heritage features of the plan area including the built environment, settings and known and unknown archaeological and assets.</p> | <p>Planning Scheme Measures: Goal:</p> <ul style="list-style-type: none"> To create a sustainable urban environment, which respects it's natural, historic and cultural heritage. <p>Specific Objective: PSS 18: To facilitate where possible berthing facilities for recreational/leisure vessels and appropriate amenity provision reflecting the cultural heritage of the area.</p> |

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|--|---|
| | <p>Key WCDP Existing Measures include: Chapter 10 Heritage: POL 10.1.11, POL 10.0.2, POL 10.0.4, POL 10.1.1, POL 10.1.2, POL 10.1.3, POL 10.1.5, POL 10.1.6, POL 10.1.7, POL 10.2.3, Objectives: OBJ 10.1.1, OBJ 10.1.3, OBJ 10.1.5, OBJ 10.1.6, OBJ 10.1.7, OBJ 10.1.8, OBJ 10.1.9, OBJ 10.2.5</p> <p>SEA Proposed Mitigation: Various Changes proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>Inclusion of Additional Specific Objective:</p> <ul style="list-style-type: none"> To protect, preserve and/ or record the archaeological value of terrestrial and underwater archaeology where feasible. <p>If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |
| <p>Landscapes L1: Protect and conserve the quality, character and distinctiveness of the River Suir waterway corridor and minimise negative visual impacts.</p> | <p>Planning Scheme Measures: Goal:</p> <ul style="list-style-type: none"> To develop a design led scheme of high quality architectural merit To promote quality design of the spaces between and around buildings, the public realm that connects the various elements of the North Quays together including the wider hinterland; <p>And various Specific Objectives including: PSA 1: All applications are required to submit a Design Statement and Visual Impact Assessment as part of planning applications with supporting illustrative material and description of proposed development demonstrating how it has been developed having regard to the built heritage context, topography and landscape character of the site.</p> <p>5.1.3 Future Views PSA 35: To consider future views and address in Design Statement.</p> <p>5.2 Landscaping/ Public Spaces specific objectives: PSA 36: To develop two principle nodal public realm spaces – one at the proposed sustainable transport bridge landing and the second opposite the eastern end of the central retail zone in the vicinity of the Rockshire Road access. Each space should have a distinct character, act as a meeting/focal point in the development and have an integrated design solution. PSA 37: The bridge landing area should act as a gateway to the development from the City's retail spine and gives access to the central retail zone and public transport hub. It should allow for the turning of the City Centre bus from the South Quays which should be incorporated seamlessly into the public realm solution. A public realm scheme for this node should consider the use of sculpture and water. PSA 38: The plaza at the eastern end of the central development zone can be at the high podium level and should facilitate views</p> |

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|----------------------------|--|
| | <p>towards the Viking Triangle and Reginalds Tower.</p> <p>PSA 39: To develop an integrated public realm scheme for the North Quays which addresses elements including street furniture, hard landscaping finishes, bin storage and services including public lighting.</p> <p>PSA 40: To require public open spaces to be retained generally free from development save for possible small scale kiosks, and public infrastructure where appropriate subject to normal planning controls.</p> <p>PSA 41: To require public open spaces and civic spaces to be fully accessible to all users, with clear way finding and be composed of high quality/durable materials. Proposed plazas will be designed in a legible and clear manner, incorporating landscaping and public art, while facilitating pedestrian and cycle circulation.</p> <p>PSA 42: To require a comprehensive landscaping scheme to include details of hard and soft landscaping proposals including tree species and the use of soft boundaries to demarcate /define private open space.</p> <p>PSA 43: To promote a child centred approach to public open space areas and to provide adequate recreation and play facilities that satisfy local needs and the projected population of the North Quays taking into account surrounding communities.</p> <p>5.2.2 Greening Specific Objectives:</p> <p>PSA 44: To require future development proposals to build a 'green' strategy into the fabric of the development and to submit proposals in relation to green infrastructure at planning application stage.</p> <p>PSA 45: To maximize planted areas to avail of the southerly exposure and to create protected areas to shield plants and people from the elements and particularly the prevailing winds which funnel down the river.</p> <p>PSA 46: To require the use of appropriate planting for the site conditions. It may not be possible for instance to plant significant areas of large mature trees therefore the use of alternative maritime hardy plants would be appropriate in raised planters.</p> <p>PSA 47: To require contemporary design solutions where the hardscape and softscape complement one another with the use of colour, texture, form in the planting selection.</p> <p>PSA 48: To maximise and exploit the changes in levels across the site and to form these transitions as green zones.</p> <p>PSA 49: To require clear delineation of the boundaries and transitions between private space, communal space and public space.</p> <p>PSA 50: To agree with Waterford City and County Council detail specifications of work for all public open space and green infrastructure.</p> <p>5.3.1 Palette and Approach Specific Objectives:</p> <p>PSA 51: To promote the use of an appropriate palette of colours and materials suitable to the site setting.</p> |

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|----------------------------|---|
| | <p>PSA 52: To promote the use of appropriate and sustainable materials such as glass and other high quality complementary materials.</p> <p>PSA 53: To avoid the excessive use of any material that might become oppressively dominant.</p> <p>PSA 54: To promote creative proposals in lighting and display technologies.</p> <p>PSA 55: To require any future application to consider signage, branding and lighting at the outset as part of the overall design approach and submit details at the application stage, including an assessment of potential impacts of light pollution on the immediate and wider environment.</p> <p>PSA 56: To require any future planning application to consider and submit proposals for the careful detailing of the interface with the street (including selection of floor levels, the design of entrance features, use of paving materials and lighting proposals).</p> <p>PSA 57: Facades at street level require to be detailed with regard to human scale and tactile quality.</p> <p>PSA 58: To apply the current design philosophy and the high quality design of the public realm within the existing medieval City Centre to all future development on the North Quays.</p> <p>Sustainable Urban Form/ Building Design (proposed as part of SEA).</p> <p>PSS 28: Applications for high-rise buildings over 50 meters above ground level shall be accompanied by a design statement as part of the assessment criteria for high buildings.</p> <p>PSS 29: High buildings must make a positive contribution to the city skyline, city structure and topography. Section 13.9.1 of the Waterford City Development Plan refers.</p> <p>PSA 16: Minimum of 10M is required between the edge of the building and waterfront. The planning scheme allows for a possible cantilevered walkway/boardwalk extending 5 metres over the river. Such proposals will be detailed at planning application stage. Exceptions to this may be permitted at certain locations if justified during the design stage.</p> <p>PSI 20: All development should include proposals on how they address the natural heritage in terms of conservation, management, and improvements to the local biodiversity in the urban environment. Developments shall incorporate landscaping and other design features that have the potential to improve or enhance existing natural habitats, ecological corridors and blue and green infrastructure.</p> <p>Key WCDP Existing Measures include: POL 10.3.2, OBJ 10.3.2, POL 10.3.3, OBJ 10.4.11, POL 10.5.2, POL 10.5.3, POL 10.5.5</p> <p>SEA Proposed Mitigation: Various Changes proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this</p> |

| SEA Environmental Receptor | Proposed Mitigation Measures and existing planning policy within the WCDP 2013-2019 |
|---|---|
| | stage of the SEA process. |
| MA1: Maintain sustainable access to assets such as open spaces, water resources, wastewater, drinking water, drainage and all other physical and social infrastructure. | <p>Key WCDP Existing Measures include: POL 11.5.1, POL 11.5.2 and POL 11.5.3 To continue the development of the water supply system so as to ensure that an adequate supply of piped water of suitable quality for domestic, commercial, industrial, fire safety and other uses, is available for the sustainable development of the city. (POL 11.5.1) To maintain and improve the information and control system for the water supply network. (POL 11.5.2) To maintain and expand the water conservation programme, and the watermain rehabilitation programme, in order to conserve valuable resources, business and industry. (POL 11.5.3)</p> <p>Planning Scheme Measures: Various Changes proposed in green text in order to embed this EPO into the Planning Scheme. Refer to Section 8 of SEA Matrix for details.</p> <p>SEA Proposed Mitigation: PSI XX: All planning applications are required to demonstrate as part of the Compliance Statement how the services and infrastructure requirements for each planning application will be developed to include connections to the strategic network, together with a programme of installation works and responsibility for delivering infrastructure.</p> <p>If the suggested amendments are incorporated adequate mitigation is in place and no further mitigation is required as part of this stage of the SEA process.</p> |

Table 9.2 links key mitigation measure(s) to the potential adverse effects of implementing the Draft Planning Scheme, if unmitigated. The measures include those from the Draft Planning Scheme as well as those from the City Development Plan. The measures generally benefit multiple environmental components i.e. a measure providing for the protection of water quality could beneficially impact on biodiversity, flora and fauna, protection of human health, etc.

9.1 Monitoring Programme

This section sets out the proposed monitoring programme to be implemented with the adoption of the Planning Scheme. Article 10 of the SEA Directive requires Member States to monitor the likely significant environmental effects of the implementation of plans and programmes in order to identify at an early stage unforeseen effects and be able to undertake appropriate remedial action. Schedule 2B(i) of the Planning and Development Regulations 2001 refers to the monitoring measures “envisaged”. The Environmental Report puts forward proposals for monitoring, but these can only be finalised when the plan is being adopted. SEA monitoring proposals should include relevant and appropriate thresholds which should trigger when remedial action should be undertaken for the particular aspect of the environment being monitored. These monitoring arrangements should be sufficiently flexible so as to be able to react to unforeseen / unexpected events.

The SEA monitoring programme for the plan is set-out below in Table 9.2. Both the positive and negative effects of the Planning Scheme on the environment are to be considered in the monitoring programme and recorded for all the EPOs. The future

monitoring process will be undertaken with a view to better understand the effects of the plan's implementation across all environmental topics.

Where policies, objectives, principles or standards are not specifically addressed in the SDZ Planning Scheme those in the relevant Waterford City Development Plan shall apply (WCCC Planning Scheme).

The intention when developing the monitoring programme is to build upon the existing data already being collected by Waterford City and County Council and the other national and local agencies in Waterford e.g. The Environmental Protection Agency (EPA), the National Parks and Wildlife Service (NPWS) and the Central Statistics Office (CSO).

In selecting such measures, attention should be focused on likely significant effects identified during the environmental assessment under F in Table 4A above. Monitoring is dealt with in more detail in Section 7.

9.2 Potential Impact and Indicators

Monitoring is based around the indicators which were chosen initially as part of the Waterford City Development Plan SEA process. These indicators allow the quantitative measurement of trends and progress over time relating to the EPOs used in the evaluation. Focus will be given to indicators which are relevant to the likely significant environmental effects of implementing the Planning Scheme and existing monitoring arrangements will be used, where possible, in order to monitor the selected indicators. Table 9.2 outlines the objectives for each environmental parameter together with their associated indicators and the responsible Authority.

9.3 Reporting

Waterford City and County Council, as the Development Agency, will be responsible for monitoring and reporting on feedback. An Annual Progress Report will be prepared by the Council, detailing planning permissions granted, development commenced and/or completed, progress on objectives and progress on sustainability indicators in the SDZ.

Table 9.2 Monitoring Proposals and Environmental Indicators (adapted from Waterford City Development Plan 2013-2019)

| Environmental Receptor | Environmental Protection Objective (EPO) | Indicators | Targets | Frequency of Monitoring | Department Responsible |
|--------------------------------------|--|---|---|-------------------------|---|
| Biodiversity, Flora and Fauna | B1: Protect, conserve and enhance habitats, species and areas of national and local importance, including aquatic habitats and species and promote the sustainable management of habitat networks. | Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive. | Maintenance of favourable conservation status for all habitats and species protected under national and international legislation. Identification of sites of Local Biodiversity and ecological corridors. | Annual | Waterford City and County Council NPWS DAHGA Inland Fisheries Ireland |
| | | Protection of biodiversity through the maintenance of existing ecological corridors and integration with new blue and green ecological corridors. | Develop an ecological management plan as part of all planning applications and public realm initiatives. | Annual | Waterford City and County Council supported by data from NPWS, DAHGA, Inland Fisheries Ireland. |
| | | Identification through planning applications on the presence of invasive species on sites (i.e. Japanese Knotweed, Himalayan Balsam, Rhododendron, etc) 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. | Ongoing | Waterford City and County Council |
| | | Identification of habitats of protected species and in particular bats and to minimise interference with these habitats. | Minimise interference with these habitats | Annually | Waterford City and County Council |
| | | Buildings/ structure that are particularly suitable for bat roosting, applications for works to these buildings shall include a recent bat survey. The results | Identification and up to date information on all bat species within the Planning Scheme area. Where roosting sites are impacted upon, alternative | Annually | Waterford City and County Council |

| Environmental Receptor | Environmental Protection Objective (EPO) | Indicators | Targets | Frequency of Monitoring | Department Responsible |
|------------------------------------|---|---|---|--|---|
| | | of which will be included in the monitoring report as part of the implementation of the SEA. | appropriate roosting sites such as bat boxes are to be provided. | | |
| Population and Human Health | P1: Facilitate a good standard of health for the Waterford's population through ensuring high quality residential, recreational and working environments that are based on sustainable landuse and travel patterns. | Increase in Waterford City's population. | Increase in residential, employment opportunities, services and public amenity within the North Quays and support increase in population. | Annually – Planning Applications. Occupancy rates, employment figures and Census Data. Annually. | Waterford City and County Council EPA Central Statistics Office |
| | | Quality of Shellfish Growing Areas in and implementation of Pollution Reduction Programmes for Waterford Harbour. | No Shellfish Areas to be graded as Class C. Implementation of Pollution Reduction Programmes for Waterford Harbour. | | |
| | | Provision of walking routes and cycling lanes. | Increase in length of cycle lanes and provision of riverside walkways. | | |
| | | Supporting Smart City and Digital Economy | Roll out of Smart Initiatives as part of planning applications and integrate into the public realm. | Ongoing and reported Annually. | Waterford City and County Council |
| | | Average density of new residential development. | Sustainable densities achieved in new residential / mixed-use schemes | Annually – Planning Applications | Waterford City and County Council |
| | | Numbers of jobs created on site during construction and operation stage. | Provide employment opportunities in the City Centre, Ferrybank / Belview area during both construction and operational and phases. | Annually | Waterford City and County Council |
| | | Noise levels complaints and Noise Mapping. | Prevent and reduce noise levels to existing and new | Annually | Waterford City and County Council |

| Environmental Receptor | Environmental Protection Objective (EPO) | Indicators | Targets | Frequency of Monitoring | Department Responsible |
|------------------------|---|--|---|-------------------------|--|
| | | | residential areas along heavily trafficked routes. i.e. Dock Road. | | |
| | | Radon levels in buildings. | Installation of passive preventive measures in all new buildings and to continuously monitor radon levels in all buildings. | Ongoing | Waterford City and Council Planning Department Property Owners |
| Water Resources | W1: Achieve and maintain required water quality standards in the South East River Basin Management Plan and reduce discharges of pollutants or contamination to waters. | Water quality monitoring results by the EPA for: Surface Water Ecological and Chemical Status. Trophic Status of Estuarine and Coastal Waters. Groundwater Quality. Drinking Water Quality. <i>EPA data under Urban Waste Water Discharges in Ireland</i> <i>Population Equivalents Greater than 500 persons – Reports for the Years 2008 and 2009 and 2010-2011. Agglomerations over 500 without Secondary Treatment.</i> <i>Performance of WWTP in relation to conditions of licence.</i> | Protect and Restore areas identified in the River Basin District Management Plan required to achieve “good” status, i.e. 4+ for water quality by 2021 in line with the Water Framework Directive objectives. No deterioration in levels of compliance with drinking water quality standards and maintenance of above national average compliance rate. | Annually | EPA, Waterford City and County Council |
| | | 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 | Annually | Environment and Engineering Department (Drainage Division) in association with the Planning and Economic |

| Environmental Receptor | Environmental Protection Objective (EPO) | Indicators | Targets | Frequency of Monitoring | Department Responsible |
|--------------------------------|---|---|--|---------------------------------|--|
| | | | developments and Identify Sustainable Drainage Systems (and features which are identified as having flood defence function) in all new developments. | | Development Department |
| | | Development of 'Green'; Strategy | Ongoing development and maintenance of green infrastructure across the site. | Ongoing - Planning Applications | Waterford City and County Council |
| Soils | S1: Protect, improve and maintain the quality of soils in the interest of avoiding environmental degradation in water quality and biodiversity. | Dredging Licences. Monitoring results from Kilbarry Landfill annual reports. | Full compliance with conditions of waste licence. | | Waterford City and County Council |
| | | All planning applications shall be accompanied by a report from a qualified expert consultant detailing soil results and appropriate remediation measures where required. | Protection enhancement and improvement of soil quality in the area. Remediation of contaminated soil on former industrial Brownfield lands within the SDZ area. | Annually/ Ongoing | Waterford City and County Council and EPA as appropriate. |
| Air and Climate Factors | AC1: To improve travel choice and accessibility, reduce the need for travel by car and shorten the length and duration of journeys. | Average daily motor vehicle flow within the City. Proportion of travel by mode. Monetary investment in quality bus, rail, walking and cycling infrastructure and supporting infrastructure. | To reduce road traffic in line with DoEHLG policy Smarter Travel A Sustainable Transport Future. Quality/ frequency of services provided and number of passengers. Increase in length of cycle paths and foot paths in the City. | Annually Ongoing | Waterford City Council Dept. Of Transport National Transport Authority |

| Environmental Receptor | Environmental Protection Objective (EPO) | Indicators | Targets | Frequency of Monitoring | Department Responsible |
|--------------------------|---|---|---|---------------------------------|---|
| | AC2: To limit adverse impacts of climate change through the use of sustainable energy sources. | Optimum building energy ratings to be achieved for residential and non residential units | All proposed developments to include a percentage of their annual energy from Sustainable Sources – e.g. Solar, Geothermal, etc. Explore district options heating enabled in order to provide an environmentally sustainable source of heating & cooling | Annually | Planning and Environmental Department |
| Cultural Heritage | C1: Protect and conserve and enhance cultural heritage features of the plan area including the built environment, settings and known and unknown archaeological assets. | Number of Monuments in the RMP and areas of archaeological potential which have been recorded or subject to exploration as a result of development. | To maintain and increase the number of archaeological features recorded and protected. | Ongoing | Waterford City and County Council DAHRRG NIAH National Monuments Service |
| | | Number of archaeological monuments damaged due to development. | No damage occurring to archaeological monuments due to development. | Ongoing | Waterford City and County Council DAHRRG NIAH |
| | | Number and conservation status of structures in RPS. Extent of ACAs designated in the City. | To increase visitor numbers to Waterford's museums. To increase the number and maintain the conservation status of Protected Structures. To maintain the quality of ACAs in the City. | | National Monuments Service |
| Landscape | L1: Protect and conserve the quality, character and distinctiveness of the River | Area of land zoned as open space along the waterway corridor. | Increase in or at least no loss in area zoned as open space along the River Suir. | Ongoing – Planning Applications | Waterford City and County Council Kilkenny County |

| Environmental Receptor | Environmental Protection Objective (EPO) | Indicators | Targets | Frequency of Monitoring | Department Responsible |
|------------------------|--|--|--|-------------------------|---|
| | Suir waterway corridor and minimise negative visual impacts. | Area of riparian woodland along the River Suir Waterway. Building height and design along the Quay and SDZ. | No loss and identification and protection of riparian woodland along the River Suir. Appropriate Heritage Appraisal and Landscape Capacity Assessment to inform any future development along the waterway corridor. Through Design Statement & Visual Impact Assessment as part of Planning Applications. | | Council |
| Material Assets | MA1: Maintain sustainable access to assets such as open spaces, water resources, water resources, wastewater, drinking water, drainage and all other physical and social infrastructure. | Access to public amenities and visitor numbers/ | Increased usage of Waterway Corridors as a public amenity. Increased visitor numbers to cultural heritage sites. | Ongoing | Waterford City and County Council Failte Ireland |
| | | Incorporation of SuDS into all new developments. | Provision for the reuse, recycling and conservation of water & implementation of SuDS (sustainable urban drainage systems) | Ongoing | Waterford City and County Council |
| | | Access to safe, clean drinking water Number of boil water notices. | New connections to Irish water. No boil water notices. | Ongoing | Irish Water |
| | | To reduce the generation of waste and adopt a sustainable approach to waste management. | To meet waste management targets as per the Waste Management Plan. | Ongoing | Waterford City and County Council (Waste Management Division) |

10.0 CONCLUSION

In accordance with the requirements of the SEA Directive and Section 168 (2) of the Planning and Development Act 2000 (as amended) stating draft Planning Schemes for SDZs shall consist of particular information including: *“proposals relating to minimising any adverse effects on the environment, including the natural and built environment, and on the amenities of the area”*. This SEA identifies and proposes measures to reduce likely significant adverse effects that have been identified through the SEA process.

The Development Agency in its role in the preparation of the Draft Planning Scheme has integrated some of the individual SEA, AA and SFRA provisions into the Goals and specific objectives and throughout the text of the draft Planning Scheme. Furthermore, due to the iterative process of SEA and AA during the plan making process, various iterations of the Planning Scheme have been developed. This process has contributed towards strengthening the provisions of the Planning Scheme and mitigating some of the identified likely significant effects on the environment at this plan making level of assessment. Future development proposals will be guided through policy and objectives as part of the Planning Scheme from the outset. In addition, the Planning Scheme is supported by higher level EU, national and city level policies. Through the application of the Compliance Statement and the specific objective PSS 1: All future planning applications shall comply with the relevant Waterford City Development Plan policies and objectives, this ensures a robust level of environmental protection.

For the most part, the findings of “uncertain” impacts in the SEA matrix will be determined at a lower level of environmental assessment largely through the relevant planning process which may be supported by EIA, AA, FRA etc. These assessments will involve for example the application of Appropriate Assessment, landscape appraisal, archaeological and architectural heritage appraisal and flood risk assessment to accurately determine the impacts under the range of environmental headings detailed above.

Table 9.1 links key mitigation measure(s) to the potential adverse effects of implementing the Planning Scheme, if unmitigated. The measures will include those from the Planning Scheme as well as those from the City Development Plan. The measures generally benefit multiple EPOs i.e. a measure providing for the protection of water quality could beneficially impact on biodiversity, flora and fauna, protection of human health, etc. Additional mitigation measures are proposed as part of the SEA process.

As the Draft Planning Scheme is strategic in nature it will be necessary to define more detailed environmental control measures at the project level and in accordance with controls and mitigation set out in respective appropriate assessment when more specific information is available.

Monitoring of the Planning Scheme and any likely significant effects on the environment is supported by a monitoring programme identified in Table 9.2.

11.0 REFERENCES

DAHRRGA. Submission received in response to the Scoping Document from the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

DEHLG (Department of Environment, Heritage and Local Government), 2009. The Planning System and Flood Risk Management Guidelines for Planning Authorities.

Directive on Strategic Environmental Assessment (SEA) (Directive 2001/42/EC).

EEA (European Environment Agency), 2015. The European Environment – State and Outlook 2015. EEA, Copenhagen.

EPA (Environmental Protection Agency), 2015. Air Quality in Ireland 2015, Key Indicators of Ambient Air Quality.

EPA (Environmental Protection Agency), 2016. Ireland's Environment – An Assessment 2016.

EPA (Environmental Protection Agency), 2017a www.epa.ie/air/quality/

EPA (Environmental Protection Agency), 2017b <http://www.epa.ie/air/quality/data/wat/> [Accessed 02/03/2017]

Habitats Directive, Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

Irish Water, 2017. <https://www.water.ie/water-supply/water-quality/results/summary/> [Accessed 17/01/2017]

NIAH, 2016 <http://www.buildingsofireland.ie/niah/search.jsp?type=record&county=WA®no=22900908> [Accessed 8 September 2016]

NIAH (National Inventory of Architectural Heritage), 2017 <http://www.buildingsofireland.ie/Surveys/Buildings/> [Accessed 18/04/2017]

Planning and Development Regulations 2001 (S.I. No. 600 of 2001) as amended.

Waterford City Council (WCC) and Loci, 2008. Waterford North Quays - Urban Design Framework Plan 2008, Revision 2.

Waterford Planning, Land Use and Transportation Study (PLUTS) 2004-2020. Atkins.

Waterford City Council (WCC), 2013. Waterford City and County Noise Action Plan 2013-2018.

Colhoun K. & Cummins S. (2013) *Birds of Conservation Concern in Ireland 2014–2019*. Irish Birds 9: 523-544.

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive). Official Journal of the European Communities, L206/7.

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (the Birds Directive). Official Journal of the European Union, L20/7.

DEHLG (2010) *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. Department of Environment, Heritage and Local Government, Dublin.

EC (2000) *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC*. Directorate-General for the Environment, European Commission.

EC (2001) *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Directorate-General for the Environment, European Commission.

EC (2011) *The implementation of the Birds and Habitats Directives in estuaries and coastal zones*. Environment Directorate-General of the European Commission.

European Communities (Birds and Natural Habitats) Regulations, 2011. *SI No. 477/2011*.

European Communities (Birds and Natural Habitats) (Amendment) Regulations, 2013. *SI No. 499/2013*.

European Communities (Birds and Natural Habitats) (Amendment) Regulations, 2015. *SI No. 355/2015*.

Flora (Protection) Order, 2015. *SI No. 356/2015*.

Fossitt, J. (2000) *A Guide to Habitats in Ireland*. The Heritage Council, Kilkenny.

NBDC (2016) *Biodiversity Maps* <<http://maps.biodiversityireland.ie>> [Accessed 23/02/2017]. National Biodiversity Data Centre, Waterford.

NPWS (2010) *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular Letter NPWS 1/10 and PSSP 2/10. Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2013a) *The Status of EU Protected Habitats and Species in Ireland. Volumes 2 & 3: Article 17 Assessments*. Department of Arts, Heritage and the Gaeltacht, Dublin.

Planning and Development Acts, 2000-2016 (as amended)

Planning and Development Act, 2000 (Designation of Strategic Development Zone: North Quays, Waterford City) Order, 2016. *SI No. 30/2016*.

Smith, G, F., O'Donoghue, P., O'Hora, K. and Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. The Heritage Council, Kilkenny.

TII (2008) *Guidelines for Ecological Survey Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*. Transport Infrastructure Ireland, Dublin.

Wildlife Act, 1976. No. 39 of 1976.

Wildlife Act, 1976 (Protection of Wild Animals) Regulations, 1990. SI No. 112/1990.

Wildlife (Amendment) Act, 2000. No. 38 of 2000.

Wildlife (Amendment) Act, 2012. No 29 of 2012.

APPENDIX A

*Relationship with policy,
plan, programmes*

Relationship with Policy, Plan, Programmes

Introduction

The Planning Scheme sits within a hierarchy of County, Regional and National Plans and has been framed with due consideration to the policy direction provided in these Plans. Furthermore, the Plan gives effect to the implementation of various European Union legislation such as the EU Habitats Directive (92/43/EEC), the Water Framework Directive and Urban Wastewater Directive (91/271/EEC) amongst others and as well as national environmental quality/control legislation. These issues were already discussed and considered in detail within the SEA's Environmental Report for the Waterford City Development Plan for which the Planning Scheme is required to be consistent.

Cumulative effects are those that arise when the effects of the implementation of one plan occur in combination with those of other plans or developments. It is the sequence of policy assessment that facilitates the assessment of cumulative effects. This assessment includes an examination of all effects including secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

The tables below identify the principle plans, policies and programmes that are likely to give rise to developments causing effects that could combine or interact with those of the Planning Scheme. This analysis shows that cognisance has been taken of relevant international and national level plans and policies. However, it could be considered to be premature to undertake any meaningful assessment at this plan level stage in order to assess the likely effects of the types of developments that could occur in combination with the implementation of the proposed planning scheme.

Where it was identified that the Planning Scheme may have a negative impact on the EPOs of these individual plans and programmes, a means of addressing these issues is presented i.e. typically through the assessment by the Environmental Protection Objectives. The Environmental Protection Objectives EPOs are used to assess the likely significant effects of implementing the Plan. The EPOs have been adapted from the SEA process of the Waterford City Development Plan 2013-2019. The EPOs are used to assess the likely significant effects of implementing the draft Planning Scheme. Where any significant adverse impacts are identified the ER includes mitigation measures to prevent, reduce and as fully as possible offset these effects on the environment.

This appendix is not intended to be a full and comprehensive review of EU Directives, the transposing regulations or the regulatory framework for environmental protection and management. The information is not exhaustive and it is recommended to consult the Directive, Regulation, Plan or Programme to become familiar with the full details of each.

Table A. 1 Relevant Plans, Programmes and Policies

| International/European Union Level |
|---|
| <ul style="list-style-type: none"> • Johannesburg Plan of Implementation, 2002 • Agenda 21 • EU Biodiversity Strategy 2020 • Convention on Wetlands of International Importance (Ramsar Convention) 1971 • EU Environmental Action Programme • European Spatial Development Perspective 1999 • EU White Paper on Renewable Energy 1997 • COMAH (Seveso III 2012/18/EU) Directive – European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 |

- EU Water Framework Directive 2000/60/EC
- SEA Directive (Directive 2001/42/EC)
- EIA Directive (2011/92/EU as amended by 2014/52/EU)
- Floods Directive 2007/60/EC
- Habitats Directive 92/43/EEC (the Habitats Directive)
- Birds Directive (2009/147/EC)
- European Communities Quality of Salmonid Waters Regulations 1998
- Drinking Water Directive (98/83/EC)
- Urban Waste Water Treatment Directive (91/271/EEC)
- Groundwater Directive (2006/118/EC)
- EU Surface Water Directive (2006/118/EC)
- Shellfish Waters Directive (2006/113/EC)
- Integrated Pollution Prevention and Control (IPPC) Licensing 2004
- Nitrates Directive (91/676/EEC)
- European Convention on the Protection of the Archaeological Heritage, 1992 (the Valletta Convention)
- The Clean Air for Europe Directive (2008/50/EC) and the Fourth Daughter Directive (2004/107/EC)
- Noise Directive 2002/49/EC
- Marine Strategy Framework Directive (2008/56/EC)
- UN Kyoto Protocol (2nd Kyoto Period)
- The Second European Climate Change Programme (ECCP II)
- Paris climate conference (COP21) 2015
- EU 2020 climate and energy Package
- Environmental Liability Directive (2004/35/EC)
- European Landscape Convention, 2000

National Level

- The National Spatial Strategy 2002-2030
- Ireland 2040 Our Plan - Draft National Planning Framework (September 2017)
- Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007 – 2020
- Our Sustainable Future - A Framework for Sustainable Development in Ireland
- The National Development Plan (2007-2013) and
- Urban Regeneration and Housing Act 2015
- National Heritage Plan 2002
- Framework and Principles for the Protection of the Archaeological Heritage – Published by Dúchas The Heritage Service).
- Smarter Travel – A Sustainable Transport Future 2009-2020;
- National Catchment Flood Risk Assessment and Management Programme;
- National Biodiversity Plan 2011-2016
- Ireland's First National Cycle Policy Framework (2009)
- National Policy on Town Defences 2008
- Noise Regulations, 1994
- National Action Plan for Social Inclusion 2007-2016
- Wildlife (Amendment) Act, 2000
- Creating a Green Infrastructure for Ireland- Enhancing Natural Capital for Human Wellbeing 2010
- National Climate Change Strategy 2007-2012
- Air Pollution Act 1987
- Local Government (Water Pollution) Acts, 1977 and 1990
- Water Quality (Dangerous Substances) Regulations 2001

- National Inventory of Architectural Heritage
- Framework and Principles for the Protection of the Archaeological Heritage 1999
- Landscape Assessment Guidelines 2000
- National Landscape Strategy 2015-2024
- Building on Recovery; Infrastructure & Capital Investment Programme 2016-2021
- Planning and Development Act, 2000 (as amended) Planning and Development Regulations 2001 (as amended)
- National Climate Change Adaptation Framework (2012)
- Climate Action and Low Carbon Development Act 2015
- National Renewable Energy Action Plan
- Strategic Framework for Integrated Land Transport (SFILT)
- Grid25 Implementation Programme
- Water Services Strategic Plan – A Plan for the Future of Water Services (2015);
- National Anti-Poverty Strategy (1997)
- Healthy Ireland – A Framework for Improved Health and Wellbeing 2013-2025;

Guidelines:

- The Planning System and Flood Risk Assessment Guidelines, Guidelines for Planning Authorities (2009)
- Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities (2009)
- Urban Design Manual A Best Practice Guide (2009)
- Design Manual for Urban Roads and Streets (DMURS) (2013)
- Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns and Villages) (2009)
- Architectural Heritage Protection – Guidelines for Planning Authorities 2004
- Development Management Guidelines (DoEHLG) 2007
- Traffic Management Guidelines (2003)
- Childcare Facilities, Guidelines for Planning Authorities (2001)
- The Provision of Schools and the Planning System, A Code of Practice for Planning Authorities (July 2008)
- Towards Sustainable Local Communities: Guidelines on Local Agenda 21 (2001)

Regional Level

- Regional Planning Guidelines for the South East Region 2010-2022
- Regional Spatial and Economic Strategies (once they are prepared)
- Draft River Basin Management Plan (2nd Cycle RBD)
- Draft Flood Risk Catchment Management Plans for the South East
- The Joint South East Waste Management Plan
- South East Region Employment Action Plan 2011
- Eastern Midlands Regional Waste Management Plan (2015-2021)
- Eastern River Basin Management Plans
- S&E Regional Operational Programme 2014- 2020
- South East Economic Development Strategy (SEEDS) 2013-2019

County and Local Level

- Waterford City Development Plan 2013- 2019 (incorporates the Housing Strategy) and SEA Environmental Report for Waterford City Development Plan.
- Waterford County Development Plan 2011-2017
- Waterford Planning, Land Use and Transportation(PLUTS) Study (2004)
- Economic Strategy for Waterford City and County (2013)
- Waterford North Quays - Urban Design Framework Plan (2008)

- Ferrybank- Belview Local Area Plan 2009 (June 2017 under review)
- One Waterford: Local Economic & Community Plan 2015-2020
- Report of the Waterford Re-Organisation Implementation Group and Economic Strategy for Waterford City and County, One Waterford – Delivering Jobs, Efficiency and Growth (2013)
- County Waterford Economic Plan: Ready for Growth 2010-2014
- Strategy for Economic, Social & Cultural Development of Waterford City 2002-2012
- Strategy for Fishery Dependent Communities(FLAG): Wicklow, Wexford and Waterford 2013
- Waterford Children & Young People's Services Committee Children & Young People's Plan 2015-2018
- Waterford City & County Council Corporate Plan 2015-2020;
- Waterford City Retail Strategy (2012)
- Waterford City Transport Feasibility Study (2010)
- Waterford Climate Change Strategy (2011)
- Strategic Plan 2014 – 2017 Waterford - Active People, Active Place
- Waterford City Centre Urban Renewal Scheme (2015)
- Kilkenny City and Environs Development Plan 2014-2020 – Appendix A Retail Strategy
- Kilkenny County Development Plan 2014-2020

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|--|--|
| Johannesburg Plan of Implementation 2002 | This International policy initiative sets out an action plan for the implementation of the activities adopted at the World Summit on Sustainable Development in 2002. It covers topics such as poverty eradication, changing unsustainable patterns of production and consumption, managing natural resources, sustainable development and other aspects of the implementation of Agenda 21. | Environmental Objectives EPOs have been developed and are included in the SEA ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process in accordance with higher level plans and policies. | No significant cumulative or in combination effects perceived at this strategic level. |
| Agenda 21 | Sustainable Development emerged as an idea in the late 1980s and led to the United Nations' Conference on Environment and Development (Earth Summit) in Rio de Janeiro in 1992. At the Summit, world leaders agreed to implement an action programme for Sustainable development called, Agenda 21. Agenda 21 is a process which facilitates sustainable development at community level. It is an approach, based on participation which respects the social, cultural, economic and environmental needs of the present and future citizens of a community in all its diversity, and which relates that the community and its future to the regional, national and international community of which it is a part. The key role of Strategic Environmental Assessment is stressed in respect of Plans and Programmes that may have significant affect on the environment. Local Agenda 21 aims to promote sustainable development at local and regional level. | EPOs have been developed and are included in the SEA ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process in accordance with higher level plans and policies. | No significant cumulative or in combination effects perceived at this strategic level. |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|--|--|
| Strategic Plan for Biodiversity 2011-2020 | This Plan sets out a framework for action by all countries and stakeholders to safeguard biodiversity and the benefits it provides to people. To ensure this, pressures on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used and benefits arising out of utilization of genetic resources are shared in a fair and equitable manner; adequate financial resources are provided, capacities are enhanced, biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach.” | EPOs have been included in the ER to ensure that biodiversity is examined in the ER and as part of the Habitats Directive Assessment. | No significant cumulative or in combination effects perceived at this strategic level. |
| Convention on Wetlands of International Importance (Ramsar Convention) 1971 | The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. | EPOs have been developed and are included in the ER to ensure that sustainable development including biodiversity and likely significant effects on the environment are addressed during the SEA process in accordance with higher level plans and policies. | No significant cumulative or in combination effects perceived at this strategic level. |
| EU Environmental Action Programme 2014 | The Seventh Environment Action Programme (EAP) takes a broad look at the challenges of environmental policy and provides a strategic framework for the Commission's environmental policy up to 2020. The seventh EAP calls to protect, conserve and enhance the Union's natural capital, to turn the Union into a resource-efficient, green and competitive low-carbon economy and to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing. The strategic approaches include among others: the better implementation of legislation, better information by improving the knowledge database, full integration of environment protection requirements in other community policies and more and wiser investment for environment and climate policy. | EPOs have been developed and are included in the ER to ensure that sustainable development including biodiversity and likely significant effects on the environment are addressed during the SEA process in accordance with higher level plans and policies. | No significant cumulative or in combination effects perceived at this strategic level. |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|---|--|
| European Spatial Development Perspective 1999 | The European Spatial Development Perspective (ESDP) is a legally non-binding document. It is a policy framework for better co-operation between EU sectoral policies with significant spatial impacts and between Member States, their regions and cities. The main policy aims of the ESDP are directed primarily towards a more balanced and multicentric system of cities and a new urban-rural relationship, the parity of access to infrastructure and knowledge and the prudent management and development of the natural and cultural heritage. | | No significant cumulative or in combination effects perceived at this strategic level. |
| EU White Paper on Renewable Energy 1997 | This paper identified a potential growth in the contribution of renewable energy to total energy supply from 14.3% in 1997 to 23.5% by 2010. The indicative target addressed to Ireland in the Directive is to increase green electricity usage from 3.6% of gross electricity consumption in 1997 to 13.2% by 2010. | | No significant cumulative or in combination effects perceived at this strategic level. |
| COMAH (Seveso III 2012/18/EU) Directive – European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 | <p>The Seveso III Directive, sometimes referred to as COMAH, stipulates certain requirements for storage of relatively large quantities of substances classified as dangerous.</p> <p>The directive sets out that each Member State must ensure that the operator:</p> <ul style="list-style-type: none"> • takes all measures necessary to prevent major accidents and to limit their consequences for man and the environment; • Is required to prove to the competent authority that all the necessary measures provided for by the Directive have been taken. | It is not envisaged that the Planning Scheme will involve the storage of any large quantities of substances classified as dangerous. The SEA EPOs for Population and Human Health include a measure to protect human health from hazards if any should arise. | No significant cumulative or in combination effects perceived at this strategic level. |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|--|---|
| EU Water Framework Directive 2000 (2000/60/EC) | <p>The WFD represents a major revision of EU water policy and establishes a framework for the protection of inland surface waters, transitional waters and groundwater. One of the main requirements of the Water Framework Directive is the development of "River Basin Management Plans" and the designation of a competent authority for each river basin district (RBD).</p> <p>This EU Directive was transposed into Irish law in 2003 and Aims to prevent any deterioration in the status of any waters and to achieve at least "good status" in all waters by 2015.</p> | <p>EPOs have been developed and are included in the ER to ensure that sustainable development including water resources and likely significant effects on the environment are addressed during the SEA process in accordance with higher level plans and policies.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level.</p> |
| SEA – Directive (2001/42/EC) - Assessment of the effects of certain plans and programmes on the Environment 2001 | <p>This Directive requires plan-makers to carry out an assessment of the likely significant environmental effects of implementing a plan or programme before the plan or programme is adopted. There are two statutory instruments which transposed the SEA Directive into Irish Law:</p> <ul style="list-style-type: none"> European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, S.I. No. 435 of 2004 Planning and Development (Strategic Environmental Assessment) Regulations 2004, S.I. No. 436 of 2004. <p>Under the SEA Directive Planning Scheme for a Strategic Development Zone requires an SEA. Section 168(2) of the Planning and Development Act identifies the key requirements of any designated planning scheme which shall include proposals relating to minimising any adverse effects on the environment, including the natural and built environment, and on the amenities of the area.</p> | <p>An SEA as required under the Planning and Development (Strategic Environmental Assessment) Regulations 2004, S.I. No. 436 of 2004 (as amended 2011) which this SEA ER forms part of is being prepared to inform the development of the Planning Scheme.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level.</p> |
| Environmental Impact Assessment Directive 2011/92/EU (as amended by 2014/52/EU, 2011) | <p>Environmental Impact Assessment Directive 2011/92/EU (amended by Directive 2014/52/EU) requires Member States to carry out Environmental Impact Assessments (EIA) of certain public and private projects, before they are authorised, where it is believed that the projects are likely to have a significant impact on the environment.</p> | <p>Further detailed Environmental Impact Assessments will be carried out at project level as required.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level.</p> |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|---|---|
| Floods Directive 2007 | The Directive requires that the PFRA, flood maps and flood risk management plans are prepared in cooperation and coordination with neighbouring states in cross-border river basins, and with the implementation of the Water Framework Directive. The Directive also requires that the PFRA and flood maps are published, and that public and stakeholder consultation and engagement is undertaken in the preparation of the flood risk management plans. | A Strategic Flood Risk Assessment (SFRA) has been undertaken on the Planning Scheme. The results from the SFRA have informed the development of the Planning Scheme and the SEA ER. | No significant cumulative or in combination effects perceived at this strategic level. All planning applications will be subject to measures identified in the SFRA and appropriate site specific flood risk assessments. |
| EU Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats Directive)1992 | <p>The main aim of the Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain, protect or restore natural habitats, animal and plant species to a favourable conservation status, introducing robust protection for those habitats and species of European importance.</p> <p>The Directive provides for a network of protected sites known as The Natura 2000 network, which limits the extent and nature of development which may have a detrimental effect on the flora or fauna identified therein. Animals and plant species that are in need of strict protection are listed in Annexes to the Directive. The Habitats Directive is considered the most important EU initiative to support National and International biodiversity.</p> | The results from the NIR informed the SEA assessment process particularly in relation to biodiversity EPO and interactions across all other EPOs. Mitigation measures were devised as part of the NIR process and are incorporated into the proposed wording and the SEA process. EPOs have been included in the ER which cover the issues in relation to the protection of designated sites, habitats and species, non-designated sites, habitats and species, aquatic habitats. | No significant cumulative or in combination effects perceived at this strategic level. |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|--|--|
| EU Directive on the Conservation of Wild Birds 2009 | The Council Directive on the Conservation of Wild Birds (known as the Birds Directive) (2009/147/EC) provides a common framework for the conservation of naturally occurring species of wild birds and their habitats throughout the EU. It obligates EU states to preserve, maintain and re-establish sufficient areas in order to safeguard the habitats of listed migratory and wetland species in order to ensure their survival and reproduction in their area of distribution. The most suitable areas for these species are classified as Special Protection Areas (SPAs) under the Natura 2000 network. Ireland is obliged to "take appropriate steps to avoid pollution or deterioration of habitats or any Disturbances affecting the birds" The Birds Directive also requires the avoidance of pollution or deterioration of habitats generally outside specifically protected sites. | EPOs have been included in the ER to ensure that any significant effects on the environment are identified. Where these occur the NIR and ER present appropriate mitigation measures as part of the SEA process and proposed wording of the Planning Scheme. | No significant cumulative or in combination effects perceived at this strategic level. |
| European Communities Quality of Salmonid Waters Regulations 1998 | European Communities (Quality of Salmonid Waters) Regulations 1998 (S.I. No. 293 of 1998) supports and protects designated Salmonid Waters, which are capable of supporting salmon (Salmo salar), trout (Salmo trutta), char (Salvelinus) and whitefish (Coregonus). | EPOs have been included in the ER to ensure that any significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures. | No significant cumulative or in combination effects perceived at this strategic level. |
| EU Drinking Water Directive 1988 | The European Communities (Drinking Water) Regulations 2007 give formal effect in Irish law to the EU Drinking Water Directive of 1988. They establish strict quality standards for water used for human consumption. They set out the maximum and guideline values for various different physical, bacteriological and chemical contaminants. Not all of these parameters are monitored on a regular basis. A group of 8 to 14 contaminants form the basis of water quality testing in Ireland. | EPOs have been included in the ER to ensure that any significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures. | No significant cumulative or in combination effects perceived at this strategic level. |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|--|--|
| EU Urban Waste Water Treatment Directive 1991 | Directive 91/271/EEC aims to protect surface inland waters by regulating collection and treatment of urban waste water and discharge of certain biodegradable industrial waste water (basically from the agro-food industry). The Directive sets targets dates for the provision of specified level of collection and treatment facilities. In particular it requires, for all agglomerations above 2,000 population equivalents, sewerage systems and secondary, i.e. biological waste water treatments. | EPOs have been included in the ER to ensure that likely significant effects on the environment are identified. Where these occur, the ER presents appropriate mitigation measures. | No significant cumulative or in combination effects perceived at this strategic level. |
| EU Groundwater Directive (2006/118/EC) 2006 | Groundwater Directive 2006/118/EC requires Member States to apply a system of investigation and authorisation to waste disposal and other activities in order to ensure that groundwater is not polluted by dangerous substances. | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |
| EU Surface Water Directive (75/440/EEC) 1975 | The Directive aims to protect public health by ensuring that surface water abstracted for use as drinking water reaches certain quality standards before it is supplied to the public. The Directive lays down nonbinding 'guide' values and binding 'imperative' values and requires Member States to monitor the quality of surface waters from which drinking water is abstracted and to take measures to ensure that it complies with the minimum quality standards. | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |
| Shellfish Waters Directive (2006/113/EC) | The aim of the Shellfish Waters Directive is to protect or improve shellfish waters in order to support shellfish life and growth. It is designed to protect the aquatic habitat of bivalve and gastropod molluscs. The Directive requires Member States to designate waters that need protection in order to support shellfish life and growth, setting physical, chemical and microbiological requirements that designated shellfish waters must either comply with or endeavour to improve. | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|--|--|--|
| Integrated Pollution Prevention and Control (IPPC) Licensing 2004 | <p>IPC licences aim to prevent or reduce emissions to air, water and land, reduce waste and use energy/resources efficiently. An IPC licence is a single integrated licence which covers all emissions from the facility and its environmental management. All related operations that the licence holder carries in connection with the activity are controlled by this licence.</p> <p>Before a licence is granted, you must satisfy the Environmental Protection Agency that emissions from the activity do not cause a significant adverse environmental impact.</p> | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |
| EU Nitrates Directive (91/676/EEC) 1991 | <p>The Council Directive concerning the Protection of Waters against Pollution caused by Nitrates from Agricultural Sources was adopted in 1991. Its aim is to reduce water pollution and protect all aquatic ecosystems from nitrate pollution caused by agricultural sources, (livestock effluents and the excessive use of fertilisers) and prevent further such pollution, with the primary emphasis being on the management of livestock manures and other fertiliser.</p> | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |
| European Convention on the Protection of the Archaeological Heritage, 1992 (The Valletta Convention) | <p>The aim of the Convention is to 'protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study'. It requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process.</p> | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|--|--|
| Air Quality Directives 1998 (as amended) | It is the objective of new EU Directive to take a new approach to the monitoring, assessment and management of air quality in recent years. The Objectives include avoiding, preventing and reducing the impact of harmful air emissions on human health and the environment. It is likely that the implementation of the Plan, due to a renewed focus on sustainable development, sustainable transportation and climate change initiatives driven by new European Legislation will have long-term benefits with respect air quality and climate change. However, any localised potential for adverse effects will be managed through the appropriate procedures and controls such as IPC Licensing etc. | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |
| Environmental Noise Directive 2002 | The Environmental Noise Directive (2002/49/EC) aims to put in place a European wide system for identifying sources of Environmental noise, informing the public about relevant noise data and taking the necessary steps to avoid, prevent or reduce noise exposure. A Noise Action Plan was published for Waterford City and County under the END in 2012 and was consulted during the SEA process. | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |
| Marine Strategy Framework Directive (2008/56/EC) | The Marine Directive aims to achieve Good Environmental Status (GES) of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. It is the first EU legislative instrument related to the protection of marine biodiversity, as it contains the explicit regulatory objective that "biodiversity is maintained by 2020", as the cornerstone for achieving GES. | EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process. | No significant cumulative or in combination effects perceived at this strategic level. |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|--|---|
| Kyoto Protocol, 2005 | <p>The Kyoto Protocol is an agreement made under the United Nations' Framework Convention on Climate Change. It was decided in December 1997 and entered into force on 16th February 2005. Its objective is to substantially reduce greenhouse gas emissions in response to climate change. Developed countries, the so-called Annex 1 states, must reduce their greenhouse gas emissions by a collective average of 5% below their 1990 levels by 2012. Following the Conference of Parties to the Climate Change Convention (COP) meeting in Copenhagen, 2009, the EU revised its commitment to reducing greenhouse gases by increasing the target to 20% reduction on 1990 levels by 2020.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level.</p> |
| Climate Change Programme (ECCP II) | <p>Objectives seek to develop the necessary elements of a strategy to implement the Kyoto protocol. No likely significant impacts are expected in relation to the environmental topic of air quality or climate change at plan stage.</p> | <p>EPOs have been developed and are included in the ER to ensure that sustainable development and likely significant effects on the environment are addressed during the SEA process.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level.</p> |
| Paris Agreement (COP 21) 2015 | <p>The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C. The Paris Agreement is a bridge between today's policies and climate-neutrality before the end of the century. This is the first ever universal, legally binding global climate deal and was signed by 195 countries.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level.</p> |
| 2020 Climate & Energy Package | <p>The 2020 package is a set of binding legislation to ensure the EU meets its climate and energy targets for the year 2020. The package sets three key targets: 20% cut in greenhouse gas emissions (from 1990 levels), 20% of EU energy from renewable and 20% improvement in energy efficiency. The targets were set by EU leaders in 2007 and enacted in legislation in 2009. They are also headline targets of the Europe 2020 strategy for smart, sustainable and inclusive growth.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level.</p> |

| International / European Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|---|--|
| Environmental Liability Directive (2004/35/EC) | The ELD establishes a framework of environmental liability, based on the "polluter-pays" principle, to prevent and remedy environmental damage. The Directive defines "environmental damage" as damage to protected species and natural habitats, damage to water and damage to soil. | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures. | No significant cumulative or in combination effects perceived at this strategic level. |
| European Landscape Convention, 2000 | Landscape Character Assessment is a process which describes maps and classifies landscapes objectively. It can be a tool to aid decision making and management or simply to promote particular attractions. Defining landscape character enables an understanding to be formed of the inherent value and importance of individual landscape elements and the processes that may alter landscape character in the future. The cultural and ecological aspects of the landscape cannot be divorced from its physical and visual characteristics so all these elements are considered. | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures. | No significant cumulative or in combination effects perceived at this strategic level. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|---|---|
| Ireland 2040 Our plan - National Planning Framework | <p>The National Planning Framework is currently at draft stage. It will succeed the National Spatial Strategy and unlike its predecessor will have a statutory basis. The Government's proposed long-term strategic planning framework will guide national, regional and local planning and investment decisions over the next 25 years.</p> <p>The key elements of Ireland 2040 are:</p> <ol style="list-style-type: none"> 1. Putting in Place a New National and Regional Development Strategy for Ireland. 2. Backed by Legislation and an Independent Office for Planning Regulation. 3. Intrinsically Linked to a New 10-year National Investment Plan. 4. Supported by Strengthened and more Environmentally Focused Planning at Local Level. 5. Using State Lands for Strategic Purposes. <p>In terms of overall population and employment growth and new housing provision, the five cities of Dublin, Cork, Limerick, Galway and Waterford will be targeted to accommodate 50% of overall national growth between them.</p> <p>National policy objectives include 'Building Accessible Centres of Scale' with Waterford City and Suburbs identified to increase by 30,000 people. This would result in a total population of 83,000 by 2040. It also includes references to improve connectivity and road and rail journey times to and from Waterford.</p> <p>Waterford is the principal urban centre in Ireland's south-east and is unique in having a network of large and strong regional urban centres in close proximity within each of the surrounding counties that both complement the role of Waterford and perform strong regional and local economic and developmental roles for their own areas.</p> | <p>Some of the relevant Key future growth enablers identified for Waterford include:</p> <ul style="list-style-type: none"> • Delivering the North Quays SDZ regeneration project for integrated, sustainable development together with supporting infrastructure, including a new pedestrian bridge or a pedestrian/ public transport bridge over the River Suir. • Provision of Citywide public transport and strategic cycleway networks • Ensuring that water supply and waste-water needs are met by new national projects to enhance Waterford's water supply and increase waste water treatment capacity. • Improving sustainability in terms of energy, waste and water, to include district heating and water conservation. <p>The EPOs have considered above and have been integrated into the SEA process to ensure the sustainable development of the North Quays SDZ is considered in accordance with this higher level policy document.</p> | <p>The Plan is currently at draft stage and subject to public consultation and Finalisation. Once finalised the final SEA will be published.</p> <p>It is likely positive cumulative effects are perceived at this strategic level stage.</p> |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|---|--|--|
| National Spatial Strategy 2002-2020 | <p>The National Spatial Strategy (NSS) is a 20 year strategic planning framework designed to achieve a better balance of social, economic, physical development and population growth in Ireland. The NSS is based upon the European Spatial Development Perspective (ESDP). Its focus is on people, on places and on building communities.</p> <p>The NSS was not a statutory plan with legislative backing and while it did substantially influence the 2007-2013 National Development Plan, the subsequent economic crisis from 2008 onwards substantially undermined Ireland's economic capacity to implement the NSS. The NSS will be superseded by the National Planning Framework as the overall National Planning Policy document as part of the Planning System.</p> | <p>One of the key aims of the NSS is to deliver more balanced regional development. Waterford City has been designated as a gateway under the existing NSS with Kilkenny designated as a hub.</p> <p>EPOs have been included in the ER to ensure the sustainable development is incorporated into the Planning Scheme and SEA process.</p> | Likely positive cumulative effects perceived at this strategic level stage. |
| Delivering a Sustainable Energy Future for Ireland - The Energy Policy Framework 2007-2020 | <p>This White Paper sets out the Government's Energy Policy Framework 2007-2020 to deliver a sustainable energy future for Ireland. It is set firmly in the global and European context which has put energy security and climate change among the Most urgent International challenges. The White Paper sets out the actions to be taken in response to the energy challenges facing Ireland. The objective is to Deliver a sustainable energy future, starting now, with a time horizon of 2020 but also looking beyond that.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures.</p> | No significant cumulative or in combination effects perceived at this strategic level stage. |
| Our Sustainable Future - A Framework for Sustainable Development in Ireland | <p>The Framework sets out 70 measures that will ensure we improve our quality of life for current and future generations and sets out clear measures, responsibilities and timelines in an implementation plan. These include areas such as the sustainability of public finances and economic resilience, natural resources, agriculture, climate change, transport, public health, education, innovation and research, education, skills and training, and global poverty.</p> | <p>EPOs have been included in the SEA ER to ensure that the Planning Scheme will harbour sustainable developments. Any likely significant effects will be mitigated against as outlined in the ER.</p> | No significant cumulative or in combination effects perceived at this strategic level stage. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|---|---|
| National Development Plan 2007-2013 | <p>The National Development Plan and Community Support Framework (NDP/CSF) 2000-2006 made a major contribution to the State's strong economic performance over the plan period. The completion of many of these programmes has both improved the social infrastructure and encouraged Regional development. NDP 2000 – 2006 invested over €54 billion up to December 2006 throughout the country benefiting education, roads, public transport, rural development, industry, water and waste services, social housing, childcare and local development.</p> <p>The National Development Plan emphasises the importance of a good transport infrastructure as being crucial to the promotion of national competitiveness and sustainable development and that this can be achieved by further investment in roads to improve traffic flows, reduce congestion and thus result in lower rates of traffic emissions.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level stage.</p> |
| Urban Regeneration and Housing Act 2015 | <p>There are two main strands to the legislation. Firstly, a new vacant site levy on housing or regeneration lands suitable for housing but not coming forward for development and, secondly, measures to streamline housing delivery including revisions to social housing and development contributions requirements.</p> | <p>The Planning Scheme will see the regeneration of a brownfield site which will include the provision of residential and commercial development in city centre location.</p> | <p>Positive significant effects cumulative are expected at this level of assessment.</p> |
| National Heritage Plan 2002 | <p>The core objective of the National Heritage Plan (2002) is to protect our heritage. In this regard the 'polluter pays' principle and the precautionary principle are operable. Specifically in regard to archaeological heritage the 'Framework and Principles for the Protection of the Archaeological Heritage' document (1999). A key objective of the National Heritage Plan is to promote the role that local communities play in protecting and enhancing Local Heritage. This is achieved through the preparation and adoption of Local Heritage Plans by Local Authorities.</p> | <p>EPOs have been included in the ER to ensure the protection and conservation of archaeology, heritage items to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level stage.</p> |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|---|---|--|
| <p>Framework and Principles for the Protection of the Archaeological Heritage – Published by Dúchas The Heritage Service).</p> | <p>The document describes the administrative framework for the protection of the archaeological heritage by the then Department of Arts, Heritage, Gaeltacht and the Islands and draws attention to relevant international conventions which provide a basis for policy development. Part III sets out principles for the protection of the archaeological heritage. Part IV summarises the provisions of the National Monuments Acts 1930 to 1994 and the National Cultural Institutions Act 1997 and sets out policies on their use. It includes policy in relation to the archaeological assessment of large-scale developments on sites where there are no previously recorded monuments.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified including those on archaeology. Where these occur the ER presents appropriate mitigation measures.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level stage.</p> |
| <p>Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009-2020</p> | <p>Recognises the vital importance of continued investment in transport to ensure an efficient economy and continued social development as well as identifying the necessary steps to ensure that people choose more sustainable transport modes such as walking, cycling and public transport. The policy is a response to the fact that continued growth in demand for road transport is not sustainable, bearing in mind recent projections that our population is predicted to grow to around 5.1 million by 2020: it will lead to further congestion, further local air pollution, contribute to global warming, and result in negative impacts to health through promoting increasingly sedentary lifestyles.</p> <p>The Planning Scheme will seek to improve connectivity between the north and south of the River Suir, creating a public transport hub and encouraging sustainable transport via pedestrian zones.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified including those on material assets. Where these occur the ER presents appropriate mitigation measures.</p> | <p>Likely significant positive cumulative or in combination effects perceived at this strategic level stage.</p> |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|---|--|
| National CFRAMS Programme (DECLG) | <p>CFRAM is Catchment Flood Risk Assessment and Management. The national CFRAM programme commenced in Ireland in 2011. The CFRAM Programme is central to the medium to long-term strategy for the reduction and management of flood risk in Ireland.</p> <p>The Water Framework Directive is being implemented in parallel to the National CFRAM Programme and the EU 'Floods' Directive. The implementation of the two directives is being coordinated to promote integrated river basin management.</p> | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified including those on flood risk. Where these occur the ER and specifically the SFRA presents appropriate mitigation measures. | Likely significant cumulative or in combination effects perceived at this strategic level stage-subject to site specific assessment. |
| National Biodiversity Plan 2011-2016 | <p>The National Biodiversity Plan (NBP), was updated in 2011 and builds upon the achievements of the first NBP. The objectives cover the conservation of biodiversity in the wider countryside and in the marine environment, both within and outside protected areas; the mainstreaming of biodiversity across the decision making process in the State; the strengthening of the knowledge base on biodiversity; increasing public awareness and participation; and Ireland's contribution to international biodiversity issues, including North South co-ordination on issues of common interest.</p> | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified including those on biodiversity. Where these occur the ER presents appropriate mitigation measures. | No significant cumulative or in combination effects perceived at this strategic level stage. |
| National Cycle Policy Framework 2009-2020 | <p>Ireland's first National Cycle Policy Framework (NCPF) was launched in April 2009. It outlines 19 specific objectives, and details the 109 individual but integrated actions, aimed at ensuring that a cycling culture is developed in Ireland to the extent that, by 2020, 10% of all journeys will be by bike. It proposes a comprehensive package of planning/infrastructure and communication/education measures, and emphasises the need for stakeholder participation and adequate funding of the required initiatives. The NCPF requires that cycle-friendly planning principles be incorporated in all national, regional, local and sub-local plans</p> <p>The Planning Scheme includes walking and cycling infrastructure as part of the SDZ.</p> | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Pedestrian zones and the relocation of the train station promote sustainable transport methods. | Significant positive cumulative effects perceived at this strategic level stage. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|--|--|
| National Policy on Town Defences 2008 | This document sets out national policy for the protection, preservation and conservation of historic urban defences in Ireland. Town defences are “monuments” as defined in the National Monuments Acts 1930-2004 and are protected under the provisions of this legislation. | The EPOs for Cultural Heritage considers these issues and designations. | No significant cumulative or in combination effects perceived at this strategic level stage. |
| Noise Regulations, 1994 | These Regulations, relating to the 1992 EPA Act, simplify and strengthen the procedures for dealing with noise nuisance, and give Local Authorities power to take action when they consider that it is necessary to do so in order to prevent or limit noise. | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified including those on noise including in population and human health section. Where these occur the ER presents appropriate mitigation. | No significant cumulative or in combination effects perceived at this strategic level stage. |
| National Action Plan for Social Inclusion 2007-2016 | The Government is committed to a coherent strategy for social inclusion based on the lifecycle approach set out in the National partnership agreement. The new strategic framework will facilitate greater co-ordination and integration of structures and procedures across Government at National and local levels, as well as improved reporting and monitoring mechanisms. | The Planning Scheme seeks to improve social inclusion in the area based on improved connectivity and residential provisions. The SEA assesses the various options through the EPOs which includes promotion of compact settlements. | No significant cumulative or in combination effects perceived at this strategic level stage. |
| Wildlife (Amendment) Act 2000 | The Wildlife (Amendment) Act 2000 supersedes the Wildlife Act 1976 as the principal National legislation provided for the protection of wildlife and the control of activities that may adversely affect wildlife. | EPOs have been included with regards to the protection and conservation of wildlife. | No significant cumulative or in combination effects perceived at this strategic level stage. |
| Creating a Green Infrastructure for Ireland- Enhancing Natural Capital for Human Wellbeing 2010 | Creating a Green Infrastructure for Ireland 2010, commissioned by Comhar Sustainable Development Council (SDC) sets out a broad definition of Green Infrastructure and explores and proposes an approach and a set of principles that should be followed in Green Infrastructure planning. The promotion and development of the ‘Green Infrastructure’ concept, | The SEA ER addresses the importance of habitat networks and ecological networks. | No significant cumulative or in combination effects perceived at this strategic level stage. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|--|---|---|
| National Climate Change Strategy, 2007-2012 | <p>The National Climate Change Strategy 2007-2012 was published in April 2007 and builds on the commitment for sustainable development as set out in Towards 2016 and the National Development Plan 2007-2013. The Strategy provides a framework for the achievement of reductions in greenhouse gas emissions as an essential step in achieving the targets agreed under the Kyoto Protocol.</p> <p>This strategy developed from the 2000 Climate Change Strategy, taking into account the review contained in Ireland's Pathway to Kyoto Compliance (2006). Its purpose is to demonstrate how Ireland is to meet its 2008-2012 Kyoto Commitments and to identify further policy measures needed for the period from 2012 and after 2020. To ensure Ireland reaches its target under the Kyoto Protocol and, building on measures put in place following the publication of the Climate Change Strategy in 2000, the Government has published the National Climate Strategy 2006. This Strategy builds on the commitment to sustainable development, to address climate change and energy issues.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified including those on climate change. Where these occur the ER presents appropriate mitigation measures.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level stage.</p> |
| Air Pollution Act 1987 | <p>This Act defines air pollution and enables Local Authorities to take measures to prevent or limit pollution.</p> | | <p>No significant cumulative or in combination effects perceived at this strategic level stage.</p> |
| Local Government (Water Pollution) Acts, 1977 and 1990 | <p>These Acts and associated regulations set out quality standards for Phosphorus in surface waters, particularly rivers and lakes and makes provisions for the protection of watercourses. The Phosphorus Regulations require that water quality be maintained or improved by reference to the baseline biological quality rating (rivers) or trophic status (lakes) assigned by the EPA.</p> | <p>EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified including those on water environment. Where these occur the ER presents appropriate mitigation measures.</p> | <p>No significant cumulative or in combination effects perceived at this strategic level stage.</p> |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|--|--|
| Water Quality (Dangerous Substances) Regulations 2001 | These Regulations give effect to the Dangerous Substances Directive 76/464/EC and the Water Framework Directive 2000/60/EC. They prescribe water quality standards and aim to ensure that, in relation to a substance present, where the existing condition of a water body does not meet a specific standard there shall be no dis-improvement in the condition of the water body. | | No significant cumulative or in combination effects perceived at this strategic level stage. |
| National Inventory of Architectural Heritage (NIAH) | The National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the Department of the Environment, Heritage and Local Government. The purpose of the NIAH is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified including those on architectural and archaeological environment. The Hennebique Building and its neighbouring NIAH sites and their settings will be required to be considered in future proposals. | Likely significant cumulative or in combination effects perceived at this strategic level stage-subject to site specific assessment. |
| Framework and Principles for the Protection of the Archaeological Heritage 1999 | This document is intended to set out the basic principles of National policy on the protection of the archaeological heritage. The document has a particular focus on the principles which should apply in respect of development and the archaeological heritage. | | No significant cumulative or in combination effects perceived at this strategic level stage. |
| Landscape and Landscape Assessment Guidelines 2000 | The Guidelines favour a method of characterisation which is the discernment of the character of the landscape based initially on land cover – trees, vegetation, settlement, water etc. and landform which results from geological and geomorphologic history and secondly, the value of the landscape is assessed in terms of historical, cultural, religious and other understandings of the landscape. A Landscape Character Assessment allows for a proactive approach to landscape management. It aids the development management process as it gives indicators of development types which would be suited to certain locations using certain design criteria and consequently the character of the landscape remains intact. | Major infrastructure projects that may arise through plan projects or other strategic infrastructure projects will be subject to planning procedures which may include EIA which will involve assessment of impacts on landscape. | No significant cumulative or in combination effects perceived at this strategic level stage. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|---|---|--|
| National Landscape Strategy for Ireland 2015-2024 | The National Landscape Strategy is used to ensure compliance with the European Landscape Convention as ratified by Ireland in 2002 and establishes principles for protecting and enhancing the landscape while positively managing its change. It provides a high level policy framework to achieve balance between the management, planning and protection of the landscape by way of supporting actions. | As above | No significant cumulative or in combination effects perceived at this strategic level stage. |
| Building on Recovery: Infrastructure and Capital Investment 2016-2021 | The Capital Plan presents the Government's framework for infrastructure investment in Ireland over the period 2016-2021. The Plan prioritises spending on those areas of greatest need as the economy continues its strong recovery. | The Planning Scheme is primarily targeted at facilitating urban regeneration, economic development and social cohesion. | Significant positive cumulative or in combination effects perceived at this strategic level stage. |
| Planning and Development Act, 2000 (as amended) Planning and Development Regulation 2001 (as amended) | The Planning & Development Act establishes a hierarchy in relation to planning. It governs the making of the national, regional and county level Plans including variations to the Development Plan. The County Development Plan represents the strategic level planning and will inform the relevant development plan together with other local level planning strategies. | The Planning Scheme SEA process has been undertaken in line with The Act and Regulations (as amended). | No significant cumulative or in combination effects perceived at this strategic level stage. |
| National Climate Change Adaptation Framework (2012) | The aim of this Framework is to ensure that an effective role is played by all stakeholders in putting in place an active and enduring adaptation policy regime. The governance structure provides for climate change adaptation to be addressed at national and local level. Similar to the approach being taken at EU level in the White Paper on Adaptation, it is intended to follow a two-phased approach to adaptation in Ireland. These include identifying national vulnerability to climate change and the development and implementation of sectoral and local adaptation action plans which will form part of the comprehensive national response to the impacts of climate change | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures. | Likely significant cumulative or in combination effects perceived at this strategic level stage-subject to site specific assessment. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|---|--|
| Climate Action and Low Carbon Development Act 2015 | The Act provides for the establishment of a national framework with the aim of achieving a low-carbon, climate-resilient, and environmentally sustainable economy by 2050. The Act provides the tools and structures to transition towards a lowcarbon economy and it anticipates that it will be achieved through a combination of: a national mitigation plan (to lower Ireland's level of greenhouse emissions); a national adaptation framework (to provide for responses to changes caused by climate change); and tailored sectoral plans (to specify the adaptation measures to be taken by each Government ministry). | As above | Likely significant cumulative or in combination effects perceived at this strategic level stage-subject to site specific assessment. |
| National Renewable Energy Action Plan | The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under Directive 2009/28/EC. The Action Plan outlines targets for transport, electricity and heat generation from renewable sources by 2020. | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures. | Likely significant cumulative or in combination effects perceived at this strategic level stage-subject to site specific assessment. |
| Strategic Framework for Integrated Land Transport (SFILT) | The SFILT aims to establish key principles and priorities to guide transport investment over the coming decades. This proposed investment framework estimates the appropriate level of investment in the land transport system and forms a set of priorities to guide the allocation of that investment to best develop and manage Ireland's land transport network over the coming decades, providing a valuable background against which future policy decisions can be made. | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures. | Likely significant cumulative or in combination effects perceived at this strategic level stage-subject to site specific assessment. |
| Grid25 Implementation Programme | Grid251 is a high-level strategy outlining how EirGrid intends to undertake the development of the electricity transmission grid in the short-, medium- and longer-terms, to support a long-term sustainable and reliable electricity supply. The Grid25 strategy seeks to implement the provisions of the 2007 Government White Paper on Energy - Delivering a Sustainable Energy Future for Ireland in terms of development of electricity transmission infrastructure. | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation measures. | No significant cumulative or in combination effects perceived at this strategic level stage-subject to site specific assessment. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|--|--|--|
| Water Services Strategic Plan – A Plan for the Future of Water Services (2015) | This document presents the draft Water Services Strategic Plan prepared by Irish Water which provides, an opportunity to consider, at a national level, the way that water services are delivered in Ireland. It sets out strategic objectives for the delivery of water services over the next 25 years up to 2040 and details current and future challenges which affect the provision of water services, identifying the priorities to be tackled in the short and medium term. | Major infrastructure projects that may arise through plan projects or other strategic infrastructure projects (will be subject to EIA involving assessment of impacts on water environment. | Likely significant cumulative or in combination effects perceived at this strategic level stage-subject to site specific assessment. |
| National Anti-Poverty Strategy (1997) | This NAPS set a ten-year target to reduce consistent poverty in Ireland to 2% by 2007, or ideally to eliminate it. It identified five themes needing particular attention, and set targets for each: Income adequacy, Unemployment, Educational disadvantage, Rural poverty and Poverty in disadvantaged urban areas. The Government reviewed the strategy in 2002, updated the targets in these areas and added six new themes. The Strategy put in place a set of structures to promote the fight against poverty | The Planning Scheme proposes to provide jobs in the retail, tourism and hospitality industry and will create employment opportunities for local areas such as Ferrybank and Belview. | No significant cumulative or in combination effects perceived at this Plan level stage. |
| Healthy Ireland – A Framework for Improved Health and Wellbeing 2013-2025 | Is a national framework for action to improve the health and wellbeing of the country over the coming generation. Based on international evidence, it outlines a new commitment to public health with a considerable emphasis on prevention, while at the same time advocating for stronger health systems. It provides for new arrangements to ensure effective co-operation between the health sector and other areas of Government and public services, concerned with social protection, children, business, food safety, education, housing, transport and the environment. It also invites the private and voluntary sector to participate through well-supported and mutually beneficial partnerships. It sets out four central goals and outlines actions under 6 thematic areas, in which all people and all parts of society can participate to achieve these goals. | The Planning Scheme supports the measure to improve health of Waterford City. Various measures are proposed including improved connectivity to the site, pedestrians and cyclists infrastructure, open spaces etc. | Likely positive cumulative or in combination effects perceived at this Plan level stage. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|--|---|
| The Planning System and Flood Risk Management. Guidelines for Planning Authorities (2009) | In September 2009 the DoEHLG in conjunction with the Office of Public Works (OPW) issued consultation guidelines for Planning Authorities on 'The Planning System and Flood Risk Management'. The new guidelines focus on a number of areas. | These guidelines have been used when formulating the flood risk assessment of the Planning Scheme. The results of the SFRA have informed the Planning Scheme and the SEA ER. | No significant or in combination effects perceived at this Plan level stage. |
| Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities (2009) | This guidance is intended to assist and guide local and planning authorities in the application of Article 6(3) and 6(4) of the Habitats Directive as it relates to their roles, Functions and responsibilities in undertaking Appropriate Assessment (AA) of plans and projects. It explains the concepts, tests and steps involved in the assessment procedure, the provisions of which are the primary mechanism for ensuring the protection of Natura 2000 sites and their conservation objectives when considering whether to authorise or adopt a plan or project. Natura 2000 sites in Ireland are European sites, including Special Protection Areas (SPAs), and Special Areas of Conservation (SACs). | A separate NIR has been completed for the Planning Scheme. The findings of this NIR have been incorporated into the SEA and where necessary mitigation measures have been included. The NIR has concluded that the mitigation identified at Stage 2 are adequate to protect the integrity of Natura 2000 sites against adverse effects. Thus, the AA process has informed the preparation of the Planning Scheme so that it can be implemented successfully and without adversely affecting the integrity of Natura 2000 sites and there is no reasonable scientific doubt in that regard. | No significant or in combination effects perceived at this Plan level stage. Likely significant or in combination effects perceived at this strategic level stage-subject to site specific assessment. |
| Design Manual for Urban Roads and Streets (2013) | The DMURS present a series of principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes with regard to street networks and individual streets. It does so by presenting these in a structured format, ranging from macro level to micro level considerations. | It is expected that DMURS will be implemented in design stage at project level. | No significant or in combination effects perceived at this Plan level stage. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|---|---|
| Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns & Villages) (2009) | These guidelines focus on creating sustainable communities by incorporating high design standards and providing a co-ordinated approach to the delivery of essential infrastructure and services. The guidelines describe the key planning principles which must feature in Development Plans and local area plans, and which will later act as reference points in the process of the preparation and assessment of planning applications for residential development in urban areas. Planning authorities are urged to ensure that an adopted local area plan is the only effective policy framework within which to consider major development proposals. | These Guidelines can be consulted by the planning authority/ developers at planning application stage as appropriate. | No significant cumulative or in combination effects perceived at this Plan level stage. |
| Architectural Heritage Protection - Guidelines for Planning Authorities 2004 | <p>These guidelines provide relevant guidance in the context of Part IV of the Planning and Development Act 2000. These guidelines are a response to Section 52 of the Act, which requires that guidelines are issues to Planning Authorities on the need to protect structures of architectural, historical or other importance and on the preservation of the character of Architectural Conservation Areas (ACA). These guidelines include the criteria to be applied when selecting proposed protected structures for inclusion in the Record of Protected Structures (RPS), guidance to planning authorities on declarations and determining planning applications in relation to a protected structure, a proposed protected structure or the exterior of a building within an ACA.</p> <p>A separate publication originally covered issues relating to churches and cathedrals: Architectural heritage protection for Places of Public Worship – Guidelines for Planning Authorities. This has now been included as Chapter 5 of the Architectural Heritage Protection – Guidelines for Planning Authorities.</p> | These Guidelines can be consulted by the planning authority/ developers at planning application stage as appropriate. | No significant cumulative or in combination effects perceived at this Plan level stage. |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|--|--|
| Development Management Guidelines (DoEHLG) 2007 | <p>'Development Management Guidelines' for Planning Authorities' was published in June 2007, replacing 'Development Control Advice and Guidelines' which was issued in 1982. These guidelines are of relevance to all types of planning applications, including Local Authorities, applicants and their advisers, on the operation of the planning process. They are also intended to promote best practice levels within Planning Authorities. They therefore act as an essential guide to anybody who wishes to interact with the development management (assessment of planning applications), planning system.</p> | <p>These Guidelines can be consulted by the planning authority/ developers at planning application stage as appropriate.</p> | <p>No significant cumulative or in combination effects perceived at this Plan level stage.</p> |
| Traffic Management Guidelines (2003) | <p>These guidelines provide guidance on a variety of issues including traffic planning, traffic calming and management, incorporation of speed restraint measures in new residential designs and the provision of suitably designed facilities for public transport users and for vulnerable road users such as cyclists, motorcyclists and pedestrians (including those with mobility/sensory impairments). It also focuses on how these issues must be examined and implemented in the context of overall transportation and land use policies.</p> | <p>These Guidelines can be consulted by the planning authority/ developers at planning application stage as appropriate.</p> | <p>No significant cumulative or in combination effects perceived at this Plan level stage.</p> |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|---|--|--|
| Childcare Facilities, Guidelines for Planning Authorities (2001) | <p>These guidelines provide a framework to guide both local authorities in preparing development plans and assessing applications for planning permission, and developers and childcare providers in formulating development proposals. These Guidelines are intended to ensure a consistency of approach throughout the country to the treatment of applications for planning permission for childcare facilities.</p> | <p>The Waterford City Development Plan supports the provisions of these guidelines through Policy 7.5.4, 7.5.4 and OBJ 7.5.5.</p> <p><i>“To require the provision of appropriate and sustainable purpose built childcare facilities in association with proposals for new residential development of more than 75 dwelling units. Where appropriate the Council will operate this requirement in a flexible manner and will encourage and facilitate cooperation between developers to jointly provide facilities, having regard to the Waterford City Childcare Strategy. (OBJ 7.5.4)”</i></p> <p><i>To encourage the provision of drop-in childcare facilities within large scale new retail, leisure or tourism developments, in particular shopping centres. (OBJ 7.5.5)</i></p> | <p>No significant cumulative or in combination effects perceived at this Plan level stage.</p> |
| The Provision of Schools and the Planning System, A Code of Practice for Planning Authorities (July 2008) | <p>This document outlines best practice approaches that should be followed by planning authorities in ensuring that the planning system plays its full part in facilitating the timely and cost-effective roll-out of school facilities by the Department of Education and Science and in line with the principles of proper planning and sustainable development.</p> | <p>These Guidelines can be consulted by the planning authority/ developers at planning application stage as appropriate.</p> | <p>No significant cumulative or in combination effects perceived at this Plan level stage.</p> |

| National Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|---|--|---|
| Towards Sustainable Local Communities: Guidelines on Local genda 21 (2001) | The Local Agenda 21 aims to reduce the amount of energy and raw materials society consumes, as well as the pollution and waste it produces; Protect fragile ecosystems and environments; Bring about a fairer distribution of wealth, both between countries and between different social groups within countries, with particular emphasis on the rights of poor and disadvantaged people. It is based on four pillars; Social, Economic, Institutional and Environmental. | EPOs have been included in the SEA ER to ensure that likely significant effects on the environment are identified. Where these occur the ER presents appropriate mitigation. | No significant cumulative or in combination effects perceived at this Plan level stage. |

| Regional Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|--|--|---|
| Regional Planning Guidelines for the South East Region 2010-2022 | The RPGs are intended to constitute a strategic planning framework for the period 2010-2022 for the development of each region and for inter-regional cooperation. The strategic policies and objectives set out in the RPG will form the backdrop for socio-economic planning by national and regional agencies and will constitute the policy framework within which county, city, town and local area development plans will be made. | The Regional Planning Guidelines support the re-development of the North Quays. It was included as a Critical Enabling Investment Priority in the RPGs in 2004. A rail passenger platform on the North Quays and a river crossing to provide a link across the river are outlined as objectives. | Exact interactions are unknown but likely to result in positive cumulative impacts. |
| Regional Spatial and Economic Strategies (once it is prepared) | It is expected that the South East Regional Assembly will prepare the Regional Spatial and Economic Strategies for the South East region once the National Planning Policy Framework (NPPF) is finalised. | Once published – these RSES are expected to support the SDZ Government designation of the North Quays. | Cumulative positive effects are expected. |
| Draft Flood Risk Catchment Management Plans for UoM 16: Suir Catchment | The Draft Flood Risk Catchment Management Plan for Unit of Management 16 was open for public consultation until 13 th December 2016. The Draft Plan will set out measures and actions to manage and reduce flood risk within the catchment. | These will be considered as part of the SFRA and future planning applications as appropriate. | Likely interactions - SFRA informs likely cumulative effects. Subject to site specific assessment. |
| South East Region Employment Action Plan 2011 | The Plan revisits the Regional Competitiveness Agendas for the South East region, taking account of recent developments and analysis, and outlines specific actions that can be taken to maximise employment creation in the region in the short and medium-long-term. | Promote Waterford as a gateway, taking action to maximise employment creation. | Positive Cumulative impacts. |
| Southern Regional Waste Management Plan (2015-2021) | The strategy is a guide to help us manage our wastes in a safe and compliant manner, through policies and actions. It provides policy direction in a broad manner, setting out what we want to achieve and a roadmap of actions to get us there. | EPOs will assess potential significant effects on the environment. | Likely cumulative effects which are unknown at this level of assessment. Subject to site specific assessment. |

| Regional Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|---|--|--|--|
| South Eastern River Basin District River Basin Management Plan 2009-2015 (1 st Cycle RBD to be replaced in 2017) | The South Eastern River Basin Management Plan aims to protect all waters within the district and where necessary, improve waters and achieve sustainable water use. The actions and objectives in relation to the Water Framework Directive and the ERBD Management plan are to protect and restore Protected Areas. | The EPOs have included an objective to maintain the water quality standards in the South East River Basin Management Plan. Screening for potential impacts under Habitats Directive Article 6 process is put in place once details of the implementation of the programme of Measures (POMs) under the ERBD are known | Likely cumulative effects which are unknown at this level of assessment. Subject to site specific assessment. |
| Draft River Basin Management Plan for Ireland 2018-2021 (2 nd Cycle RBD) | The Draft River Basin Management Plan for Ireland for the second cycle, aims to build on the progress made during the first cycle while improving on the way things were done to date. A key purpose of the new plan is to identify priorities in achieving the objectives of the Water Framework Directive, and ensure that the implementation of this plan is guided by this prioritisation. The plan proposes to prioritise full compliance with the relevant EU legislation, prevent deterioration, meeting the objectives for designated protected areas, protect high status waters and implement targeted actions and pilot schemes in focus sub-catchments. | The Plan identifies that Urban Waste Water is a significant pressure in 22% of water bodies while urban run-off is a significant pressure in 10% of waterbodies. The RBMP outlines high level actions and supporting measures to address pressures from urban waste water and urban run-off. | Likely cumulative effects which are unknown at this level of assessment. Subject to site specific assessment. . |

| Regional Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme | Interactions resulting in Cumulative Effects |
|--|--|--|--|
| S&E Regional Operational Programme 2014- 2020 | The Southern and Eastern Regional Operational Programme 2014-2020 is intended to support and facilitate Member States and Managing Authorities in the implementation of the partnership principle. | A priority objective is to revitalise, regenerate and improve the urban environment in the designated urban centres as part of integrated urban strategies. Waterford Gateway was awarded funding in 2014 through the Designated Urban Centres Grant Scheme 2014-2020, with aims to regenerate substantial brownfield sites in the city centre, while improving accessible public realm and transport modes. | Positive cumulative impacts |
| South East Economic Development Strategy (SEEDS) 2013-2023 | The SEEDS aims to identify the economic needs of the Southeast, with the aim of improving the employment situation and making specific proposals to create jobs and grow the regional economy. The aim is to focus on the Southeast's key strengths in tourism, developing a critical mass of expertise through improved educational attainment, delivery of a Technological University and strong research and development. The strategy aims to maximise the potential of existing key assets such as the two ports of national significance (Rosslare and Waterford), the regional airport and develop a regional Transport Hub that aligns road, rail and port infrastructure. | The Planning Scheme aims to become a driver for economic growth in the region. It will make a significant provision for retail, and will also include commercial, office, research that will support the SEEDS. | Positive cumulative impacts expected. |

| Local Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme (State whether environmental effects are known Yes/No) | Interactions resulting in Cumulative Effects |
|---|--|--|--|
| Waterford City Development Plan 2013-2019 (incorporates the Housing Strategy) and SEA Environmental Report for Waterford City Development Plan. | The Waterford City Development Plan 2013-2019 sets out an overall strategy for the proper planning and sustainable development of the functional area of Waterford City. A housing requirement of 4,800 units is required for the new plan period (240ha). The Plan requires housing to be located as close as possible to employment opportunities and public transport routes that are readily accessible to the City Centre. | As a higher level policy document all likely significant adverse impacts will be avoided through the implementation of mitigation measure in the form of policies and objectives contained in the Plan. Site specific project assessments will be required for all projects in accordance with statutory requirements. E.g. Project level EIA, and FRA as required. | Positive long term cumulative effects |
| Waterford County Development Plan 2011-2017 | The Waterford County Development Plan 2011-2017 sets out the overall strategy for the proper planning and sustainable development of the County for the period 2011-2017. | The Plan identifies the need to develop new economic and employment opportunities in tandem with the provision of new housing development. The Planning Scheme will be consistent with the Plan through the utilisation and redevelopment of obsolete and vacant sites by in preference to green-field development. | Positive long-term cumulative effects |
| Waterford Planning, Land Use and Transportation(PLUTS) Study (2004) | The PLUTS study is an integrated framework of plans and solutions to address the needs of the City in both land use and transportation terms up to the year 2020. PLUTS aims to achieve critical mass, develop a compact and balanced city, integrate land use and transport, harness educational resources, utilise existing key assets and manage growth. | The study aims to achieve a more balanced growth between north and south sides of the River Suir, incorporating a new City Centre Bridge for pedestrians and cyclists and the provision of a rail passenger platform on the North Quays as will be provided by the Planning Scheme. | Positive long-term cumulative effects |

| Local Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme (State whether environmental effects are known Yes/No) | Interactions resulting in Cumulative Effects |
|--|---|--|---|
| Economic Strategy for Waterford City and County (2013) | The strategy aims to identify measures to maximise the economic development of Waterford and its wider hinterland/region and, in particular, to enhance the role of Waterford City as a generator of growth and a strong and dynamic focus for development of the wider region. | The Strategy promotes the development of the North Quays as it has potential for a self-contained river-side village using a fresh creative strategy. | Positive long-term cumulative effects |
| Waterford North Quays - Urban Design Framework Plan (2008) | The Urban Design Framework Plan for the North Quays presents a broad vision for the North Quays, providing basic development concepts and key urban design guidelines, bringing together an integrated framework plan for the area. | Outlines the need for more balanced growth between north and south sides of the River Suir, a new city centre pedestrian and cycle bridge, the provision of a rail platform on the north quays and the development of a mix of uses on the site. | Positive long-term cumulative effects |
| Ferrybank- Bellview Local Area Plan 2009 (June 2017 LAP - under review) | The Ferrybank- Bellview Local Area Plan (LAP) 2009 outlines a strategy for the proper planning and sustainable development of an area of land stretching from Grannagh to Belview and from the River Suir to the line of the Waterford bypass, adjacent to the SDZ area. | <p>The policies, objectives and zoning objectives have been considered relevant to the existing and future development of the Ferrybank area and have been considered as part of the draft Planning Scheme proposals. Specifically transport and Open Space objectives to include:</p> <ul style="list-style-type: none"> • OS1.1, OS3.1 , OS2.1 • T7 Facilitate the delivery of a proposed green route. • T12 Keep disused railway line free from development. • NE1 Ensure the protection of views. • NE2 Restrict development on the SAC and the proposed NHA. | <p>Cumulative long-term positive impacts. Likely Short-term negative impacts to local populations and Lower River Suir SAC during Construction phase.</p> |

| Local Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme (State whether environmental effects are known Yes/No) | Interactions resulting in Cumulative Effects |
|---|--|---|--|
| Draft Ferrybank- Bellview Local Area Plan (June 2017) | <p>The purpose of this LAP is to provide guidance on the future development of the plan area and to ensure that such development occurs in a planned and orderly manner.</p> <p>The Vision of the LAP is to “To ensure that the people of the Waterford City Environs in County Kilkenny enjoy a good quality of life with a high standard of education, excellent employment prospects and easy access to a full range of social, economic and cultural services. Through integrated planning and cooperation with Waterford City and County Council, all other stakeholders in the region, ensuring that Waterford City will fulfil its role as a Gateway city and as an economic driver of the South East Waterford City region, and facilitating the provision of key investment priorities and ensuring that development takes place in a balanced, sustainable, transport friendly, attractive manner with good quality of life and opportunities for the people of the City, environs and the region.</p> | <p>The LAP borders the NQ SDZ Site to the North. It identifies a number of objectives that are relevant to the area to include:</p> <p>Objective:</p> <p>1D To maximise the connectivity between Ferrybank and the North Quays SDZ and to take account of the impacts of the planning scheme when full detail is available.</p> <p>Objective:</p> <p>1E To seek to implement in full the provisions of the Waterford Planning Land Use and Transportation Study 2004 (PLUTS) and any review thereof undertaken.</p> | <p>Cumulative long-term positive impacts and likely Short-term negative impacts to local populations and Lower River Suir SAC during Construction phase.</p> |
| One Waterford: Local Economic & Community Plan 2015-2020 | <p>The Plan identifies and delivers positive step changes that will deliver the economic and social transformation of Waterford, to grow the local and regional economy, strengthen Waterford's role as the regional leader of the South East, ensure that our communities are strong and engaged, and ensure that all people have an excellent quality of life.</p> | <p>An objective of the plan is to revitalise, regenerate and improve the urban environment, including realising the economic potential of the North Quays by 2019.</p> | <p>Positive long-term cumulative effects</p> |
| Report of the Waterford Re-Organisation Implementation Group and Economic Strategy for Waterford City and County, One Waterford – Delivering Jobs, Efficiency and Growth (2013) | <p>The Plan outlines an Economic Strategy for Waterford City and County. The plan determines that certain key interventions are needed to enable the sustainable growth and recovery of the economy of Waterford and the South East and addresses the inhibitors of growth.</p> | <p>The development, improvement of public realm and commercial opportunities of the North Quays are recommended to help develop the critical mass of Waterford as a Gateway City.</p> | <p>Positive long-term cumulative effects.</p> |

| Local Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme (State whether environmental effects are known Yes/No) | Interactions resulting in Cumulative Effects |
|---|--|--|--|
| Fisheries Local Action Group (FLAG) Local Development Strategy 2016 | The Strategy assesses the development needs of the FLAG area, outlining objectives and actions to further develop the industry within the area. | The strategy does not relate specifically to the site proposed. The nearest location included in the strategy is Cheekpoint, 4km downstream. | No cumulative impacts are predicted. Subject to site specific assessment. |
| Waterford Children & Young People's Services Committee Children & Young People's Plan 2015-2018 | The Plan identifies the needs of children & young people and lays out a set of priority actions which are intended to improve service delivery and achieve better outcomes for all children in the area. | The Planning Scheme supports the development of 'supporting uses' which includes play areas and any required community facilities. | Positive long-term cumulative effects |
| Waterford City & County Council Corporate Plan 2014-2019 | The Corporate Plan outlines strategic priorities and objectives for the Council for its lifetime, and is reflective of the needs and priorities of all the communities and citizens of Waterford. The Plan aims to develop the economy, infrastructure and tourism of the region, support the regeneration of primary urban centres, and the promotion and protection of our heritage, culture and natural environment. The plan also aims to develop a Community Plan to increase engagement at all levels. | The Planning Scheme supports higher level documents including Waterford City & County Council Corporate Plan | Positive long-term cumulative effects |
| Waterford City Retail Strategy (2012) | The Retail Strategy provides a quantitative and qualitative analysis of the potential of Waterford City to accommodate further retail development. The strategy outlines policies with the aim of meeting the City's shopping needs in a way that is efficient, equitable and sustainable | The Planning Scheme will provide retail floorspace as required for Waterford City in the Retail Strategy. | Positive long term cumulative effects |
| Waterford Climate Change Strategy (2011) | The Waterford Climate Change Strategy sets out an action plan to offset carbon emissions. | Climate change and carbon emissions measures are addressed under the EPOs. | Positive long term cumulative effects |

| Local Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme (State whether environmental effects are known Yes/No) | Interactions resulting in Cumulative Effects |
|--|--|--|--|
| Strategic Plan 2014 – 2017 Waterford – Active People, Active Place | <p>The Mission of the Plan is to work in collaboration with sporting, community, voluntary and statutory partners to plan, co-ordinate, develop, deliver and evaluate sustainable opportunities for the people of Waterford City and County to enjoy the health benefits of participation in sport and physical activity. This Plan is to be achieved through a series of goals and objectives developed under active communities, sport, engagement and management.</p> | The Planning Scheme will address community facilities through open space provision and land uses defined as 'supporting uses'. | Positive Cumulative effects expected. |
| Waterford City Centre Urban Renewal Scheme (2015) | <p>The Urban Renewal Scheme outlines public realm upgrades, alterations to traffic circulation and urban realm improvements. It's Vision includes maximising the potential of the City Centre to continue to grow as a national and regional destination.</p> | The North Quays is located in a Brownfield site located in the city centre. The regeneration of the SDZ has the opportunity to complement and facilitate the urban renewal of this area and Waterford city through integrated transportation proposals including proposals for a new transportation hub. | Likely to have positive cumulative impacts on population and wider region. Specific proposals will be subject to site specific assessment. |
| Kilkenny City and Environs Development Plan 2014-2020 | <p>The Kilkenny City & Environs Development Plan emphasises sustainable economic development of the city and environs into the future while seeking to balance the needs for redevelopment, expansion and growth in the environs with strong policies for the conservation and protection of the natural and built environment and ensuring a good quality life for its inhabitants.</p> <p>Waterford is identified as the Gateway for the region with Kilkenny and Wexford acting as Hubs to support the role of the gateway. Ferrybank/Belview within the Waterford environs has been ranked as Level 2 - District Centre within the Retail Hierarchy for Kilkenny County and the retail strategy of Waterford City Council. The Ferrybank area is identified as having the potential to deliver a range of retail and non-retail service functions for the community.</p> | The Planning Scheme supports higher level documents will support the development of the Ferrybank / Belview area as a District Centre. | Likely positive cumulative effects. |

| Local Policy, Plan, Programme or Project | Summary of Purpose – Aim/ Objective/ Action of Policy, Plan, Programme or Project | Relevance to Proposed Planning Scheme (State whether environmental effects are known Yes/No) | Interactions resulting in Cumulative Effects |
|--|--|--|--|
| Kilkenny County Development Plan 2014-2020 | <p>The Development Plan sets out Kilkenny County Council's policies and objectives for the proper planning and sustainable development of the County from 2014 to 2020.</p> <p>The Development Plan aims to implement the provisions of the Regional Planning Guidelines and to target the growth of the Ferrybank/Belview area within the Waterford environs to advance sustainable development. This will be achieved through integrated planning and cooperation with Waterford City Council and other authorities and agencies in the region to maximise the potential of Waterford City and its environs as a gateway city serving the South East Region.</p> <p>The Ferrybank area located in the environs of Waterford City has been designated in as being the second largest urban area within the County after Kilkenny City and Environs.</p> | The Planning Scheme supports higher level documents including Kilkenny County Development Plan. | Positive Cumulative effects expected. |

APPENDIX B

*Responses Received from
Environmental Authorities Following
SEA Scoping Consultation*

Responses Received from Environmental Authorities Following SEA Scoping Consultation

| Environmental Authority | Issue | Concern/Comments | Response / Action Proposed |
|--|--|---|---|
| Environmental Protection Agency (EPA) received 20th March 2017 | | | |
| Environmental Protection Agency | Integration of Environmental Considerations | <ul style="list-style-type: none"> Acknowledge that previous submission has been taken into account in preparing the scoping report re: River Suir Designated Nutrient Sensitive Water; Integrated Water Quality Report for South East 2012 (Nitrates Problem); appropriate critical infrastructure (water/wastewater); Lower River Suir – Designation as SAC); Groundwater vulnerability adjacent to SDZ; Flood Risk Management; waste management; SDZ should seek to protect important Scenic Views. | <ul style="list-style-type: none"> Noted and considered as part of the development of the ER. |
| | | <ul style="list-style-type: none"> Integration of Environmental Considerations. | <ul style="list-style-type: none"> Noted and considered as part of the development of the ER. |
| | Noise Considerations | <ul style="list-style-type: none"> The Plan should take into account any noise mapping related data available in preparing and implementing the Plan. Recommends a commitment be made to prepare a noise action plan, as a means of managing environmental noise through land use planning, traffic management and control of noise sources within / adjacent to the Plan area, as relevant and appropriate. | <ul style="list-style-type: none"> Noise Action Plan 2013-2018 prepared for Waterford and currently being updated and considered as part of the development of the ER. |
| | | <ul style="list-style-type: none"> EPA State of the Environment Report 2016 – the key issues and challenges described within this report should be taken into account, as relevant and appropriate to the Plan area in preparing the Draft Plan and associated SEA. | <ul style="list-style-type: none"> Noted – Used to inform the Environmental Baseline and existing environmental pressures and threats. |
| | | <ul style="list-style-type: none"> Lists the Environmental Authorities which require Notice. | <ul style="list-style-type: none"> Notice given to all environmental authorities as part of Scoping Process. |

| Environmental Authority | Issue | Concern/Comments | Response / Action Proposed |
|--|---|--|--|
| Kilkenny County Council (KCC) received 30th March 2017 | | | |
| Kilkenny County Council | Ferrybank/ Belview Local Area Plan 2009 (as amended in 2012). | <ul style="list-style-type: none"> Welcome the many references to Ferrybank/ Belview Local Area Plan 2009. Attention is drawn to many sources of information in relation to environmental context, in particular Map 4: Environmental Parameters and Map 8 Development Objectives. Other relevant sources of information include SEA and AA Screenings of Amendments 1 to the Ferrybank Belview Local Area Plan (2102). SEA Statement on the 2009 LAP. Kilkenny County Development Plan SEA (2014) . KCC is currently engaged in review process of the 2009 LAP including SEA and AA process. Would welcome a meeting to discuss cumulative and in combination effects of both of these frameworks for the larger area. | <ul style="list-style-type: none"> Noted – Information used to inform Scoping Report and SEA ER. Noted. Noted. Noted. Noted. |
| Department of Arts Heritage, Regional, Rural and Gaeltacht Affairs (DAHRRGA) 31st March 2017 | | | |
| Department of Arts Heritage, Regional, Rural and Gaeltacht Affairs | Archaeological | <ul style="list-style-type: none"> North Quays would be of high archaeological potential, as working quays and the focus for maritime traffic. They are most certainly sited on what is now reclaimed land that was formerly bankside locations or part of the river itself. There is therefore a high potential that previously unknown or unrecorded riverine/underwater archaeological heritage could be retained within those areas The Strategic Development Zone (SDZ) is located immediately west of Recorded Monument WAO09-008--- Religious House which is subject to statutory protection in the Record of Monuments & Places, established under Section 12 of the National Monuments (Amendment) Act 1994 | <ul style="list-style-type: none"> Noted – Cultural Heritage including known and unknown Archaeological heritage included as part of the EPOs for the Planning Scheme Noted and supported by Waterford City Development Plan 2013-2019 policies and objectives including OBJ 10.1.5. |

| Environmental Authority | Issue | Concern/Comments | Response / Action Proposed |
|--|-----------------------|---|---|
| Department of Arts Heritage, Regional, Rural and Gaeltacht Affairs | Archaeological contd. | <ul style="list-style-type: none"> Full and detailed archaeological assessment involving both terrestrial and underwater archaeological assessment will be required as part of the planning process for any specific developments within the SDZ. | <ul style="list-style-type: none"> Noted and currently supported by Waterford City Development Plan 2013-2019 Policies and objectives (Specifically OBJ 10.1.6). |
| | | <ul style="list-style-type: none"> An archaeological strategy identifying a programme of required archaeological investigative work and mitigation measures for specific developments within the SDZ should be prepared. | <ul style="list-style-type: none"> Noted – Specific developments not identified as part of the Planning Scheme. The requirement to undertake an archaeological assessment at project level (as above). |
| | | <ul style="list-style-type: none"> The Local Authority should have regard to the archaeological policy of the Department as outlined in the policy document “Framework and Principles for the Protection of the Archaeological Heritage” (1999), where the principle of preservation in-situ of archaeological remains is the set out: “there should always be a presumption in favour of avoiding developmental impacts on the archaeological heritage. <i>Preservation in-situ must always be the preferred option to be considered rather than preservation by record in order to allow development to proceed, and preservation in-situ must also be presumed to be the preferred option.</i>” | <ul style="list-style-type: none"> Noted and supported by Waterford City Development Plan 2013-2019 policies and objectives. |
| | | <ul style="list-style-type: none"> The archaeological objectives contained in the current County Development Plan should be considered when preparing the draft Planning Scheme and Strategic Environmental Assessment for the North Quays SDZ | <ul style="list-style-type: none"> Noted. |
| DAHRRGA | Nature Conservation | The Department welcomes the approach and focus of the Scoping Report, and particular the mention of assessment of invasive species and wastewater capacity. However, the following are emphasised for the scope of the SEA and Habitats Directive appropriate assessment: | Noted – All points raised to be addressed as part of the Habitats Directive Assessment contained in the Natura Impact Assessment Report. |

| Environmental Authority | Issue | Concern/Comments | Response / Action Proposed |
|-------------------------|----------------------------|--|---|
| DAHRRGA | Nature Conservation contd. | <ul style="list-style-type: none"> The effects of disturbance due to demolition and disturbance on juvenile Twaite shad, a fish species which is the subject of a conservation objective for the Lower River Suir cSAC. Up-to-date information of this species should be sought from Inland Fisheries Ireland | <ul style="list-style-type: none"> See NIR & proposed Mitigation Measures. |
| | | <ul style="list-style-type: none"> The effects of residual pollution (heavy metals, PCBs, etc.), from any contaminated subsoils in industrial sites being redeveloped, in discharges from the site to the Lower River Suir cSAC. | <ul style="list-style-type: none"> See NIR & proposed Mitigation Measures. |
| | | <ul style="list-style-type: none"> A determination whether there will be any net loss of habitat types for which the cSAC was designated (e.g. mudflats, Atlantic salt meadow). | <ul style="list-style-type: none"> NIR determination that there will be no net loss of habitats which are identified as Qualifying Interest QIs for SAC. |
| | | <ul style="list-style-type: none"> The effects of increased lighting on the species of conservation value using the river and development site itself. | <ul style="list-style-type: none"> See NIR & proposed Mitigation Measures. |
| | | <ul style="list-style-type: none"> An assessment whether the works (especially piling) will cause any sound or vibration barriers to migrating fish species (salmon and sea lamprey). | <ul style="list-style-type: none"> Due to strategic nature of this Plan assessment of effects are more appropriately assessed at project level i.e. EIA and AA. |
| | | <ul style="list-style-type: none"> The effects of any recreational disturbance from increased boat and pleasure craft use of the water front (marinas, pontoons, etc.) on the conservation objectives of the Lower River Suir cSAC. This includes upstream effects on the brackish and freshwater parts of the cSAC also. | <ul style="list-style-type: none"> There are no proposals/ objectives identified in the Planning Scheme to increase boat or pleasure craft use of the waterfront. Any such proposals would be subject to site specific project assessment i.e. Appropriate Assessment. |
| | | <ul style="list-style-type: none"> The opportunity to provide connectivity within the SDZ waterfront for species dispersing up- and downstream through the City, such as kingfisher, otter, etc. See other urban projects for examples of good practice. | <ul style="list-style-type: none"> See NIR & proposed Mitigation Measures. |
| | | <ul style="list-style-type: none"> A survey for breeding sites or resting places of strictly protected species, such as otter and bats. | <ul style="list-style-type: none"> Noted and undertaken – results included as part of Biodiversity Baseline in SEA ER. |

| Environmental Authority | Issue | Concern/Comments | Response / Action Proposed |
|-------------------------|----------------------------|--|--|
| DAHRRGA | Nature Conservation contd. | <ul style="list-style-type: none"> An assessment of the measures to ensure that waste arising from excavations will be disposed on in a planned and regulated manner, and will not result in infilling of areas of the estuarine cSAC, as has been the case elsewhere. | <ul style="list-style-type: none"> See NIR & proposed Mitigation Measures.. |
| | | <ul style="list-style-type: none"> An in-combination assessment of the effects of the scheme and proposed bridge crossing. The latter may require in-stream support pillars, which could have direct and indirect effects on the habitat of Twaite shad, in particular. | <ul style="list-style-type: none"> See NIR & proposed Mitigation Measures. |



Prepared by
Roughan & O'Donovan
Arena House, Arena Road, Sandyford, Dublin 18
Tel: +353 1 2940800 Fax: +353 1 2940820
Email: info@rod.ie www.rod.ie