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# Chapter 1

## Introduction

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## 1.1 General

This Environmental Impact Assessment Report (EIAR) for the proposed River Suir Sustainable Transport Bridge is “*A statement of the effects, if any, which the proposed project, if carried out, would have on the environment*” (Environmental Protection Agency (EPA), Draft 2017) and has been prepared in respect of the construction and operation of the proposed development. The EIAR, as presented, has been prepared by Roughan & O'Donovan (ROD) consulting engineers and a team of specialist sub-consultants, with the assistance of Waterford City and County Council.

The EIAR is presented in three volumes; the standalone Non-Technical Summary is Volume 1, this Volume 2 contains the main text and Volume 3 contains the associated Figures. Volume 2 comprises Background Information and General Description (Chapters 1-4) and Environmental Effects and Proposed Mitigation Measures (Chapters 5-18). A separate Natura Impact Statement (NIS) which complements the EIAR, and vice versa, has also been prepared. The volume and chapter layout of this EIAR is hereby presented:

### **Volume 1: Non – Technical Summary**

### **Volume 2: Main Text**

Chapter	1:	Introduction
Chapter	2:	Need for the Proposed Development
Chapter	3:	Alternatives Considered
Chapter	4:	Description of the Proposed Development
Chapter	5:	Traffic and Transport
Chapter	6:	Population and Human Health
Chapter	7:	Biodiversity
Chapter	8:	Soils and Geology
Chapter	9:	Hydrogeology
Chapter	10:	Hydrology
Chapter	11:	Landscape and Visual
Chapter	12:	Noise and Vibration
Chapter	13:	Air Quality and Climate
Chapter	14:	Archaeological and Cultural Heritage
Chapter	15:	Architectural Heritage
Chapter	16:	Material Assets and Land
Chapter	17:	Major Accidents, Interrelationships and Cumulative Impacts
Chapter	18:	Mitigation Measures

### **Volume 3: Figures**

## 1.2 Overview

### 1.2.1 Proposed Development

The proposed development comprises a sustainable transport bridge crossing the River Suir in Waterford City and includes a paved and landscaped plaza at the landing point on the South Quay, in direct proximity to the Clock Tower. It is anticipated that the proposed bridge will provide a new pedestrian, cycle and courtesy electric bus link between the North Quays and South Quays, promoting the further development of Waterford City and facilitating the development of the North Quays Strategic Development Zone (SDZ) lands. The proposed development is termed a 'Sustainable Transport Bridge' as it will support sustainable modes of transport including pedestrians, cyclists and electric bus users. The bridge will be approximately 207m in length and will allow the extension of the retail spine from Waterford City across to the North Quays SDZ.

On the South Quay the proposed bridge will land in the vicinity of the Clock Tower on Meagher's Quays. The South Quay setting currently comprises at-grade car parks which are adjacent to Merchant's Quay (R680), a 19th century Clock Tower and associated bollards, a walkway along the river edge and a glass walled flood defence. A marina is also located within the River Suir at this point with access at one point via the adjoining car park.

During the 13<sup>th</sup> to 16<sup>th</sup> centuries, Waterford accounted for a large portion of Ireland's trade and the South Quay was a focal point for this trade. The South Quay was reconstructed in the early 18<sup>th</sup> century, which allowed for trade with North America, England and the Continent. A bridge was built across the River Suir in 1793, improving communications with the hinterland to the north, which had up until then been cut off from the city to the south.

The North Quays at present comprise an assembly of wharves consisting of disused open spaces following the demolition of disused industrial buildings in 2016 and the Hennebique grain store building in July 2018. The Rosslare to Waterford (via Belview) rail line terminates to the east of the North Quay landing point.

Rice Bridge is currently the only crossing of the River Suir within Waterford City centre. The current pedestrian access from the north quays to the south quays entails walking upriver along Dock Road, crossing Rice Bridge to the south quays and walking along Merchant's Quay (R680), as presented in Plate 1.1. While there are cycle lanes along Merchant's Quay in both directions, there are no cycle facilities provided along Dock Road or Rice Bridge and it is a hostile environment for cyclists, as presented in Plate 1.2. The Ferrybank and Bellfield areas are residential areas to the north of Waterford City with limited connectivity to Waterford City other than by car or bus.



**Plate 1.1** Existing access route for pedestrians between the North and South Quays, along Dock Road (R711), Rice Bridge and Merchant's Quay (R680) (Courtesy of Google Maps)



**Plate 1.2** Traffic on the Plunkett Station roundabout, looking east showing the absence of cycle lanes

### 1.2.2 EIAR Team

Roughan & O'Donovan have led the preparation of this EIAR with the assistance of a number of specialists. Table 1.1 outlines the experience and qualifications of these experts.

**Table 1.1 Experience and Qualifications of the EIAR Contributors**

<b>Topic</b>	<b>Specialist Contributors</b>	<b>Company</b>	<b>Qualifications</b>	<b>Experience (Years)</b>
Chapters 1-4	Barry Corrigan	ROD	BSc, Dip EIA & SEA, MIEMA, CEnv	18
	Tony Dempsey	ROD	B.A., BA.I (Civil), Ph.D. C.Eng. M.I.E.I.	25
	Christian Smith	ROD	BEng Civil, CEng	17
	Christine Murphy	ROD	BSc, MSc Env Sci, PIEMA	6
	Daniel Coleman	ROD	BEng, MEng, CEng	6
	Edoardo Po	ROD	MEng MIE., PGrad Dip, CEng	5
Traffic and Transport	John Bell	ROD	BEng, CEng	17
Population and Human Health	Frances O'Kelly	ROD	BSc, MSc	11
	Warren Vokes	ROD	BA, MSc	3
Biodiversity	Owen O'Keefe	ROD	BSc, ACIEEM	3
	Kate Moore	ROD	BSc, GradCIEEM	2
	Brendan O'Connor	Aquafact	Ph. D., B.Sc. Hons	38
Land and Soils	Fintan Buggy	ROD	BSc, MSc Soil Mechanics, CEng, MICE, PE MIEI	36
Hydrogeology	Patrick Morrissey	ROD	BA, BAI, MSc, PhD, PGDip Stats, MIEI	10
Hydrology	Tony Cawley	Hydro Environmental	BE(Civil), MSc.Eng Hydrology;	31
	Patrick Morrissey	ROD	BA, BAI, MSc, PhD, PGDip Stats, MIEI	10
	Warren Vokes	ROD	BA, MSc	3
Landscape and Visual	Mark Boyle	Murray & Associates	BSc. Ag., M Landscape Architecture, Dip Project Management	20
Noise and Vibration	Dr Stephen Smyth	AWN Consulting Ltd.	BA, BAI, MIEI, MIOA	14
	Alistair Maclaurin	AWN Consulting Ltd.	Dip. Acoustics & Noise Control, Acoustics	12
Air Quality and Climate	Dr Ed Porter	AWN Consulting Ltd.	BSc, PhD Chem, MRSC	20
	Dr Avril Challoner	AWN Consulting Ltd.	BEng Env.Eng. HDip Statistics, PhD Env Chemistry	6

Topic	Specialist Contributors	Company	Qualifications	Experience (Years)
Archaeology and Cultural Heritage	Faith Bailey	Irish Archaeology Consultancy (IAC)	MA BA (Hons), MCIFA, MIAQM	14
Underwater Archaeology	Julianna O'Donoghue	Mizen Archaeology	BSc Archaeology	17
Architectural Heritage	Rob Goodbody	Historic Building Consultants	BA(Mod); Dip Environmental Planning; MA Local History; Masters in Urban and Building Conservation; Dip Applied Building Repair & Conservation	43
Material Assets and Land	Barry Corrigan	ROD	BSc, Dip EIA & SEA, MIEMA, CEnv	18
	Christine Murphy	ROD	BSc, MSc Env Sci, PIEMA	6
	Gemma Rothwell	ROD	BSc Env Sci	2
Major Accidents, Interrelationships and Cumulative Impacts	Christine Murphy	ROD	BSc, MSc Env Sci, Dip Env Law, PIEMA	6
	Gemma Rothwell	ROD	BSc Env Sci	2
Mitigation Measures	Christine Murphy	ROD	BSc, MSc Env Sci, PIEMA	6

### 1.2.3 Constraints Study

A Constraints Study (file reference number 002\_2016.10.04\_WCCC) was carried out and published in October 2016. The Constraints Study was a desktop review of publicly available information to identify potential significant environmental constraints relating to the proposed development prior to the commencement of the design stage. The report highlighted key constraints and recommended necessary surveys and assessments.

## 1.3 EIA Legislation

### 1.3.1 Introduction

Environmental Impact Assessment (EIA) is defined in Directive 2011/92/EU (as amended by Directive 2014/52/EU) as follows:

*“Environmental Impact Assessment means a process consisting of:*

- (i) the preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);*
- (ii) the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;*
- (iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with*

*Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;*

- (iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and*
- (v) the integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a.”*

### **1.3.2 Legal Requirement for an EIAR**

This EIAR has been prepared in accordance with the relevant provisions of Directive 2011/92/EU<sup>1</sup> on the Assessment of the Effects of Certain Public and Private Projects on the Environment as amended by Directive 2014/52/EU<sup>2</sup>. Directive 2014/52/EU amends EIA law in a number of respects by amending Directive 2011/92/EU. Article 5 and Annex IV to the EIA Directive 2011/92/EU, (as substituted by Directive 2014/52/EU) and Sections 50(2) and 50(3) of the Roads Act 1993, as amended, specify the information to be contained in an EIAR (referred to as an Environmental Impact Statement (EIS) in Roads Act 1993, as amended) in relation to this proposed development. Directive 2014/52/EU was required to be transposed by 16 May 2017 and requires changes in Irish laws, regulations and administrative provisions across a number of legislative codes to reflect the contents of Directive 2014/52/EU. On the 1<sup>st</sup> September 2018, the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018) came into operation in order to transpose the requirements of Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment into Irish planning law. However, at the time of publication of this EIAR, the changes in Irish laws across a number of legislative codes (including the Roads Act 1993 as amended and Road Regulations 1994 as amended) have not yet been implemented. This EIAR has been prepared in full accordance and compliance with the provisions of Directive 2014/52/EU. Regard has also been had to the current provisions of the relative Irish legislative codes including the Roads Act 1993 as amended as they continue to apply at this time.

Section 50 of the Roads Act (1993 - 2015), as amended, sets out provisions for the preparation of an EIAR.

Section 50(1) of the Roads Act (1993-2015) states (Note: The functions of the Minister have transferred to An Bord Pleanála under Section 215 of the Planning and Development Act 2000, as amended):

*“1 (a) A road authority or the Authority shall prepare a statement of the likely effects on the environment (‘environmental impact statement’) of any proposed road development it proposes consisting of -*

- (i) the construction of a motorway,*
- (ii) the construction of a busway,*
- (iii) the construction of a service area, or*
- (iv) any prescribed type of proposed road development consisting of the construction of a proposed public road or the improvement of an existing public road.”*

<sup>1</sup> Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification).

<sup>2</sup> Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.



- (b) *Where the Minister considers that any proposed road development (other than development to which paragraph (a) applies) consisting of the construction of a proposed public road or the improvement of an existing public road would be likely to have significant effects on the environment, he shall direct the road authority to prepare an environmental impact statement in respect of such proposed road development and the authority shall comply with such direction*
- (c) *Where a road authority considers that any proposed road development (other than development to which paragraph (a) applies) consisting of the construction of a proposed public road or the improvement of an existing public road would be likely to have significant effects on the environment, it shall inform the Minister in writing and where the Minister concurs with the road authority he shall give a direction to the road authority under paragraph (b)."*

The prescribed type of proposed road development, as defined by paragraph 8 of the Roads Regulations (Statutory Instrument (SI) No.119 of 1994), for the purpose of subsection (1) (a) (iv) of Section 50 of the Act is as follows:

- "(a) the construction of a new road of four or more lanes, or the realignment or widening of an existing road so as to provide four or more lanes, where such new, realigned or widened road would be eight kilometres or more in length in a rural area, or 500 metres or more in length in an urban area;*
- (b) **the construction of a new bridge or tunnel which would be 100m or more in length.**"*

Taking this legislation into account, the proposed River Suir Sustainable Transport Bridge requires that an EIAR is prepared under the Roads Regulations (SI. No. 119 of 1994) subsection (1) (a) (iv) (b) of Section 50 as the proposed development comprises the construction of a new bridge of 207m in length, exceeding the prescribed length of 100m. The proposed development exceeds the threshold for which an EIA is automatically required.

## 1.4 Scope of the EIAR

The design of a development is a systematic and iterative process in which the collation and assessment of environmental data and predicted impacts are essentially linked to the development of the design. Chapter 3, Alternatives Considered, of this EIAR summarises the processes that led to the development of the proposal that is described in Chapter 4, Description of the Proposed Development.

The process of EIA Scoping for this EIAR and an Informal EIA Scoping document was issued to statutory consultees in June 2017, requesting comments on the proposed content of the EIAR.

### 1.4.1 Environmental Protection Agency (EPA) Guidelines

The following EPA guidelines informed the EIAR:

- EPA, Guidelines on the Information to be contained in Environmental Impact Statements, 2002; and
- EPA, Advice notes on Current Practice (in the preparation of Environmental Impact Statements), 2003; and
- Advice Notes for Preparing Environmental Impact Statements, Draft September 2015.

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports, Draft May 2017 is currently on consultation and has been considered in informing the EIAR.

#### **1.4.2 Transport Infrastructure Ireland (TII) / National Roads Authority (NRA) Environmental Assessment and Construction Guidelines**

The following NRA (now known for operational purposes as TII) planning guidelines were considered during the design and environmental assessment processes:

- Environmental Impact Assessment of National Road Schemes - A Practical Guide, Revision 1, 20 November 2008;
- Guidelines on the Implementation of Landscape Treatments on National Road Schemes in Ireland, 2012;
- Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes, Revision 1, May 2011;
- Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes, 2006;
- Guidelines for Assessment of Ecological Impacts of National Road Schemes, Revision 2, 1<sup>st</sup> June 2009;
- Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes, 2008;
- Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Scheme, 2008;
- Guidelines for the Treatment of Noise and Vibration in National Road Schemes - Revision 1, October 2004;
- Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes, March 2014;
- Guidelines for the Assessment of Architectural Heritage Impacts of National Road Schemes, 2005; and
- Guidelines for the Assessment of Archaeological Heritage Impacts of National Road Schemes, 2005.

The following TII / NRA construction guidelines are followed and referred to during the environmental assessment process:

- Guidelines for the Management of Noxious Weeds and Non- Native Invasive Plant Species on National Roads, Revision 1, December 2010;
- The Management of Waste from National Road Construction Projects, December 2017;
- Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes, July 2008;
- Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub Prior to, during and Post Construction of National Road Schemes, 2006;
- Guidelines for the Treatment of Badgers Prior to the Construction of National Road Schemes - Revised November 2006;
- Guidelines for the Treatment of Badgers during the Construction of National Road Schemes, 2005;
- Guidelines for the Treatment of Bats during the Construction of National Road Schemes, 2006;

- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes, 2008; and
- Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan, 2007.

## 1.5 Difficulties Encountered

There were no particular difficulties encountered in the development of this EIAR.

It should be noted that surveys, assessments and information that form the basis of this EIAR are based on the current design of the proposed development which has been developed to a stage that permits a fully informed EIA. While some developments and refinements of the current design may occur during the detailed design stage, any such iterations of the development, if approved, will not include any significant adverse impacts on the environment not dealt with within this EIAR.

## 1.6 Statutory Consultations

A copy of this EIAR is being provided to the prescribed bodies as required by Section 51(3) of the Roads Act (1993), as amended. The EIAR and NIS will be available for inspection until 12<sup>th</sup> of February 2019 at the following locations as detailed in the published newspaper notices:

- Waterford City and County Council, Customer Care Desk, Baileys New Street, Waterford City (Office Hours 9:30am-4:00pm Monday to Friday) and
- Waterford City and County Council, Civic Offices, Davitts Quay, Dungarvan, Co. Waterford (Office Hours 9:30am-4:00pm Monday to Friday)

Copies of the full EIAR and/or NIS may be purchased from Waterford City and County Council offices. Alternatively, the EIAR can be viewed on the Waterford City and County Council website at [www.waterfordcouncil.ie](http://www.waterfordcouncil.ie).

In addition to the statutory consultations, a non-statutory consultation was held in Waterford City in July 2018 during the development of the design of the proposed development. The feedback received during the consultation process was considered by the project team in the development of the design and in the preparation of this EIAR. The alternative bridge options are discussed in Chapter 3.

