



Chapter 01
Introduction

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1. Introduction

1.1 Introduction

This Environmental Impact Assessment Report (EIAR) has been prepared in respect of the Ringsend to City Centre Core Bus Corridor Scheme (hereinafter referred to as the Proposed Scheme).

The Proposed Scheme comprises infrastructure improvements for active travel (both walking and cycling) and the provision of enhanced bus priority measures for existing (both public and private) and future service users, in a manner which is consistent with, and will help attain, sustainable transport policies and objectives.

This Chapter of the EIAR introduces the Proposed Scheme, summarises the Environmental Impact Assessment (EIA) process, describes the methodology used to prepare this EIAR and outlines the consultation activities that have been carried out to date.

The route of the Proposed Scheme is presented in Image 1.1.

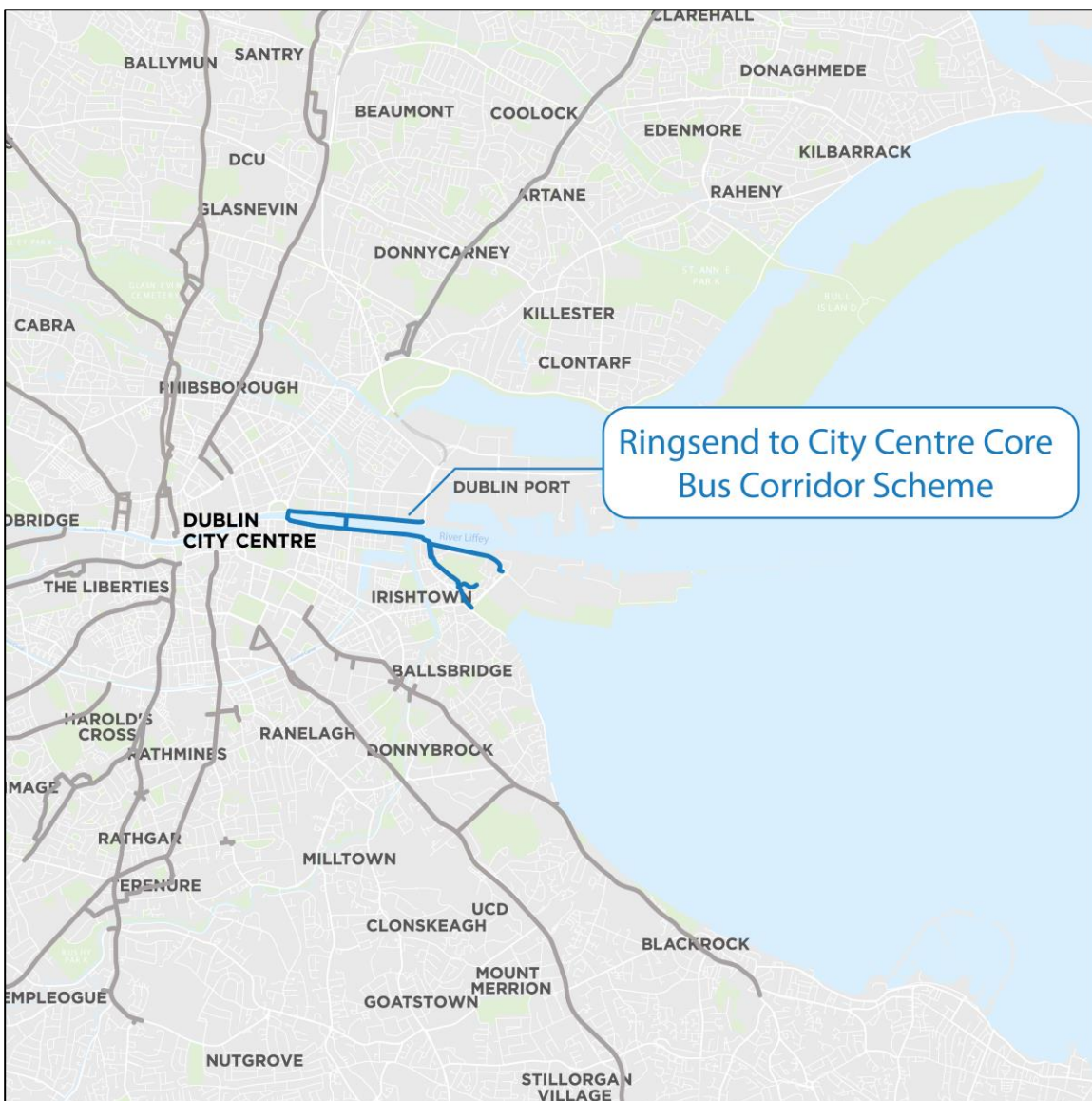


Image 1.1: Route of the Proposed Scheme

The Proposed Scheme will commence at the edge of the City Centre at Talbot Memorial Bridge beside the Custom House and will proceed eastwards along the north and south quays to Tom Clarke East Link Bridge beside Dublin Port. This section of the Proposed Scheme includes a new public transportation opening bridge (hereafter referred to as the 'Dodder Public Transport Opening Bridge (DPTOB)') over the River Dodder at its confluence with the River Liffey. The DPTOB will span from the eastern end of Sir John Rogerson's Quay (adjacent to the Capital Dock building) to the R131 adjacent to the Tom Clarke East Link Bridge. It will accommodate pedestrians, cyclists, public buses and taxis, providing a gateway between Dublin City's south quays and Ringsend, as well as the Poolbeg Peninsula beyond. The Proposed Scheme will continue from this point as a cycling route towards the Poolbeg Peninsula and onward to Dublin Bay South at Sandymount. It will commence from the southern end of the Tom Clarke East Link Bridge, with two branches, one in an eastern direction (along York Road and Pigeon House Road), and the other in a south-eastern direction (along Pembroke Cottages, Cambridge Park, Ringsend Park, Strand Street and Pembroke Street) and will then conclude at the junction of the R131 Sean Moore Road and the R802 Beach Road.

The Proposed Scheme will significantly enhance travel by public transport by providing bus priority as well as improved pedestrian and cycling infrastructure. Currently this access corridor is characterised by traffic congestion and discontinuous inadequate bus and cycling infrastructure, meaning that for most of the journey, buses and cyclists are competing for space with the general traffic, impacting on the attractiveness for pedestrians, cyclists and bus users of these sustainable transport modes.

The Proposed Scheme will improve both the overall journey times for buses along the route and their journey time reliability, by providing increased bus priority infrastructure. The result will be increased journey reliability, by largely removing interaction between bus traffic and general traffic, thereby delivering significant benefits to the travelling public and to the environment.

In addition to the improvements to bus journey time and journey time reliability, the Proposed Scheme will provide significant benefits for cyclists and pedestrians. The scheme design has been developed having regard to the relevant accessibility guidance and universal design principles to provide access for all users. The Proposed Scheme will provide improved pedestrian crossing facilities along the route, with an increase in the number of signalised crossing points and the provision of side road ramps.

The provision of dedicated cycling infrastructure along the Proposed Scheme will improve the level of service provided for cyclists along the route, making cycling trips safer and more attractive. In this regard, the Proposed Scheme will deliver substantial elements of the National Transport Authority (NTA) Greater Dublin Area Cycle Network Plan (hereafter referred to as the GDA Cycle Network Plan) (NTA 2013) (and the revised 2022 Greater Dublin Area Cycle Network (NTA 2022a) updated as part of the Greater Dublin Area Transport Strategy 2022 – 2042 (NTA 2022b), much of which does not currently have adequate provision, as well as linking with other existing and proposed cycling schemes and sustainable transport modes, contributing towards the development of a comprehensive cycling network for Dublin.

Several urban realm upgrades, including widened footpaths, high quality hard and soft landscaping and street furniture will be provided in areas of high activity, which will contribute towards a safer, more attractive environment for pedestrians.

The primary objective of the Proposed Scheme, therefore, is the facilitation of modal shift from car dependency through the provision of bus, cycle, and walking infrastructure enhancements, thereby contributing to an efficient, integrated transport system and to facilitate a shift to a low carbon and climate resilient City.

The Proposed Scheme is one of 12 schemes to be delivered under the BusConnects Dublin - Core Bus Corridor Infrastructure Works (hereafter called the CBC Infrastructure Works). The CBC Infrastructure Works is one of the initiatives within the NTA's overall BusConnects Programme.

The BusConnects Programme seeks to greatly improve bus services in Irish cities, including Dublin, so that journeys by bus will be fast, reliable, punctual, convenient and affordable.

Further information is provided in Chapter 2 (Need for the Proposed Scheme) and Chapter 3 (Consideration of Reasonable Alternatives).

It is envisaged that the CBC Infrastructure Works, once completed, will deliver the radial Core Bus Corridors identified in the Transport Strategy for the Greater Dublin Area 2016-2035 (NTA 2016) and the replacement Greater Dublin Area Transport Strategy 2022 - 2042.

A full description of the Proposed Scheme is provided in Chapter 4 (Proposed Scheme Description), which is accompanied by the scheme design drawings in Volume 3 (Figures) of this EIAR, while the assessment of cumulative impacts and interactions are presented in Chapter 21 (Cumulative Impacts & Environmental Interactions) in this volume of the EIAR.

The EIAR is defined by the Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (hereinafter referred to as the EPA Guidelines) as ‘a report or statement of the effects, if any, that the proposed project, if carried out, would have on the environment’ (EPA 2022). The EIAR details the consideration of reasonable alternatives, consideration and assessment of likely significant impacts, mitigation, and avoidance measures to reduce significant adverse impacts, and an assessment of residual impacts. This EIAR has been completed in accordance with all applicable legislation and all relevant guidance documents and will facilitate An Bord Pleanála (ABP) in undertaking an EIA for the Proposed Scheme under 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 (hereinafter referred to as the EIA Directive) and Section 50 of Number 14 of 1993 - Roads Act 1993 (hereinafter referred to as the Roads Act), as amended by S.I. No. 279/2019 - European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019 (hereinafter referred to as the Roads Regulations).

1.2 Aim and Objectives

The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The objectives of the Proposed Scheme are to:

- Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements;
- Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;
- Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland’s emission reduction targets;
- Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;
- Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and
- Ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

The planning and design of the Proposed Scheme has been guided by these aims and objectives, with the need for the Proposed Scheme described in detail in Chapter 2 (Need for the Proposed Scheme) of this EIAR.

The outcomes achieved from delivering the Proposed Scheme will be:

- An attractive, resilient, equitable public transport network better connecting communities and improving access to work, education and social activity;
- To facilitate a transport infrastructure network that prioritises walking and cycling and a mode shift to public transport; and
- To support increased economic and social potential through integrated land-use and transport planning to reduce the time burden of travel.

1.3 Delivery of the Project

In the event that approval is granted in respect of the Proposed Scheme, it is proposed to deliver the CBC Infrastructure Works over the period from 2023 to 2028. In the event of approval by ABP under Section 51 of the Roads Act and confirmation of the Compulsory Purchase Order (CPO) to allow property acquisition to facilitate the delivery of the Proposed Scheme, it is envisaged that construction would commence during 2023, with an expected construction programme to completion of approximately 30 months, assuming that the construction of the DPTOB and the other elements of the Proposed Scheme are constructed concurrently. It should be noted however that it is envisaged that the DPTOB will be constructed under a separate Construction Contract from the remainder of the Proposed Scheme. Therefore, it is possible that the construction of the DPTOB could be undertaken in a different sequence (e.g., either independently of the other elements or overlapping with them).

1.4 Role of the National Transport Authority

The National Transport Authority (NTA) is a statutory non-commercial body, which operates under the aegis of the Department of Transport. The NTA was established on foot of the Dublin Transport Authority Act 2008 (as amended) (hereinafter referred to as the 2008 Act).

The NTA has some specific additional functions in respect of infrastructure and the integration of transport and land use planning in the GDA, reflecting the particular public transport and traffic management needs of the Eastern region of the country comprising approximately 40% of the State's population and economic activity.

The NTA is responsible for the development and implementation of strategies to provide high quality, accessible and sustainable transport across Ireland. The NTA has a number of statutory functions including the following which are relevant to the Proposed Scheme:

- Develop an integrated, accessible public transport network;
- Provide bus infrastructure and fleet and cycling facilities and schemes; and
- Invest in all public transport infrastructure.

Specifically, under Section 44(1) of the 2008 Act (as amended), *'in relation to public transport infrastructure in the GDA, the Authority shall have the following functions:*

- (a) To secure the provision of, or to provide, public transport infrastructure;*
- (b) To enter into agreements with other persons in order to secure the provision of such public transport infrastructure, whether by means of a concession, joint venture, public private partnership or any other means; and*
- (c) To acquire and facilitate the development of land adjacent to any public transport infrastructure where such acquisition and development contribute to the economic viability of the said infrastructure whether by agreement or by means of a compulsory purchase order made by the Authority in accordance with Part XIV of the Act of 2000'.*

The Board of the NTA, at its meeting on 18 October 2019, considered whether the function of providing the public transport infrastructure comprising of the CBC Infrastructure Works should be performed by the NTA itself under the provisions of section 44(2)(b) of the 2008 Act. Following consideration, the Board of the NTA decided that the functions in relation to securing the provision of public transport infrastructure falling within section 44(2)(a) of the 2008 Act in relation to the CBC Infrastructure Works, should be performed by the NTA.

The NTA established a dedicated BusConnects Infrastructure team to advance the planning and construction of the CBC Infrastructure Works, including technical and communications resources and external service providers procured in the planning and design of the 12 Proposed Schemes.

In the case of the Proposed Scheme, the functions of the BusConnects Infrastructure team included undertaking the design and planning process, seeking (and obtaining) all development consents including related compulsory acquisition approvals from ABP, and constructing the Proposed Scheme (if approved).

1.5 EIAR Process, Screening, Content and Methodology

1.5.1 Introduction

As set out in the former Department of Housing, Planning and Local Government (DHPLG) Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018) (hereinafter referred to as the 2018 Guidelines) (DHPLG 2018), the EIA Directive requires that public and private projects that are likely to have significant effects on the environment be made subject to an assessment prior to development consent being given. As set out in the 2018 Guidelines, EIA is a process to be undertaken in respect of applications for specified classes of development listed in the EIA Directive before a decision in respect of development consent is made. The process involves the preparation of an EIAR by the applicant, consultations with the public, relevant prescribed bodies and any other affected Member States, and an examination and analysis of the EIAR and other relevant information leading to a reasoned conclusion by the competent authority on the likely significant effects of the proposed development on the environment. Again, as observed in the 2018 Guidelines, the provisions of the EIA Directive are aimed at enhancing the EIA process through ensuring the completeness and quality of the EIAR submitted by the applicant and the examination undertaken by the competent authority and by providing for early and effective public participation before the development consent decision is made.

The EIA Directive requires that public and private projects that are likely to have significant effects on the environment be made subject to an assessment prior to development consent being given. The requirements of the EIA Directive were transposed into Irish planning law with the enactment of a number of implementing legislative measures, including S.I. No. 296/2018 – European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (hereinafter referred to as the 2018 EIA Regulations), with effect from 1 September 2018. Further, the Roads Regulations amended the provisions of the Roads Act and S.I. No. 119/1994 - Roads Regulations, 1994 (hereinafter referred to as the Roads Regulations 1994).

It is pursuant to the amendments to the Roads Act and Roads Regulations 1994 that this EIAR has been prepared in respect of the Proposed Scheme. Article 5 of and Annex IV to the EIA Directive and Section 50(2) of the Roads Act specify the information to be contained in an EIAR in relation to this Proposed Scheme.

Accordingly, this EIAR contains all of the information prescribed by the relevant provisions of Article 5 of and Annex IV to the EIA Directive, and Section 50(2) of the Roads Act.

1.5.2 Relevant Legislation, Policy and Guidelines

This EIAR has been prepared in accordance with, but not limited to, the following legislation and guidance:

- The EIA Directive;
- Roads Act, as amended;
- Roads Regulations 1994, as amended;
- Roads Regulations;
- Number 30 of 2000 – Planning and Development Act, 2000 (as amended);
- S.I. No. 600/2001 - Planning and Development Regulations, 2001 (as amended);
- EPA Guidelines (EPA 2022);
- Environmental Impact Assessment of Projects – Guidance on the Preparation of the Environmental Impact Assessment Report (European Commission 2017);
- Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (European Commission 1999);
- Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment (European Commission 2013);
- The 2018 Guidelines (DHPLG 2018);
- National Roads Authority (NRA) Environmental Impact Assessment of National Road Schemes – A Practical Guide (NRA 2008); and
- Advice Note 17: Cumulative Effects Assessment Relevant to Nationally Significant Infrastructure Projects (The Planning Inspectorate 2019).

Where necessary, the impact assessment chapters refer to policy documents that are specifically relevant to their assessment.

Key policy documents that inform the examination of all environmental topic areas include:

- Project Ireland 2040 National Planning Framework (Government of Ireland 2018a);
- Project Ireland 2040 National Development Plan 2018 – 2027 (Government of Ireland 2018b);
- Project Ireland 2040 National Development Plan 2021 – 2030 (Government of Ireland 2021);
- Climate Action Plan 2021 (Government of Ireland 2021);
- Smarter Travel: A Sustainable Transport Future: A New Transport Strategy for Ireland 2009 – 2020 (DTAS 2009);
- Eastern and Midlands Regional Assembly (EMRA) Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019 – 2031 (EMRA 2019);
- National Investment Framework for Transport in Ireland (NIFTI) (Department of Transport 2021);
- Transport Strategy for the Greater Dublin Area 2016 – 2035 (NTA 2016);
- Greater Dublin Area Transport Strategy 2022 – 2042 (NTA 2022b);
- Greater Dublin Area Cycle Network Plan 2013 (NTA 2013);
- 2022 Greater Dublin Area Cycle Network (NTA 2022a);
- Dublin City Council (DCC) Dublin City Development Plan 2022 – 2028 (DCC 2022); and
- Dublin City Public Realm Strategy (DCC 2012).

Where necessary, the impact assessment chapters refer to legislation and guidance documents that are specifically relevant to their assessment.

In addition to the applicable EIA legislation and guidance, all relevant provisions of European Union (EU) Directives and National legislation relating to the specialist areas have also been considered as part of the process and are addressed in the relevant assessment chapters.

The Proposed Scheme is supported by an extensive policy framework of International, European, National, Regional and Local policies, planning strategies and plans. Refer to Chapter 2 (Need for the Proposed Scheme) for further information.

1.5.3 EIA Process

EIA is a systematic and an iterative process that examines the potential environmental impacts of a proposed development of project and establishes appropriate design and mitigation measures to avoid, reduce or offset impacts. The assessment of potential environmental impacts arising from the Proposed Scheme has been conducted in accordance with best practice as detailed in the chapters and associated appendices prepared in respect of each relevant environmental topic.

The EIA process can generally be summarised as follows:

- **Screening** – Determining whether or not an EIA is required for the Proposed Scheme. This included a review of the Proposed Scheme and understanding the legislative requirement for EIA under the Roads Act;
- **Consideration of the EIAR's Scope** – The EIA team considered the characteristics of the Proposed Scheme and the likely relevant issues which could arise due to its construction and operation;
- **Baseline Data Collection** – Establishment of a robust baseline of the existing environment in the study area of the Proposed Scheme, including a review of existing available information and undertaking any surveys identified as required during the Scoping phase;
- **Impact Assessment** – Assessment of the potential environmental impacts of the Proposed Scheme with and without mitigation measures, and an iterative process of informing design to avoid impacts;
- **Mitigation** – Formulation of mitigation measures to ameliorate the potential impacts of the Proposed Scheme which cannot be avoided through design;
- **Consultation** – With Statutory Authorities, Stakeholders, the public and other bodies;

- **Decision** – The competent authority, in this case ABP, will decide if the Proposed Scheme can be authorised, and if so, may specify conditions that must be adhered to;
- **Announcement** – The public is informed of the decision; and
- **Monitoring** – When required, monitoring of the effectiveness of implemented mitigation measures during construction and operation.

1.5.4 Screening and the Legislative Requirement for EIA

Screening is the first stage of the EIA process, whereby a decision is made on whether or not an EIA is required.

Section 50 of the Roads Act is concerned with the requirement for EIA of a road development. Section 50(1)(a) states that:

‘A road development that is proposed that comprises any of the following shall be subject to an environmental impact assessment:

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

Under Article 8 of the Road Regulations 1994 (as amended), the prescribed type of road development for the purposes of section 50(1)(a)(iv) of the Roads Act are:

- *‘(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’; and*
- *‘(b) the construction of a new bridge or tunnel which would be 100 metres or more in length.’*

The Proposed Scheme meets the threshold as set out in Article 8 of the Road Regulations 1994, as amended, in that it includes the construction of a new bridge which is to be 100 metres or more in length.

1.5.5 Consideration of the EIAR Scope

As referenced above, the scope of the EIA was developed having regard to the characteristics of the Proposed Scheme and all likely significant environmental effects which could arise due to its construction and operation.

In addition, during the development of the EIAR, prescribed bodies and relevant non-statutory consultees (refer to Section 1.7 of this Chapter) were consulted to appraise them of the proposed approach to the EIAR and they were afforded the opportunity to provide comment on the approach.

Comments received during this pre-application consultation process with prescribed bodies and non-statutory bodies were reviewed and considered in the preparation of this EIAR.

Moreover, as a result of the three phases of extensive public consultation in respect of the Proposed Scheme, submissions and observations received from the public and public concerns were considered and, where appropriate, issues raised in those submissions and observations are included in the EIAR.

1.5.6 Contents of the EIAR

As set out in the European Commission EIAR Guidance (European Commission 2017), *‘the EIAR is the document prepared by the developer [of a project] that presents the output of the assessment. It contains information regarding:*

- *the Project,*
- *the likely significant effect of the Project,*
- *the Baseline scenario,*

- *the proposed Alternatives,*
- *the features and Measures to mitigate adverse significant effects,*
- *as well as a Non-Technical Summary and,*
- *any additional information specified in Annex IV of the EIA Directive.'*

Article 5 of and Annex IV to the EIA Directive, as well as Section 50(2) of the Roads Act specify the information to be contained in an EIAR in relation to this Proposed Scheme.

For clarity on the information to be contained in the EIAR, the relevant sections of the legislation are reproduced in Table 1.1.

Table 1.1: Annex IV of the EIA Directive

Annex IV – Information Referred to in Article 5(1) (Information for the EIAR)
<p>1. Description of the project, including in particular:</p> <ul style="list-style-type: none"> (a) <i>A description of the location of the project;</i> (b) <i>A description of the physical characteristics of the whole project, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;</i> (c) <i>A description of the main characteristics of the operational phase of the project (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; and</i> (d) <i>An estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during the construction and operation phases.</i>
<p>2. <i>A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.</i></p>
<p>3. <i>A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge</i></p>
<p>4. <i>A description of the factors specified in Article 3(1) likely to be significantly affected by the project: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydro morphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.</i></p>
<p>5. <i>A description of the likely significant effects of the project on the environment resulting from, inter alia:</i></p> <ul style="list-style-type: none"> (a) <i>The construction and existence of the project, including, where relevant, demolition works;</i> (b) <i>The use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;</i> (c) <i>The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;</i> (d) <i>The risks to human health, cultural heritage or the environment (for example due to accidents or disasters);</i> (e) <i>The cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;</i> (f) <i>The impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;</i> (g) <i>The technologies and the substances used.</i> <p><i>The description of the likely significant effects on the factors specified in Article 3(1) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the project. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project.</i></p>
<p>6. <i>A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.</i></p>
<p>7. <i>A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.</i></p>
<p>8. <i>A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom (**)⁷ or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.</i></p>
<p>9. <i>A non-technical summary of the information provided under points 1 to 8.</i></p>

Annex IV – Information Referred to in Article 5(1) (Information for the EIAR)

10 A reference list detailing the sources used for the descriptions and assessments included in the report’.

Section 50(2) of the Roads Act specifies the information to be contained in an EIAR, and is reproduced in Table 1.2.

Table 1.2: Section 50(2) of the Roads Act

Section 50(2) of the Roads Act
<p>‘50(2) The road authority or the Authority, as the case may be, shall ensure that an environmental impact assessment report referred to in subsection (1B) —</p> <p>a) is prepared by competent experts,</p> <p>b) subject to subsection (3), contains the following information:</p> <p>(i) a description of the proposed road development comprising information on the site, design, size and other relevant features of the development;</p> <p>(ii) a description of the likely significant effects of the proposed road development on the environment;</p> <p>(iii) a description of any features of the proposed road development and of any measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;</p> <p>(iv) a description of the reasonable alternatives studied by the road authority or the Authority, as the case may be, which are relevant to the proposed road development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed road development on the environment;</p> <p>(v) a non-technical summary of the information referred to in subparagraphs (i) to (iv);</p> <p>(vi) any additional information specified in Annex IV that is relevant to the specific characteristics of the particular proposed road development or type of proposed road development and to the environmental features likely to be affected,</p> <p>and</p> <p>c) c) takes into account the available results of other relevant assessments carried out pursuant to any Act of the Oireachtas or under European Union legislation with a view to avoiding duplication of assessments.’</p>

1.5.7 EIAR Structure

The EIAR for the Proposed Scheme is presented in four volumes as follows:

- **Volume 1 – Non-Technical Summary:** This summarises the findings of the EIAR in a clear, accessible format that uses non-technical language and supporting graphics. The Non-Technical Summary describes the Proposed Scheme, summarises the baseline environment, potential impacts and mitigation measures, and relevant topics of the EIAR in a manner that can be easily understood by the general public;
- **Volume 2 – Main Report:** This includes introductory chapters in addition to ‘assessment’ chapters for each environmental topic in accordance with Annex IV of the EIA Directive. The front-end chapters provide the relevant Proposed Scheme context while the assessment chapters provide a description of the relevant environmental aspects and likely significant impacts with cumulative impacts from other schemes in combination with the predicted impacts of the Proposed Scheme, and summary chapters provided thereafter;
- **Volume 3 – Figures:** This provides drawings, maps and graphics (including photomontages) that support, and are referenced within Volume 2; and
- **Volume 4 – Appendices:** This provides the technical reports that support and are cross-referenced within Volume 2. This includes other relevant drawings, modelling outputs, background reports and / or supporting documents.

The EIAR chapter structure is presented in Table 1.3.

Table 1.3: EIAR Structure

EIAR Chapter	Description
Volume 1: Non-Technical Summary	
NTS	Summary of the EIAR in non-technical language.
Volume 2: Main Report	

EIAR Chapter	Description
Chapter 1	Introduction
Chapter 2	Need for the Proposed Scheme
Chapter 3	Consideration of Reasonable Alternatives
Chapter 4	Proposed Scheme Description
Chapter 5	Construction
Chapter 6	Traffic & Transport
Chapter 7	Air Quality
Chapter 8	Climate
Chapter 9	Noise & Vibration
Chapter 10	Population
Chapter 11	Human Health
Chapter 12	Biodiversity
Chapter 13	Water
Chapter 14	Land, Soils, Geology & Hydrogeology
Chapter 15	Archaeological & Cultural Heritage
Chapter 16	Architectural Heritage
Chapter 17	Landscape (Townscape) & Visual
Chapter 18	Waste & Resources
Chapter 19	Material Assets
Chapter 20	Risk of Major Accidents and / or Disasters
Chapter 21	Cumulative Impacts & Environmental Interactions
Chapter 22	Summary of Mitigation & Monitoring Measures
Chapter 23	Summary of Significant Residual Impacts
Volume 3: Figures	
Figures	Graphics and plans supporting the EIAR chapters, illustrating the Proposed Scheme and environmental information.
Volume 4: Appendices	
Appendices	Technical reference information supporting the EIAR chapters, such as technical reports compiling calculations and detailed background data.

While the EIAR has been prepared in compliance with the EIA Directive, it has also been written to make it accessible to a wider, non-specialist audience. Where technical terminology is used, an explanation is provided in the text, and / or in the glossary of terms which is provided at the beginning of Volume 2 of the EIAR.

Generally, the structure of Chapters in Volume 2 (Main Report) of this EIAR, aligns with both the European Commission EIAR Guidance (European Commission 2017) and the EPA Guidelines (EPA 2022), and includes the following headings:

- **Introduction:** Provides an overview of the aims and objectives of the specific chapter in assessing the Proposed Scheme and outlines the scope of the assessment;
- **Methodology:** Describes the forecasting methods and evidence used to identify and assess the significant impacts on the environment;
- **Baseline Environment:** The baseline refers to the current state of environmental characteristics. It involves the collection and analysis of information on the condition, sensitivity and significance of relevant environmental topics which are likely to be significantly impacted by the Proposed Scheme;
- **Potential Impacts:** Reporting in the EIAR is structured to ensure that criteria and standards of significance, sensitivity and magnitude used as part of the assessment are identified and documented and that the level of certainty of data is recorded. An explanation is provided for the assessment criteria that have been applied within each environmental topic area, including reference to the appropriate published guidance;
- **Mitigation and Monitoring Measures:** This section sets out measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse impacts on the environment and, where appropriate, identifies any proposed mitigation and monitoring arrangements. This section covers both the Construction and Operational Phases; and

- **Residual Impacts:** Any impacts that are predicted to remain after all mitigation measures have been implemented are referred to as 'Residual Impacts'. These are the remaining environmental impacts of the Proposed Scheme that could not be reasonably avoided.

1.5.8 Assessment Scenarios

1.5.8.1 Do Nothing Scenario

The EIAR chapters considers a 'Do Nothing' scenario (with the exception of Air Quality / Noise & Vibration / Climate which assess the Do Minimum and Do Something scenarios described below). The Do Nothing scenario outlines what is likely to happen to the environment should the Proposed Scheme and other GDA strategic projects (including the other 11 Core Bus Corridor Schemes) not be implemented, taking account of the continuation or change of current management regimes, as well as the continuation or change of trends currently evident in the environment.

1.5.8.2 Traffic and Transport Assessment Scenarios

The impact assessments that have been carried as part of Chapter 6 (Traffic and Transport) using the following scenarios:

- **'Do Nothing'** – The 'Do Nothing' scenario is the same as set out above and it represents the current baseline traffic and transport conditions of the direct and indirect study areas **without** the Proposed Scheme in place and other GDA Strategy projects, outlined in Chapter 6 (Traffic & Transport). This scenario forms the reference case by which to compare the Proposed Scheme ('Do Something') for the qualitative assessments only;
- **'Do Minimum'** – The 'Do Minimum' scenario (Opening Year (2028), Design Year (2043)) represents the likely traffic and transport conditions of the direct and indirect study areas including for any transportation schemes which have taken place, been approved or are planned for implementation, **without** the Proposed Scheme in place (refer to Section 1.5.8.3). This scenario forms the reference case by which to compare the Proposed Scheme ('Do Something') for the quantitative assessments. Further detail on the Proposed Scheme and demand assumptions within this scenario is included in Chapter 6 (Traffic & Transport); and
- **'Do Something'** – The 'Do Something' scenario represents the likely traffic and transport conditions of the direct and indirect study areas including for any transportation schemes which have taken place, been approved or are planned for implementation, **with** the Proposed Scheme in place (i.e. the Do Minimum scenario with the addition of the Proposed Scheme).

1.5.8.3 Do Minimum Transport Schemes

The core reference case (Do Minimum) modelling scenarios (Opening Year (2028) and Design Year (2043)) are based on the progressive roll-out of the Greater Dublin Area Transport Strategy 2022 – 2042 (NTA 2022b), with a partial implementation by 2028, in line with National Development Plan (NDP) investment priorities and the full implementation by 2043.

The Do Minimum scenarios (in both 2028 and 2043) include all other elements of the BusConnects Programme of projects, apart from the CBC Infrastructure Works elements (i.e. the new BusConnects routes and services as part of the revised Dublin Area bus network, new bus fleet, the Next Generation Ticketing and integrated fare structure proposals are included in the Do Minimum scenarios).

In 2028, other notable Do Minimum transport schemes include; the roll out of the DART+ Programme, Luas Green Line capacity enhancement and the 2022 Greater Dublin Area Cycle Network (NTA 2022a) implementation (excluding BusConnects CBC Infrastructure Works elements).

As outlined above, the 2043 Do Minimum scenario assumes the full implementation of the Greater Dublin Area Transport Strategy schemes, so therefore assumes that proposed major transport schemes such as MetroLink, DART+ Tunnel, Luas line extensions to Lucan, Poolbeg, Finglas and Bray are all fully operational.

1.5.9 Assessment Criteria

The assessments evaluate the Construction and Operational Phases of the Proposed Scheme, with the likelihood, extent, magnitude, duration and significance of potential impacts described. The interactions in impacts between different environmental aspects and the potential for cumulative impacts to arise are also considered. For all environmental topics, the significance of any residual impacts remaining are assessed and presented.

The assessment criteria used generally follow the European Commission EIAR Guidance (European Commission 2017) and the EPA Guidelines (EPA 2022), as reproduced in Table 1.4, unless otherwise stated and described within the relevant EIAR chapter.

Table 1.4: Description of Effects from the EPA Guidelines (EPA 2022)

Assessment Criteria	
Quality of Effects	
It is important to inform the non-specialist reader whether the effect is positive, negative or neutral.	Positive Effects A change which improves the quality of the environment (for example, by increasing species diversity or improving the reproductive capacity of an ecosystem; or by removing nuisances; or improving amenities)
	Neutral Effects No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error
	Negative / Adverse Effects A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing a nuisance)
Significance of Effects	
'Significance' is a concept that can have different meanings for different topics – in the absence of specific definitions for the different topics the following definitions may be useful.	Imperceptible An effect capable of measurement but without noticeable consequences
	Not Significant An effect which causes noticeable changes in the character of the environment but without significant consequences
	Slight Effects An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate Effects An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
	Significant Effects An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Very Significant Effects An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
	Profound Effects An effect which obliterates sensitive characteristics
Extent and Context of Effects	
Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly or increasingly experienced.	Extent Describe the size of the area, the number of sites, and the proportion of a population affected by an effect
	Context Describe whether the extent, durations, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Probability of Effects	
Descriptions of effects should establish how likely it	Likely Effects The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented
	Unlikely Effects

Assessment Criteria	
is that the predicted effects will occur – so that the Competent Authority can take a view of the balance of risk over advantage when making a decision.	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented
Duration and Frequency of Effects	
‘Duration’ is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.	Momentary Effects Effects lasting from seconds to minutes
	Brief Effects Effects lasting less than a day
	Temporary Effects Effects lasting less than a year
	Short-term Effects Effects lasting one to seven years
	Medium-term Effects Effects lasting seven to fifteen years
	Long-term Effects Effects lasting fifteen to sixty years
	Permanent Effects Effects lasting over sixty years
	Reversible Effects Effects that can be undone, for example through remediation or Restoration
	Frequency of Effects Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

1.5.10 Details of Competent Experts

The BusConnects Infrastructure team has engaged an environmental team led by Jacobs Engineering Ireland Ltd. to undertake the preparation of this EIAR for the Proposed Scheme, in collaboration with the Engineering Design Team led by Roughan & O’Donovan (ROD). The responsible competent expert(s) and details of the expertise are provided in Table 1.5.

Table 1.5: Details of Competent Experts

Topic	Main Author – Competency Details
Chapter 1 (Introduction)	<p><u>David King BE MEng Certified Project Manager, Jacobs</u></p> <p>David King is the Divisional Director for Transport Planning in Ireland for Jacobs. He has over 20 years' professional experience in policy derivation, transport strategy preparation, modelling, traffic impact, multi-modal scheme appraisal, business case development, planning applications, Environmental Impact Statement (EIS) preparation, Compulsory Purchase Order (CPO), and Oral Hearings for all modes of transport including heavy rail, light rail, bus and BRT, and Metro. He holds an honours degree and master's degree in Engineering from Technological University Dublin (formerly IT Tallaght) and is a certified Project Manager. David has excellent experience in all aspects of transportation planning, project appraisal and project management of public transport and urban planning schemes, and his areas of expertise include:</p> <ul style="list-style-type: none"> Professional witness at several Oral Hearings for key infrastructure development proposals in Ireland such as Metro North, Luas Cross City, Luas Citywest, and Luas Docklands. Oral Hearing evidence included presenting the Business Case for the Proposed Scheme, and environmental evidence in relation to planning and policy, traffic, socioeconomics, and land-use. Wide-ranging experience in the preparation of Railway Orders, including Metro North, Metro West, and Luas Cross City. <p>David has overall responsibility for coordinating all services relating to the identification and mitigation of environmental impacts associated with the 12 Schemes (including the Proposed Scheme) that comprise the BusConnects Programme.</p> <p><u>Eddie Feely BSc MIES CEnv, Arup</u></p> <p>Eddie Feely is an Associate with Arup and has over 21 years' experience as an Environmental Consultant. He holds a BSc in Environmental Pollution Science, is a Member of the Institution of Environmental Sciences and is a Chartered Environmentalist. Eddie has managed the preparation of Environmental Impact Assessment Reports Statements for a number of infrastructure projects including High Speed Two Phase 2a (West Midlands to Crewe) in the UK, Curragh Racecourse Redevelopment, DART Underground, Dublin Airport Visual Control Tower and Wicklow Port Access and Town Relief Road. Eddie presented expert witness evidence at the DART Underground and Wicklow Port Access and Town Relief Road oral hearings. Eddie is the overall EIAR coordinator 12 Schemes (including the Proposed Scheme) that comprise the BusConnects Programme.</p> <p><u>Jenny Wade MSc C.Env MIEMA, Jacobs</u></p> <p>Jenny Wade is an Associated Director with Jacobs. She holds a Master's degree in Environmental Management from Imperial College, London and is currently completing a Master's in Public Health part-time through Cardiff University.</p> <p>Jenny has over 18 years' relevant experience in environmental impact assessment and strategic environmental assessment.</p> <p><u>Eoin O'Catháin BE, MSc, CEng MIEI, RConsEI</u></p> <p>Eoin O'Catháin (18 years of experience) is a Technical Director with Roughan & O'Donovan Consulting Engineers. Eoin holds a Bachelor of Engineering degree (BE) in Civil Engineering from University College Dublin (2004) and a Master of Science degree from Trinity College Dublin (2006).</p> <p>Eoin is a Chartered member of the Institute of Engineers of Ireland. Eoin is also a Registered Professional Consulting Engineer (RConsEI) of the Association of Consulting Engineers of Ireland (ACEI).</p>
Chapter 2 (Need for the Proposed Scheme)	<p><u>Jenny Wade MSc C.Env MIEMA, Jacobs</u></p> <p><u>David King BE MEng Certified Project Manager, Jacobs</u></p> <p><u>Eoin O'Catháin BE, MSc, CEng MIEI, RConsEI</u></p> <p>(See above)</p>
Chapter 3 (Consideration of Reasonable Alternatives)	<p><u>Jenny Wade MSc C.Env MIEMA, Jacobs</u></p> <p><u>Eoin O'Catháin BE, MSc, CEng MIEI, RConsEI</u></p> <p>(See above)</p>

Topic	Main Author – Competency Details
Chapter 4 (Proposed Scheme Description)	<p><u>Jenny Wade MSc C.Env MIEMA, Jacobs</u> <u>Eoin O’Catháin BE, MSc, CEng MIEI, RConsEI</u> (See above)</p>
Chapter 5 (Construction)	<p><u>Jenny Wade MSc C.Env MIEMA, Jacobs</u> <u>Eoin O’Catháin BE, MSc, CEng MIEI, RConsEI</u> (See above) <u>Michael Mitchell BEng (Hons), CEng, MICE, MStructE, MAPM, Arup</u> Michael Mitchell is an Associate Director with ARUP. He holds an honours degree in Civil Engineering from University of Strathclyde. Michael has 25 years’ relevant experience and in particular, managed the planning and design for various road schemes including A2 Buncrana Road, A6 Randalstown to Castledawson, Busway Bridge & Ramps at Belfast Transport Hub and Dunleer-Dundalk Motorway.</p>
Chapter 6 (Traffic & Transport)	<p><u>Ian Byrne BEng MSc, Systra</u> Ian Byrne is a Business Director of the Data, Modelling and Analytics Sector within SYSTRA and has over 23 years’ experience as a Transport Planning Consultant. He holds an honours degree in Civil Engineering and a master’s degree in Transportation Engineering from Trinity College Dublin. Ian is a Fellow in the Chartered Institute of Highways and Transportation. Ian has prepared transport assessments for many strategies and multi-modal schemes across Ireland and has been a professional witness at a number of Oral Hearings for key infrastructure development proposals in Ireland including Port of Cork Ringaskiddy Development, Metro North, Adamstown SDZ, N4 Upgrade Scheme and Cork Docklands Infrastructure amongst others. <u>Paul Hussey BEng, Systra</u> Paul Hussey is an Associate with Systra and has over 13 years’ experience as a Transport Planning Consultant. He holds an honours degree in Civil Engineering from University College Dublin. Paul has 13 years’ relevant experience in a wide range of transportation planning, policy and engineering projects. Through his work Paul has gained a broad knowledge of transport scheme appraisal in Ireland and has successfully delivered a number of challenging transport assessment and appraisal projects such as the MetroLink Cost Benefit Analysis (CBA), the Greater Dublin Area (GDA) Transport Strategy, Cork Metropolitan Area Transport Strategy (CMATS), DART Expansion Options Assessment and the Metro North Route Alignment Options Appraisal. <u>Stuart Gibb BEng(Mech)(Hons), Jacobs</u> Stuart Gibb is a Senior Associate Director and technical expert with over 15-years’ professional experience who leads Jacobs simulation modelling capability in the UK and Europe. In recent years Stuart has led on the development of a number of major, multi-modal microsimulations models including those for the Dublin BusConnects and Metrolink major projects as well as those for other key clients including Transport for London, Highways England, the Department for Transport and a host of UK local authorities. Stuart holds an honours degree in Mechanical Design Engineering.</p>
Chapter 7 (Air Quality)	<p><u>Dr. Edward Porter, BSc, PhD, C Chem MRSC MIAQM MIES, AWN Consulting</u> Edward Porter is a Director and Principal Environmental Consultant responsible for Air Quality with AWN Consulting. Edward holds an honours bachelor’s degree from the University of Sussex (1991) and a PhD from University College Dublin (1997). Edward is a Full Member of the Royal Society of Chemistry (C Chem MRSC) and a Member of the Institute of Air Quality Management (MIAQM) and the Institute of Environmental Sciences (MIES) Edward has 25 years’ relevant experience and in particular, has prepared numerous Air Quality and Climate Impact Assessments for infrastructural developments including the M3 Navan Bypass and Kells Bypass, M7/M8 Motorway and the M1 Dundalk Western Bypass. Edward presented expert witness evidence at the An Bord Pleanála oral hearings into these developments.</p>

Topic	Main Author – Competency Details
Chapter 8 (Climate)	<p><u>Dr. Avril Challoner, BEng, PhD, MIAQM, MIES CSci, AWN Consulting</u></p> <p>Dr. Avril Challoner is a Senior Environmental Consultant in the Air Quality section of AWN Consulting. She holds a BEng (Hons) in Environmental Engineering from the National University of Ireland Galway, a HDip in Statistics from Trinity College Dublin and has completed a PhD in Environmental Engineering (Air Quality) in Trinity College Dublin. She is a Chartered Scientist (CSci), Member of the Institute of Air Quality Management (MIAQM) and specialises in the fields of air quality, EIA and air dispersion modelling.</p> <p>She has worked in the air quality field since 2009, 8 years of which have been spent in consultancy.</p> <p><u>Dr. Jovanna Arndt, BSc, PhD, MIAQM, AWN Consulting</u></p> <p>Dr. Jovanna Arndt is a Senior Air Quality Consultant in the Air Quality section of AWN Consulting. She holds a BSc (Hons) in Environmental Science (2010) and a Ph.D. in Atmospheric Chemistry from University College Cork (2016) and is a member of the Institute of Air Quality Management.</p> <p>She has specialised in air quality for 10 years, with experience in EIA, air dispersion modelling, source apportionment and monitoring and managing air quality impacts.</p> <p><u>Ian Byrne/Paul Hussey – see above</u></p> <p>Ian and Paul have provided transport planning inputs for the preparation of the Climate assessment.</p>
Chapter 9 (Noise & Vibration)	<p><u>Jennifer Harmon BSc, MIOA, AWN Consulting</u></p> <p>Jennifer Harmon is a Senior Acoustic Consultant with AWN Consulting. She holds a BSc in Environmental Science, a Diploma in Acoustics and Noise Control and is a full member of the Institute of Acoustics (IOA).</p> <p>She has worked as a consultant since 2000, specialising in acoustics since 2001, and possesses extensive experience in the field of environmental noise and vibration impact assessment, noise control engineering, building and room acoustics. Jennifer has prepared noise and vibration impact assessments for a wide range of transport projects across Ireland, including new road schemes, road realignment and upgrade projects as well as light and heavy rail projects as landside air-noise. Her experience in road traffic noise impact assessment includes extensive baseline studies, detailed transport noise models, noise mitigation design and construction impact assessments.</p>
Chapter 10 (Population)	<p><u>Gareth Walters BEng MSc CMILT MCIHT, Jacobs</u></p> <p>Gareth Walters is a Transport Planner with Jacobs with almost 30 years' experience. He holds a masters in Transport Planning and an honours degree in Civil Engineering, and has been a Chartered Member of the Chartered Institute of Logistics and Transport for over 20 years. Gareth has carried out numerous demand forecasting and economic analyses, including preparing socio-economic impact assessments and business cases for transport infrastructure developments, in particular including MetroWest Phases 1 and 2 (reopening closed rail lines and new stations), various other new rail stations in the West of England, and several road schemes in Worcestershire and the West of England. Gareth recently participated in Issue Specific Hearings as part of examination of the Development Consent Order (DCO) for the Portishead Branch Line (MetroWest Phase 1).</p> <p><u>Siobhan Fisher BSc ICTTech, Jacobs</u></p> <p>Siobhan Fisher is a Transport Planning Consultant with Jacobs and has 4 years' experience of working on a wide variety of projects. She holds an honours degree in Mathematics and holds accreditation of ICTTech with the Institute of Highway Engineers. Siobhan has worked on a wide range of projects, including authoring of the NTA Greater Dublin Area Naas Road Study, Transport Assessment originator for the Southampton to London Pipeline, and originator of local council and National Highways business cases and Transport Assessments and junction models.</p>
Chapter 11 (Human Health)	<p><u>Dr. Martin Hogan, EHA Occupation Health Hygiene Consultants – Health</u></p> <p>Dr. Martin Hogan is a medical doctor, registered with the Irish Medical Council as a Specialist in Occupational Medicine since 1997. He has 20 years' experience in assessing Human Health impacts of proposed developments and has contributed to many Environmental Impact Statements. He has given evidence in over 20 Oral Hearings including transport infrastructure such as road, rail and airport development, as well as waste management including landfills and incinerators.</p>

Topic	Main Author – Competency Details
	<p>His specialist interests include Occupational Medicine in the Pharmaceutical and Chemical industry and Environmental Medicine. He lectures in Toxicology in University College Cork. He is a past National Speciality Director of Occupational Medicine in Ireland and a past Dean of the Faculty of Occupational Medicine of the Royal College of Physicians of Ireland. He is the President of the Organising Committee for ICOH 2018 and a member of the Board of ICOH (International Commission on Occupational Health).</p> <p><u>Jenny Wade MSc CEnv MIEMA, Jacobs</u> (See above)</p>
<p>Chapter 12 (Biodiversity)</p>	<p><u>Aebhín Cawley CEnv MCIEEM, Scott Cawley</u></p> <p>Aebhín Cawley is a director of Scott Cawley. She holds a degree in Zoology and also a postgraduate Diploma in Physical Planning from University of Dublin (Trinity College). She is a Chartered Environmentalist (CEnv) with the Society for the Environment (SocEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).</p> <p>Aebhín has sixteen years’ professional experience, twelve of which have been in ecological surveying and impact assessment for public and private sector projects including road, rail and other major infrastructural projects. Aebhín has been undertaking Appropriate Assessment (AA) work in Ireland since 2002 and has been influential in determining the direction in which AA work is evolving in Ireland. She has delivered lectures and training on AA to a range of public and private sector organisations, including a range of planning authorities, as well as professional institutes.</p> <p>Aebhín regularly prepares AA Screening Statements as well as Natura Impact Statements (NIS) for AA and therefore, has current experience in best practise in undertaking such assessments. Aebhín was the project director for the Biodiversity chapter of the EIAR and the NIS with overall responsibility for the delivery of those reports as well as for high-level input to the survey methodologies, assessment of impacts and development of the mitigation strategy.</p> <p><u>Kristie Watkin Bourne MSc, Scott Cawley Ltd.</u></p> <p>Kristie Watkin-Bourne is a Senior Consultant Ecologist at Scott Cawley Ltd. She holds a first-class honours degree in Physical Geography from Swansea University, and a first-class master’s degree in Applied Environmental Science from University College Dublin. She is a CIEEM Member (Qualifying) and is experienced in conducting a range of terrestrial and aquatic ecological surveys for habitat and site appraisals, species monitoring, and impact assessment. With five years consultancy experience, Kristie has a wide range of experience in Appropriate Assessment, Ecological Impact Assessment, Cumulative Impact Assessment, and Strategic Environmental Assessment of plans and projects within the Irish planning environment. Kristie has worked on behalf of public sector bodies including Irish Water, The National Transport Authority, and several County Councils in addition to private developers across infrastructure, renewable energy, and residential development projects. Kristie also undertook specific elements of the field survey work.</p> <p><u>Tim Ryle Ph.D. MIEEnvSc, Scott Cawley Ltd.</u></p> <p>Tim Ryle is a Principal Ecologist with Scott Cawley Ltd. He holds an honours degree in Botany from University College Dublin and was later awarded a Ph.D. from the same institution. He is a full Member of the Institute of Environmental Scientists. Tim is an experienced ecological consultant with twenty years’ experience in private consultancy in designing, undertaking and managing a wide range of ecological survey and in assessing impacts and designing mitigation measures and biodiversity enhancements, in particular for protected species including badgers, otters, bats, birds, amphibians as well as habitats of conservation importance. He is also experienced in undertaking appropriate Assessment for small-scale development projects and larger infrastructural projects, land plans as well as national/government plans.</p> <p><u>Patrick O’Shea, BA (Hons), MSc, MCIEEM, Roughan & O’Donovan</u></p> <p>Patrick O’Shea is an ecologist with 10 years’ experience in consultancy and research. He has a thorough knowledge of ecological requirements on infrastructure and development projects. He has experience in undertaking surveys, monitoring, data analysis and reporting for habitats, including habitats listed on Annex I to Council Directive 92/43/EEC (the Habitats Directive), as well as a variety of species, including newt, otter, red squirrel, pine marten, badger, birds, bats and reptiles. He also has extensive experience as an Ecological Clerk of Works (ECoW) for archaeology, tree felling, ground investigation and hydrological testing works and supervision of the implementation as well of ecological mitigation. Patrick has undertaken numerous surveys for invasive species and has worked as ECoW on a number of construction sites with active Japanese Knotweed control. Patrick has held a number of project-specific protected species licences in Ireland and the UK for red squirrel, badger, otter, newt and bat species. Patrick has provided environmental services on a range of projects involving sensitive watercourses and Natura 2000 Sites. In particular, the Dublin Mountains Visitor Centre and the Waterford City to Rosslare</p>

Topic	Main Author – Competency Details
	<p>Europort Greenway was particularly complex and covered both SACs and SPAs and the potential impacts of the developments, ranging from habitat loss to water quality to increased footfall.</p> <p>Since 2017, Patrick has led the ROD ecology team on the Leinster Bridges Routine Maintenance Contract, preparing ecological reports, AA Screening Reports and Natura Impact Statements for routine and reactive maintenance works. During the life-time of the project, Patrick has liaised with the TII environment team, TII engineers, Inland Fisheries Ireland and the environmental consultants for the other regions which has ensured that the contract has run smoothly while complying with the environmental legislative obligations. Patrick’s experience includes the ecological surveying and the preparation of EIAR Biodiversity Chapters, Construction Environmental Management Plans, Invasive Species Management Plans, AA Screening Reports and Natura Impact Statements. Details of Patrick’s project experience is presented in the table below.</p> <p><u>Owen O’Keefe, BSc, ACIEEM, Roughan & O’Donovan</u></p> <p>Having graduated from University College Cork in 2015, Owen joined the ROD Environmental team. Owen’s academic and professional experience covers a broad range of topics, including environmental assessment, but with a focus on the aquatic aspect throughout. Since joining ROD, Owen has undertaken both field work and reporting. He has carried out extensive watercourse surveys, electric fishing and White-clawed Crayfish surveys and is certified to carry out standardised River Habitat Survey, as prescribed by the Environment Agency for England. He has also undertaken numerous ecological surveys (including habitats, invasive alien plant species, protected mammals etc.) and acted as Ecological Clerk of Works. Given his strong understanding of Article 6 of the Habitats Directive (92/43/EEC), Owen has prepared Appropriate Assessment Screening Reports for a large number of projects and plans and has produced Natura Impact Statements for projects such as the River Suir Sustainable Transport Bridge and Natura Impact Reports for land use plans such as the Planning Scheme for the North Quays (Waterford) Strategic Development Zone. Owen has also produced a number of Ecological Impact Assessments and Biodiversity chapters for Environmental Impact Assessment Reports. Owen also has training and experience in the use of ArcGIS.</p> <p><u>Kate Moore, BSc, GradCIEEM, Roughan & O’Donovan</u></p> <p>Kate is an ecologist with over five years’ experience. Kate graduated from University College Dublin in 2015 with academic experience covering a broad range of ecology-related topics, including environmental impact assessment, biological invasions and field biology. Since joining ROD, Kate has carried out multidisciplinary walkover surveys for a number of projects including the DART+ West and the River Dodder Greenway. She also has experience in undertaking specialized surveys of wintering birds, red squirrel, badger, otter, newt, bat and invasive plant species. She has authored and contributed to numerous Environmental Impact Assessments, Appropriate Assessment and Strategic Environmental Assessment reports.</p>
Chapter 13 (Water)	<p><u>Rebecca Westlake BSc (hons), MSc, LL.M, PhD, CSci, CMarSci, MIMarEST, Jacobs.</u></p> <p>Rebecca is Head of Discipline for Water Science and Hydromorphology at Jacobs. She holds an honours degree in physical geography from Plymouth University, an MSc in coastal and marine resource management, an LL.M in environmental law and practice, and a PhD in geomorphology. Rebecca is chartered with Institute of Marine Engineering, Science and Technology, and has approximately 25 years’ relevant experience in water science and environmental assessment. Rebecca is highly experienced in many aspects of legislation and regulation, in addition to specific technical specialism in Water Framework Directive, and all stages of the EIA process, including Development Consent Orders. Rebecca is a technical lead for water chapters for major infrastructure projects including DCO for roads, rail and water sectors, often undertakes peer reviewer roles. She is currently lead technical reviewer for the Water Supply Project water chapter and associated technical appendices.</p> <p><u>Anthony Cawley BE, M.Eng.Sc. C.Eng., M.I.E.I. Director, Hydro Environmental Ltd.</u></p> <p>Anthony is a Director with Hydro Environmental Ltd. and is a Chartered Civil Engineer with approximately 30 years professional consulting experience in the water engineering field in a wide variety of activities relating to hydrology, hydrogeology and flooding, and hydrodynamic and hydraulic assessment of fluvial and tidal processes. Anthony qualified with an honours degree in Civil Engineering from NUI Galway in 1987 and a post graduate master’s degree in Engineering Hydrology from NUI Galway in 1990. He is an expert hydraulic and coastal processes modeller and analyst with considerable experience in application of 1D, 2D and 3D models to rivers, estuaries and coastal waters. He has detailed estuarine and coastal modelling experience that include recent projects as the Shannon Estuary hydrodynamic model and tidal harmonic analysis of tide elevations and velocities for oil spill tracking, the sediment transport, wave climate and hydrodynamic assessment of the proposed New Port for Galway. He has successfully completed and defended at the oral hearing the hydrology, hydrogeology, geology and soils component of the EIS assessment for numerous road schemes and infrastructure projects over the past twenty years. These major Infrastructure projects include TII Road projects such as Galway City Ring road, M6, M20/M21, N23, N69 Limerick – Foynes, N59 Oughterard to Maam Cross, Lansdowne Stadium redevelopment, Arklow Sewerage scheme, and many others. Also retained as an expert consultant to An</p>

Topic	Main Author – Competency Details
	<p>Bord Pleanála for the Dublin Docks Gateway and Alexandra Basin projects in respect to flooding and hydrodynamic marine processes and is experienced in the requirements of SEA and AA.</p> <p><u>Ian Griffin, PhD BSc, CEnv C.WEM, Jacobs</u></p> <p>Ian Griffin is a Senior Associate Director and Head of Discipline for Water Science & Hydromorphology (UK & Europe). He holds an Honours degree in Botany from University of Glasgow and a PhD in Environmental Science from the University of Stirling. He is a Chartered Member of the Chartered Institution of Water and Environmental Management and a Chartered Environmentalist. Ian has over 22-years’ experience in academic research, conservation and consultancy and has specialised in the Water Environment. Ian is the Technical Lead and main reviewer for the Water Environment for a range of infrastructure projects, including transportation projects for Transport Scotland and National Highways, water supply and pipeline and flood risk management projects.</p>
Chapter 14 (Land, Soils, Geology & Hydrogeology)	<p><u>Marie Fleming BSc (Hons), MSc, Arup</u></p> <p>Marie Fleming is an Associate working in the Ground Engineering team in Arup and has a Bachelor of Science (Earth Sciences) honours degree from University College Cork and a master’s degree in Engineering Geology from Imperial College London. Marie has over 18 years professional experience on large infrastructure projects and is a Professional Geologist (PGeo) with the Institute of Geologists of Ireland (IGI), a Chartered European Geologist (EurGeol) with the European Federation of Geologists and a Fellow of the Geological Society of London (GSL). She has prepared numerous Land, Soils, Geology & Hydrogeology Impact Assessments for infrastructural developments including DART Underground and the M7 Osberstown Interchange and R407 Sallins Bypass.</p>
Chapter 15 (Archaeological & Cultural Heritage)	<p><u>Lisa Courtney BA (Hons) MSc (Ag) Dipl. Bus. Mgt., Adv. Dipl. In Planning & Env. Law, MIAI, Courtney Deery Heritage Consultancy Ltd</u></p> <p>Lisa Courtney is a director of Courtney Deery Heritage Consultancy and has over 25 years of field and research experience in environmental impact assessment reporting. Lisa holds a BA (Hons) in Archaeology and Economics and a MSc (Ag) in Environmental Resource Management from University College Dublin and has obtained certificates from the University of Oxford in Condition Surveys of Historic Buildings (2017) and the assessment of setting of heritage assets (2013). Lisa holds a higher diploma in Planning and Environmental Law (2020). Lisa is a member of the Institute of Archaeologists of Ireland (IAI) and a member of the International Council of Monuments and Places (ICOMOS). Lisa has carried out reports for large scale infrastructural projects and conservation initiatives, her experience demonstrates a capability of characterising the existing historic and archaeological environment and evaluating its significance.</p> <p><u>Dr Clare Crowley BA (Hons), PhD, Courtney Deery Heritage Consultancy Ltd</u></p> <p>Dr Clare Crowley, a Senior Heritage Consultant, has more than 20 years’ experience in the field and holds a PhD in Archaeology (Dublin Institute of Technology 2009), a BA (Hons) in Ancient History, Archaeology & French (Trinity College Dublin 1996), a Certificate in Repair and Conservation of Historic Buildings (Dublin Civic Trust 2004) and a Certificate in Condition Surveys of Historic Buildings (University of Oxford 2017). Clare has carried out numerous surveys and evaluations of archaeological monuments, buildings, sites and historic landscapes and streetscapes for the purposes of conservation and environmental impact assessment Lisa and Clare prepared and oversaw Chapter 15 (Archaeological & Cultural Heritage) of this EIAR.</p>
Chapter 16 (Architectural Heritage)	<p><u>Cathal Crimmins, B.Arch., MArch Sc (Conservation of Towns and Buildings), RIAI Grade 1 Accredited Conservation Architect, FRIAI, MRIBA</u></p> <p>Cathal Crimmins is a conservation architect with over thirty years’ experience researching, recording and assessing historic structures, and landscapes. He is a fellow of the RIAI and member of RIBA. He is an RIAI Grade 1 accredited Conservation Architect. Cathal has tutored in architecture and in architectural conservation. Relevant experience includes the preparation of inventories of Tullamore, Carlow, Chapelizod, Henrietta Street, O’Connell Street and Dundrum for the OPW, the Irish Architectural Archive, The Dublin Civic Trust, UCD and private clients, advising on additions and deletions to the Record of Protected Structures to Dublin City Council & Galway City Council.</p> <p><u>Julia Crimmins, BA (Hons), MUBC, MSc (Sp)</u></p> <p>Julia Crimmins is a built heritage consultant with Cathal Crimmins Architect, RIAI Grade 1 Accredited Practice. Julia holds a BA in Archaeology University College Dublin, a MUBC Master’s in Urban and Building conservation University College Dublin (2006) and a MSc (Sp) in Spatial Planning from the Technical University of Dublin. Julia is a member of the Institute of Archaeologists of Ireland (IAI), The Irish Planning Institute (IPI) and a member of the International Council of Monuments and Places (ICOMOS). Julia has over 15 years of experience working on buildings and sites of architectural heritage interest, preparing Conservation Reports, Architectural Heritage Impact Assessments and Architectural Heritage Chapters of EIARs.</p>

Topic	Main Author – Competency Details
<p>Chapter 17 (Landscape (Townscape) & Visual)</p>	<p><u>Thomas Burns B Agr. Sc. Dip. EIA Mgmt. MILI EFLA., Brady Shipman Martin</u> Thomas Burns is a Partner and landscape planner with Brady Shipman Martin. He holds an honours degree and a post-graduate Diploma in Environmental Impact Assessment Management (1994) from University College Dublin.</p> <p>Thomas has a strong background in environmental, landscape and planning issues across a wide range of disciplines, including assessment and master-planning. For over 20 years, Thomas has been involved in the master planning, planning, environmental assessment and construction of a diverse range of projects, and as part of his involvement, has regularly given expert evidence at planning hearings and other public inquiries.</p> <p>Thomas has been directly involved in the environmental and landscape and visual assessments of many key national infrastructure projects, including over 750km of the national roads programme including the M20 Cork to Limerick Motorway Scheme, the M7 Osberstown Interchange and R407 Sallins Bypass, the Shannon LNG Facility, the Corrib Gas Terminal, T2 Terminal at Dublin Airport and the DART Underground project. Given his experience on National Roads, Thomas was commissioned by the TII to raft Guidelines for Landscape Treatments on National Roads in Ireland. He has also brought his environmental and landscape planning experience to projects such as the Strategic Environmental Assessment aspect of various statutory plans and programmes, including County Meath Development Plan 2013-2019; the Department of Environment IOSEA 5 and as well being part of the wider project team that carried out the Environmental Assessment of Food Harvest 2020.</p> <p>Thomas is an active member of the Irish Landscape Institute (ILI), where he was Chairperson of the Professional Practice Committee since its inception in 1995 until 2011. Thomas also previously served as the ILI Representative on the Council of the European Foundation of Landscape Architecture (EFLA) from 1997 to 2000.</p> <p><u>Alex Craven BSc (Hons) MLA - Brady Shipman Martin</u> Alex Craven is an LVIA Specialist and landscape architect with Brady Shipman Martin. He holds an honours degree in Landscape Architecture with Ecology and a master’s degree in Landscape Architecture from the University of Sheffield.</p> <p>Alex has 8 years’ relevant experience and has been involved with landscape and visual assessment throughout that time for a range of project types including infrastructural projects. He has worked on a wide range of landscape and visual impact assessments for renewable energy, residential, infrastructure and leisure development projects. He has been involved in all stages of the process from report writing to generating Zones of Theoretical Visibility, on site viewpoint and receptor assessments, verified viewpoint photography and production of a range of report-based figures. He has been involved with managing the detailed design of a section of the N25 in Co. Waterford, and also landscape and visual assessment for the Knock to Collooney N17 (Atlantic Economic Corridor) Upgrade.</p>
<p>Chapter 18 (Waste & Resources)</p>	<p><u>Janet Lynch BEng, MCTWM, MIEI CEng, Arup</u> Janet Lynch is an Associate with Arup with over 20 years’ experience in circular economy, resources and waste management, EIAR, and Industrial Emissions Licensing. Skills include construction and operational resource and waste management strategies and plans, material re-use, recycling and disposal technologies. Planning and EIA project management includes energy, renewables, industrial, and infrastructure projects; Industrial Emissions (IE) License applications & review includes waste, biomass, oil and gas, energy, cement, and the pharmaceutical sector.</p> <p>Janet holds an honours degree in Civil and Environmental Engineering from University College Cork, a FETAC Certificate in Waste Facility Management and a Certificate in Applied Project Management from the IEI and University Limerick. She is a Chartered member of the Chartered Institution of Wastes Management (MCTWM) and a Chartered Member of Engineers Ireland.</p> <p><u>Hannah Lesbirel MEnvSci, MCIWM, CRWM, PIEMA, Arup</u> Hannah Lesbirel is an Consultant with ARUP. She holds a honours master’s degree in Environment Science from University of Southampton. She is a Chartered member of the Chartered Institute of Waste Management (MCIWM).</p> <p>Hannah has 4 years’ relevant experience and in particular, develops technical and operational solutions for waste management for strategic reporting. Hannah develops strategic solutions for waste management across a variety of types of projects, from small to large and city scale developments. Hannah has experience as waste and resource specialist for several environmental planning and permitting works, contributing to the generation of baseline reports and environmental statement chapters for waste and resource management, reviewing planning applications and discharge of conditions including London Legacy Development Corporation, confidential mixed used skyscraper, London and Thames Water Upgrade Works.</p>

Topic	Main Author – Competency Details
	Hannah Lesbirel assisted in the preparation of Chapter 18 (Waste & Resources) of the EIAR.
Chapter 19 (Material Assets)	<p><u>Foin O’Catháin BE, MSc, CEng MIEI, RConsEI</u> (See above)</p> <p><u>Hannah Cullen BA MSc C.WEM CEnv MCIWEM, Jacobs</u> Hannah Cullen is a Senior Environmental Scientist with Jacobs Engineering Ireland and has eight years of professional experience in the environmental sector. She holds a BA in Geology from Trinity College Dublin and an MSc in Environmental Science from University College Dublin. She is a Chartered Environmentalist (CEnv) with the Society of the Environment and is a Chartered Water and Environmental Manager (C.WEM) with the Chartered Institute of Water and Environmental Management (CIWEM). Hannah has experience in Environmental Impact Assessment, environmental monitoring, environmental auditing, and environmental site constraints assessment and due diligence work. She has worked on a range of both public and private sector Environmental Impact Assessment Reports of varying scales over the past six years since joining Jacobs.</p>
Chapter 20 (Risk of Major Accidents and / or Disasters)	<p><u>Foin O’Catháin BE, MSc, CEng MIEI, RConsEI</u> <u>Jenny Wade MSc C.Env MIEMA, Jacobs</u> (See above)</p>
Chapter 21 (Cumulative Impacts & Environmental Interactions)	<p><u>Peter Gambrill C.Env MIEMA, Jacobs</u> Peter is a Technical Director in Jacobs and is a Chartered Environmentalist (CEnv) and Full Member of the Institute of Environmental Management and Assessment (IEMA), with over 20 years’ experience as an environmental consultant, technical lead and project manager on a wide variety of projects and for different sectors. He has experience and knowledge working on projects of differing sizes and complexity, managing and coordinating multidiscipline teams on projects for a variety of clients. Peter has had a varied background, starting his career as a geotechnical and geoenvironmental engineer and moving on to more holistic environmental management and impact assessment, delivery and project management. He has developed a breadth of experience and knowledge including; EIA (including DCO in the UK), SEA, permitted development and planning requirements; compliance auditing and environmental management systems; waste management; environmental permitting and regulation; protected species mitigation; contaminated land assessment and remediation; stakeholder and contractor liaison and construction supervision.</p> <p><u>Isabelle Barnard BSc PIEMA, Jacobs</u> Isabelle is an Environmental Consultant at Jacobs, currently working towards Practitioner Membership of the Institute of Environmental Management and Assessment (IEMA). Isabelle graduated from the University of Southampton in 2019 with a First-Class Honours in Environmental Science and prior to joining Jacobs, gained experience working for a small engineering consultancy. Isabelle has just under three years’ experience at Jacobs and has developed a clear understanding of the EIA process through work on various projects for different clients (i.e. highways, rail, utilities, nuclear). Isabelle’s experience includes the coordination of and contribution to three EIAs to support planning application submissions and planning application addendum submissions. Contributions include authoring chapters of Scoping Reports and Environmental Statements, and preparation of Non-Technical Summaries and Environmental Management Plans. Isabelle has also assessed numerous smaller-scale schemes across different sectors, most notably highways and utilities.</p>
Chapter 22 (Summary of Mitigation & Monitoring Measures)	<p><u>Jenny Wade MSc CEnv MIEMA, Jacobs</u> (See above)</p>
Chapter 23 (Summary of Significant Residual Impacts)	<p><u>Jenny Wade MSc CEnv MIEMA, Jacobs</u> (See above)</p>

1.6 Consultation

1.6.1 Consultation Objectives

Public participation has been an integral part of the iterative development of the Proposed Scheme from the outset. Pre-application public consultation was carried out, in three phases (one in relation to Emerging Preferred Route (EPR) consultation and two in relation to the Preferred Route Option (PRO) consultation), to inform the public and stakeholders of the development of the Proposed Scheme from an early stage and to seek feedback and participation throughout its development. The BusConnects Infrastructure team has undertaken a comprehensive consultation and engagement process with stakeholders, landowners and members of the public throughout the development of the Proposed Scheme.

The primary objective of the non-statutory public consultation process was and is to provide opportunities for members of the public and interested stakeholders to contribute to the planning and design of the Proposed Scheme and to inform the development process. Public participation in the planning and design of the Proposed Scheme was encouraged from an early stage through on-the-ground engagement and information and media campaigns.

The early involvement of the public and stakeholders ensured the views of various groups, individuals and stakeholders were taken into consideration throughout the development of the Proposed Scheme and in the preparation of this EIAR.

The non-statutory consultation process assisted in:

- The establishment of a sufficiently robust environmental baseline for the Proposed Scheme and its surroundings;
- The identification, early in the process, of specific concerns and issues relating to the Proposed Scheme so that they could be appropriately accounted for in the design and assessment scope; and
- Ensuring the appropriate involvement of the public and stakeholders in the assessment and design process.

The consultation process involved engagement from:

- EPR Option Consultations; and
- PRO Consultations.

More specific information relating to the pre-application phases of public consultation, issues which emerged and the manner in which they informed the iterative development of the Proposed Scheme are outlined in the sections which follow.

1.6.2 Emerging Preferred Route Option Consultation

1.6.2.1 EPR Consultation Overview

The EPR public consultation phase for the Proposed Scheme occurred from 26 February 2019 to 31 May 2019.

The public were invited to make written submissions in relation to the published proposals to the BusConnects Infrastructure team either through an online form, by email or by post. There were also consultation events held in which the public were able to view the proposals and discuss them directly with members of the BusConnects Infrastructure team. Public consultation events for the Proposed Scheme took place on 1 April 2019 in The Convention Centre Dublin, Spencer Dock, Dublin 1.

In addition to the open public consultation, a Community Forum was established with the aim of facilitating two-way communication between local communities and the BusConnects Infrastructure team.

Community Forum meetings took place on 18 April 2019 in The Convention Centre Dublin, Dublin 1 and on 12 September 2019 in the Gibson Hotel, Dublin 1. The meeting involved the presentation of an overview of the design

for the Proposed Scheme and, with the use of an independent chairperson, the representatives were given the opportunity to ask questions of the BusConnects Infrastructure team and provide feedback.

In addition, there have been meetings held with residents' groups to provide updates on aspects of the Proposed Scheme. The BusConnects Infrastructure team has made the presentations given at the Community Forums and Residents Group meetings available to the public on the BusConnects website (www.busconnects.ie).

Letters were delivered to each individual potentially impacted property affected by the Proposed Scheme that, in addition to providing information about the Proposed Scheme, offered a one-to-one meeting to discuss the likely impact, issues and concerns. Each potentially impacted property was also sent a copy of the EPR brochure for the Proposed Scheme, with no property owners availing of the one-to-one meetings.

There were a total of 19 submissions made in respect of the Proposed Scheme during the EPR public consultation phase.

1.6.2.2 Ringsend to City Centre – Key Issues Emerging from the EPR Consultation Process

The key issues emerging from the EPR consultation process were as follows:

- Traffic and access impacts – a number of submissions raised concerns about traffic and access impacts;
- Cycling and pedestrian facilities – although most people were supportive in general of increased cycle lanes and pedestrian provision, some concerns were raised about the use of cycle lanes being shared with bus lanes as well as the potential for reduced safety of pedestrians and cyclists alike more generally;
- Community and environmental impacts including flooding – concerns were raised about potential negative impacts for the local community and environment as a result of the Proposed Scheme; and
- Loss of car parking – the loss of on-street parking spaces was raised as a key issue, specifically existing areas that are used for the parking of vehicles but are not technically designated as such.

Some specific examples of some of these key issues raised through the non-statutory public consultation process are outlined below:

- Many submissions raised safety concerns, particularly about cycle lanes being shared with bus lanes (expressing a desire for them to be segregated along most of the route) as well as pedestrians having adequate walking space, specifically in respect to cyclists on the eastern side of the Samuel Beckett Bridge;
- Concerns were raised about the potential negative impacts for the local community due to elements of the Proposed Scheme proposals, particularly the opening of Ringsend Park 24 hours a day, which could lead to an increase in anti-social behaviour;
- Consideration of numerous environmental impacts were also referenced within received submissions. Many referred to the likely increase in noise and air pollution as a result of likely diversions away from the north and south quays, but also visual impacts associated with the removal of green space and trees;
- The loss of on-street parking spaces, particularly existing informal parking spaces, was raised as an issue in many submissions;
- Traffic and access related issues were also raised during the non-statutory consultation process, namely that Pigeon House Road would become progressively busier and that all outbound traffic from the City Centre would be directed via Misery Hill, Hibernian Road and Lazer Lane, causing significant traffic congestion along these narrow routes; and
- A number of submissions cited concerns about flooding along Strand Street as a result of Proposed Scheme proposals.

The issues raised during the first phase of public consultation were considered as part of the route options assessment process and in determining the preferred route. The EPR proposals were amended to address the issues raised in submissions, where possible, including incorporating suggestions and recommendations from local residents, community groups and stakeholders, where appropriate. These amendments were incorporated into the designs and informed the PRO design development which was subsequently also published for non-statutory public consultation.

The design development of the scheme proposals took on board:

- Additional detailed topographical survey information along the route corridor;
- Submissions received during the first non-statutory public consultation; and
- Issues raised during meetings with community forum, resident groups and meetings with directly impacted landowners.

As part of this review, several new design options were developed for consideration in specific areas where issues were identified. These new design options were developed and subsequently adopted as part of the draft PRO, including:

- Fully segregated cycle tracks are proposed along this corridor, cyclists will not be required to share bus lanes with cycle tracks being located within the existing Campshires along the quays and offline cycle routes through Ringsend Park. Congestion issues for pedestrians and cyclists on the eastern side of Samuel Beckett Bridge is to be addressed separately by Dublin City Council's proposed new walking and cycling bridge across the River Liffey a little further downstream to the east. Having said this, a substantial transport and traffic modelling exercise was done to inform the Proposed Scheme proposals and all junctions along the corridor have been optimised in so far as possible at this stage;
- Provision of a walking and cycling route through Ringsend Park will shorten the distances between the residential areas surrounding the park, which will benefit the local community as a whole. There will be public lighting provided along the proposed cycle and pedestrian link to enhance security, while the western side of the park is well overlooked by houses and the adjoining residential streets that will provide further passive surveillance;
- The full extent of environmental impacts are reported and set out within this EIAR. However, the Proposed Scheme has been revised to ensure the retention of most of the existing trees, including proposals for the planting of a substantial number of new trees along its route, while the NTA intends to upgrade its existing bus fleet to transition to a fleet of low emission vehicles which will reduce air and noise pollution;
- The Proposed Scheme has been revised to reduce the impact on existing on-street car parking provision in so far as possible. The reduction in on-street car parking will be predominantly along the north and south Campshires, with very limited reduction on residential streets in Ringsend;
- Revised proposals include the provision of quiet street treatment with additional traffic calming measures along Pigeon House Road (removing the proposal for a dedicated cycle track) that cyclists will share with road traffic. The Proposed Scheme has been revised to retain access to Sir John Rogerson's Quay east from Samuel Beckett Bridge. On Sir John Rogerson's Quay, the proposed change to the westbound bus lane approaching the junction at Cardiff Lane will allow for the provision of more signal time for pedestrians at this busy location. General traffic will instead exit Cardiff Lane at the Misery Lane junction; and
- The Proposed Scheme no longer includes any works to the old granite sea wall along Strand Street. Therefore, the Proposed Scheme will not affect flood risk in this area.

1.6.3 Preferred Route Option Consultations

1.6.3.1 Community Forum

A second Community Forum meeting took place on 12 September 2019 at the Gibson Hotel, Dublin 1 for community and public representatives. This Community Forum was held in advance of the launch of a second round of public consultation, with the aim of keeping the public and their representatives updated on the design process between the first and second consultation. The meeting involved the presentation of an updated overview of the design for the Proposed Scheme, outlining several new design options being developed for consideration in specific areas where issues were identified, following review of the submissions from the first non-statutory public consultation. Again, with the use of an independent chairperson, the community and public representatives were given the opportunity to ask questions of the BusConnects Infrastructure team and provide feedback.

1.6.3.2 PRO Consultation Overview

The PRO, or second round of public consultation, took place from 4 March 2020 to 17 April 2020. The public were invited to make written submissions in relation to the published proposals to the BusConnects Infrastructure team

either through an online form, by email or by post. Due to the COVID-19 pandemic, all further planned events scheduled after 12 March 2020 were postponed. This included the planned public information event relating to the Proposed Scheme. In deference to the submissions which had already been received, the decision was made not to cancel the consultation. However, due to the introduction of COVID-19 public health restrictions, further on-site or face-to-face public engagement was restricted.

Following the EPR submission review, there were some changes to the number of properties that were potentially impacted. One letter was prepared and delivered on 13 July 2020 to properties either continuing to be potentially impacted, newly potentially impacted or no-longer potentially impacted, with recipients invited to schedule meetings with the BusConnects Infrastructure team if they wished to discuss the proposals on an individual basis. It should be noted that at this stage, correspondence in relation to land acquisition for the DPTOB took place between Dublin City Council and the potentially affected parties.

Consequently, there were just eight submissions received relating to the Proposed Scheme. The submissions included individual submissions by residents, commuters, interest groups and community associations.

Design development and planning for the Proposed Scheme continued and, the BusConnects Infrastructure team determined to run an additional round of public consultation in November 2020 to complete the non-statutory public engagement prior to finalising the PRO. The third round of public consultation took place from 4 November 2020 to 16 December 2020.

With the continuing effect of the COVID-19 pandemic and associated restrictions, the third public consultation was largely held virtually. A virtual consultation room for the Proposed Scheme was developed and virtual access to the room was facilitated. Along with offering a call back facility, the room provided a description of the Preferred Route from start to finish with supporting maps and included information of all revisions made since the previous rounds of public consultation as well as other supporting documents. Over the seven weeks of the consultation, 129 users visited the virtual information room for the Proposed Scheme. A third Community Forum virtual consultation call was also held on 2 December 2020 as part of the third round of non-statutory consultation.

As per the previous rounds, those properties continuing to be either potentially impacted, newly potentially impacted, or no-longer potentially impacted were written to directly to receive information on the consultation in advance of any wider publication of the proposals. One-to-one meetings were offered via videocall or over the phone for those who wished to discuss the proposals further in relation to their own property with the minutes being recorded as part of the consultation process.

There were three submissions received during this third phase of public consultation, thereby making a total of 11 submissions received over the second and third phases of public consultation (March / April 2020 and November / December 2020). Key issues raised are presented in the following sections.

1.6.3.3 Ringsend to City Centre – Key Issues Emerging from the PRO Consultation Process

They key issues from the non-statutory PRO consultation process relating to the Proposed Scheme were as follows:

- Design aspects of cycling facilities:
 - Shared spaces between cyclists and pedestrians are unwelcome;
 - Some narrow areas along the north quays Campshires are noted;
 - Link to the Dodder Greenway;
 - Improvement on Samuel Beckett Bridge; and
 - Clarify proposal for cycle route through Ringsend Park – widening beside footpath.
- Design aspects of bus facilities;
- Queries in relation to bus routing on east side of DPTOB and a desire for buses to turn right, southbound on the East Link Bridge;
- Request on whether the proposed Tom Clarke East Link footbridge could be delivered in tandem with the Proposed Scheme;
- Request for impacts on trees to be avoided insofar as possible;
- More quiet street measures on Pigeon House Road to deter through traffic;

- Various concerns about connectivity to the Poolbeg area for new housing development; and
- Extend the Core Bus Corridor along Sean Moore Road and clarify proposed BusConnects route at Poolbeg.

The issues raised during the second round of public consultation in March / April 2020 and the additional (third) public consultation phase in November / December 2020 were broadly the same. These issues have been considered in the iterative Proposed Scheme development.

The PRO proposals were amended, again where practical to do so, while still achieving the Proposed Scheme objectives, to address the issues raised in submissions, including incorporating suggestions and recommendations from local residents, community groups and stakeholders, where appropriate. These amendments were incorporated into the designs and formed the Preferred Route which has been developed for statutory public consultation in relation to the Proposed Scheme.

Some minor design changes which were adopted included:

- The junctions north and south of Talbot Memorial Bridge were included in the extents of the Proposed Scheme to ensure these junctions were optimised for transport and traffic modelling requirements to better inform the design of the Proposed Scheme;
- A second boardwalk structure is proposed along the River Liffey at the former Dublin City Council Dublin Docklands Offices on Custom House Quay to better facilitate pedestrian movement at this location with a two-way cycle track proposed along the existing footway;
- Bus stop locations have been modified, with some existing bus stops or loading bays relocated or removed to achieve better spacing between stops, while also ensuring that each stop is sited in the best location to serve surrounding neighbourhoods and a more efficient bus network operation;
- The existing flood defence wall on the south side of the River Liffey to the east of Samuel Beckett Bridge will be realigned to facilitate the proposed two-way cycle track in this location;
- The proposed cycle track in Ringsend Park has been revised to a widened shared user path;
- The proposed cycle track along Kerlogue Road has been redirected to align along Strand Street, and Beach Road; and
- Inclusion of the Mayor Street Upper / National Convention Centre Junction to avoid unnecessary journey length / diversions to access the National Convention Centre.

The resulting Proposed Scheme is described in Chapter 4 (Proposed Scheme Description).

1.7 Consultation with Prescribed Bodies and Other Consultees

1.7.1 Consultation on the EIA Process

In addition to the extensive non-statutory public consultation on the Proposed Scheme, as outlined in Section 1.6, the BusConnects Infrastructure team undertook consultation on the EIAR with certain prescribed bodies and relevant non-statutory consultees.

Consultations were also conducted with organisations such as the National Parks and Wildlife Service (NPWS), Transport Infrastructure Ireland (TII) and relevant local authorities, and these are considered in the development of the relevant impact assessment chapters in Volume 2 of this EIAR.

1.7.2 Prescribed Bodies and Interested Parties

In addition to meaningful consultation with the public concerned; including affected landowners (see Section 1.7.3) consultations were also undertaken with Dublin City Council (DCC) and with the prescribed bodies and interested parties outlined in Table 1.6 with regard to the approach to the EIAR.

Table 1.6: Prescribed Bodies and Interested Parties

Prescribed Bodies and Interested Parties	
An Chomhairle Ealaíon	Health Service Executive (HSE)
An Taisce	The Heritage Council
Dublin City Council (DCC)	Inland Fisheries Ireland (IFI)
Department of the Environment, Climate and Communications	Irish Water
Development Applications Unit (DAU) - Department of Housing, Local Government and Heritage	Office of Public Works (OPW)
Department of Transport	TII
National Tourism Development Authority trading as Fáilte Ireland	Waterways Ireland
Geological Survey Ireland (GSI)	

Where possible, the information and advice received from the consultation process were subsequently incorporated into the design of the Proposed Scheme and addressed in the relevant chapters of the EIAR. Issues raised during the consultation process with the prescribed bodies and interested parties included the following:

- Development Applications Unit (DAU) – Department of Housing, Local Government and Heritage. Consultation meeting held 5 February 2020 to apprise the DAU of BusConnects and the envisaged approach with regard to EIA / Appropriate Assessment (AA);
- DAU - Department of Housing, Local Government and Heritage: Comments provided related to the assessment of the impacts of the Proposed Scheme on biodiversity, the completion of ecological surveys (such as trees, hedgerows, bats, birds etc.) alien invasive species, mitigation and monitoring measures and Construction Environmental Management Plans (CEMP);
- DCC comments in relation to the BusConnects Dublin – Core Bus Corridors Infrastructure Works related to transport, air quality, noise, built heritage, street lighting, utility infrastructure, surface water management / flood risk, landscaping, biodiversity, and integration with other transportation projects. Specifically, DCC requested that the EIAR should address alternatives, cumulative impacts, mitigation, and project splitting. In relation to the Proposed Scheme, DCC identified protected structures, Conservations Areas, historic pavings and gateways etc. which have the potential to be impacted due to the Proposed Scheme;
- Health Service Executive (HSE) comments related to the assessment of likely significant impacts on sensitive receptors, surface water, groundwater, air, noise, vibration, dust and on content of the CEMPs;
- Inland Fisheries Ireland’s (IFI) submission identified each of the rivers to be crossed as part of the CBC Infrastructure Works and provided a brief summary of their importance. Additionally, IFI provided comments on the design, in-stream works and mitigation measures to be implemented;
- The Environmental Health Office of the HSE provided recommendations in relation to the management of potential pollutants and discharge entering surface waters, the design of suitable drainage systems and storage of fuels and chemicals; and
- Geological Survey Ireland (GSI) were consulted on 21 May 2021, to apprise GSI of BusConnects, and the proposed approach to the assessment of Land, Soils, Geology and Hydrogeology.

1.7.3 Landowners

Since the initiation of the pre-application public consultation process in February 2019, there has been ongoing engagement with landowners, and / or anyone with an interest in potentially impacted properties or lands along the corridor of the Proposed Scheme, as design development has progressed.

As set out in the Consultation Section (Section 1.6), during each round of public consultation those landowners identified as being either potentially impacted or no-longer potentially impacted were written to directly to receive information on the consultation in advance of any wider publication of the proposals. One-to-one meetings were offered on a face-to-face basis pre-COVID, and via videocall or over the phone since March 2020, for those who wished to discuss the proposals further in relation to their own property with the minutes being recorded as part of the consultation process. Over the three rounds of consultation, one letter of this kind was issued.

Throughout the planning process any requests for meetings, phone conversations, or other requests for information have been accommodated where possible. Many of the submissions received during consultations have included from potentially impacted owners and as with all other submissions they have been considered in the design development.

Most recently between May and December 2021, five letters (registered) have been issued to properties to be the subject of the Proposed Scheme CPO process, seeking to engage with them to ascertain ownership details (or to confirm ownership details based on Property Registration Authority – Registry of Deeds referencing research), or to ascertain any others with an interest in the property / lands. Follow-up conversations have been facilitated as a result of these letters, on request. In addition, a further attempt was made to contact those occupiers that had yet to make contact by visiting each property during October 2021. It should be noted that several state agencies have interests in the lands affected by the Proposed Scheme, including areas of sea-bed in the estuaries of the River Liffey and the River Dodder, for which notification letters were issued to the relevant bodies.

Over the course of the engagements, affected property owners have had the opportunity to discuss, among other things, the following aspects with the BusConnects Infrastructure team:

- Overall scheme proposals and potential impacts;
- Timelines for the Proposed Scheme design development and associated EIAR assessment;
- Procedural matters such as planning and CPO process;
- Specific details of impact of scheme on landowner property including approximate extent of encroachment; and
- General information around reinstatement and accommodation works.

1.8 Difficulties Encountered During the Preparation of the EIAR

The primary difficulty encountered during the preparation of the EIAR was the onset of the COVID-19 pandemic in March 2020 and the ensuing restrictions which have continued into 2021. On-site and face-to-face consultations for the PRO non-statutory public consultation (which had commenced on 4 March 2020) was suspended when it was underway with all remaining planned events cancelled. However, the consultation remained open and continued to accept written submissions.

The third round of public consultations (November / December 2020) was largely virtual (either by virtual consultation rooms / Zoom meetings or telephone contact). Subsequent engagement with interested parties and landowners continued via virtual means.

It is considered that in spite of the COVID-19 restrictions, comprehensive consultations were undertaken to inform design development and EIAR preparation.

With regard to EIAR baseline surveys, they were either undertaken prior to COVID-19 restrictions coming into force or were undertaken within the requirements of the Government's COVID-19 Guidelines. The restrictions did not give rise to any substantive effects on data gathering, and consequently, it is considered that the EIAR prepared is sufficiently robust in nature.

1.9 References

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Directives and Legislation

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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

Dublin Transport Authority Act 2008 (as amended)

No.30 of 2000 – Planning and Development Act 2000 (as amended)

Public Transport Regulation Act 2009 (as amended)

Number 14 of 1993 - Roads Act 1993

S.I. No. 119 of 1994 - Road Regulations, 1994 (as amended)

S.I. No. 279/2019 - European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019

S.I. No. 296/2018 – European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018

Taxi Regulation Act 2013