

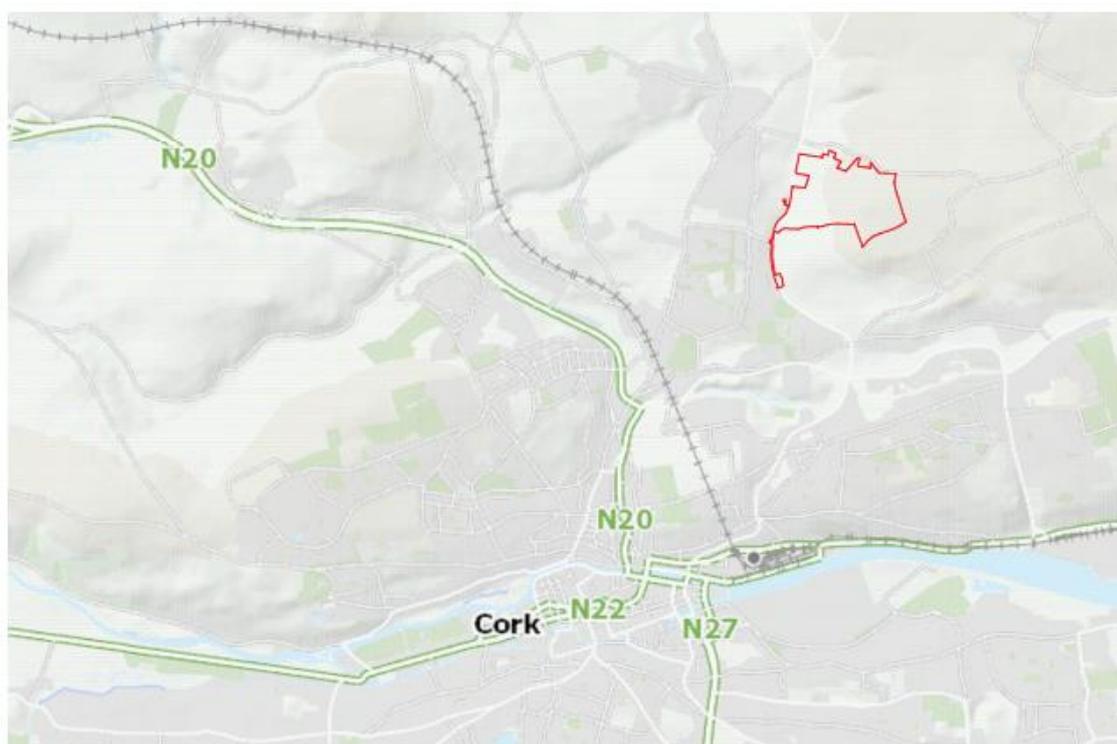
Chapter 1.0

Introduction

1.0 Introduction

This Environmental Impact Assessment Report (EIAR) has been compiled by Cunnane Stratton Reynolds on behalf of Longview Estates Ltd for a proposed Strategic Housing Development at Lahardane and Ballincolly, Ballyvolane, Cork, on lands outlined in red in Figure 1.1. The purpose of this EIAR is to assist and inform An Bord Pleanála, as the competent authority, in undertaking an environmental assessment of this project. This chapter of the EIAR was prepared by Orla O'Callaghan, BA, MPlan, MIPI, Senior Planner at Cunnane Stratton Reynolds.

Figure 1.1 Site Location of the Proposed Development outlined in red



A ten year permission is sought by Longview Estates Ltd for the proposed development of 753 no units at Lahardane and Ballincolly (Townlands), Ballyvolane, Cork City. In summary the proposed development includes:

- 67 no. detached units, 278 no. semi-detached units, 186 no. terrace units, 69 no. duplexes and 153 no. apartments;
- The construction of a local centre consisting of a doctors surgery, 2 no. retail units, community use and a crèche;
- Open spaces and play areas in addition to general landscaping, boundary treatments and landscaped parkland/ greenway;
- The proposal includes an internal distributor road providing access to neighbouring lands, associated internal roads, car parking, pedestrian and cycle paths (providing access to neighbouring lands), public lighting, internal bus stops and turning area, bin storage (in apartment locations) and cycle parking and all site services infrastructure. The associated site and

infrastructural works include water supply, foul and surface / storm water drainage infrastructure to local services and drains and 5 no. unit sub stations;

The proposed development makes provision for two no. pumping stations (and connections to / from same), one in neighbourhood 5 and one adjacent to the Ballyhooly Road, with access, to serve this site and future lands as required by Irish Water.

- Two no. vehicular accesses are proposed from the Ballyhooly Road and one no. access to / from the local road to the north of the site (pedestrian access points will also be allowed to the local road to the north), all including local road widening within applicant lands, resurfacing and boundary works;
- Signalisation of the Lower Dublin Hill / Ballyhooly Road Junction is also proposed along with the provision of a new bus stop on the eastern side of the Ballyhooly Road close to the junction of Lower Dublin Hill and the Ballyhooly Road. The application also provides for the reservation of lands to accommodate the widening of the Ballyhooly Road and the provision of new pedestrian and cyclist infrastructure along the eastern side of the Ballyhooly Road with crossing of same close to Mervue Lawn south of the proposed development;
- Groundworks, excavation and ground reprofiling are required and proposed to provide a Distributor Road through the site and all development areas internally within the site. The proposed development also provides for the line diversion and partial undergrounding of the Kilbarry-Flaxfort-Mayfield 38kv line that traverses the landholding east / west, the removal of existing pylons and the provision of two new pylons one in the Lahardane Townland and one in the Ballincolly Townland and landscaping works within the 110 kv power line wayleaves that also traverse the site.

A full description of the proposed development is contained in Chapter 2 of this EIAR and the accompanying drawings and design report prepared by Horgan Carroll Architects provide further details of the proposed development.

1.1 Definition of EIA/EIAR and the Current Legislation

This EIAR document has been prepared in accordance with the European Union EIA Directive 85/337/EC as amended by directives 97/11/EC, 2003/4/EC, 2011/92/EU and 2014/52/EU, as well as implementing legislation, i.e. Part X of the Planning and Development Act 2000, as amended (*'the 2000 Act'*), and Part 10 of the Planning and Development Regulations 2001, as amended, (most recently by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018)

Article 1(2) (g) of EIA Directive 2011/92/EU, as amended by the 2014 Directive states that "*environmental impact assessment*" means a process consisting of:

- (i) *The preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);*
- (ii) *the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;*

- (iii) *the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;*
- (iv) *the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and*
- (v) *the integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a.;*

A definition of Environmental Impact Assessment Report (EIAR) has not been included in the revised directive. However the EPA Guidelines (2017) provide the following definition:

“A statement of the effects, if any, which proposed development, if carried out, would have on the environment. The EIAR is prepared by the developer and is submitted to the CA (Competent Authority) as part of a consent process. The CA uses the information provided to assess the environmental effects of the project and, in the context of other considerations, to help determine if consent should be granted. The information in the EIAR is also used by other parties to evaluate the acceptability of the project and its effects and to inform their submissions to the CA.

The EIAR consists of a systematic analysis and assessment of the potential effects of a proposed project on the receiving environment. The amended EIA Directive prescribes a range of environmental factors which are used to organised descriptions of the environment and these factors must be addressed in the EIAR. The EIAR should be prepared at a stage in the design process where changes can still be made to avoid adverse effects. This often results in the modification of the project to avoid or reduce effects through redesign”.

The key amendments introduced by the 2014 Directive include the following:

- The refinement of environmental factors to be considered in the assessment process – resource efficiency, climate change, population and human health, biodiversity and disaster risk prevention and management.
- Strengthening of the procedures for screening, particularly through the introduction of new information requirements to be provided by the developer (Annex IIA) and revised selection criteria to be used by the competent authority in making a determination (Annex III of Directive).
- Expansion of the information to be included in the EIAR (formerly known in Ireland as EIS) (Annex III of Directive).
- Requirement that the EIAR must be prepared by competent experts and for the competent authority to have, or have access to, sufficient expertise to examine the EIAR.
- Expansion of the information to be included in a development consent decision including a requirement for a ‘*reasoned conclusion*’ to be incorporated into the decision in respect of the significant effects of the project on the environment.

- Requirements to inform the public and to make relevant environmental information publicly accessible through electronic means and in a timely fashion during the assessment process and at the time of the decision.
- Requirement for monitoring of significant adverse effects resulting from the construction and operation of a project.

1.2 The EIA Process

The main purpose of the EIA process is to identify the likely significant impacts on the environment associated with a proposed development and to eliminate or mitigate these impacts. The EIAR summarises the environmental information collected during the impact assessment of a proposed development. There are a number of steps to the EIA process which include Screening, Scoping, Consideration of Alternatives, Preparation of the EIAR and the examination by the CA of the information presented in the EIAR. These stages are described in more detail below:

Screening

Screening is the initial stage in the EIA process and determines whether a proposed development requires an EIA. Screening is the process used to determine whether a proposed development requires an EIAR by reference to the mandatory legislative threshold requirements or by reference to the type and scale of the proposed development and the significance or the environmental sensitivity of the receiving environment.

In accordance with the Planning and Development Act 2000 (as amended to 2019) an environmental impact assessment shall be carried out in respect of applications where either-

- (a) The proposed development would be of a class specified in-

Part 1 of Schedule 5 of the Planning and Development Regulations 2001 (as amended) and either

- (i) Such development would equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part, or
- (ii) No quantity, area or other limit is specified in that part in respect of the development concerned,

Or

Part 2 of Schedule 5 of the Planning and Development Regulations 2001 and either

- (i) Such development would equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part, or
- (ii) No quantity, area or other limit in that Part in respect of the development concerned.

The proposed development does not fall within any of the development classes set out in Part 1 of Schedule 5. It does however fall within classes of development set out in Part 2 of Schedule 5. The applicable categories are as follows:

Infrastructure Projects

10. (b)

(i) Construction of more than 500 dwellings and

(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.

The proposed development triggers a requirement for a mandatory EIA because the number of dwellings proposed is 753 which exceeds the threshold of 500 specified in 10b (i) above and the overall site area is 46.9 Ha which is in excess of the 20 hectares threshold for urban development elsewhere in 10b (iv) above.

Scoping

Scoping is an early stage in the EIA process. The purpose of scoping is to identify the information to be contained in an EIAR and the methodology to be used in gathering and assessing that information. As set out in the 2018 EIA Guidelines and Section 7 of the Planning and Development (Strategic Housing Development) Regulations, a prospective applicant can make a request to An Bord Pleanála for an EIA scoping in regard to a proposed Strategic Housing Development. These requests are discretionary.

The scope of this EIAR has been developed by the design team and has been informed by the following:

- *Directives 2014/52/EU;*
- *The advice received from the specialist team preparing the EIAR;*
- *European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018;*
- *The Planning and Development Act 2000 (as amended);*
- *The Planning and Development Regulations 2001 (as amended);*
- *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018;*
- *Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA, 2017;*
- *Environmental Impact Assessment of Projects: Guidance on Screening, European Commission, 2017;*
- *Environmental Impact Assessment of Projects: Guidance on Scoping, European Commission, 2017;*
- *Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report, European Commission, 2017;*

- Advice and guidance provided by Cork County and City Councils during the Section 247 meetings and informally;
- The tripartite meetings held with An Bord Pleanála and Cork County and City Councils – ref. PL 04.300557 and ref. PL 04 .304350;
- *The Cork County Development Plan 2014;*
- *The Cobh Municipal District Local Area Plan 2017;*
- Relevant Regional and National Planning Policy Documents and Guidance;
- The likely concerns of third parties.

In addition, specialist disciplines have had regard to other relevant guidelines, and where relevant these are noted in individual chapters of the EIAR.

Engagement and several meetings have occurred with technical staff of Cork County Council and Cork City Council during the course of the application preparation; it being an area of land that commenced its planning process with Cork County Council and then, as part of the “transfer lands” covered by the City Boundary Extension being formally passed over by the County to the City (May 2019) for the conclusion of the application process. It should be noted that consultations with Cork City Council took place when the file was formally in the County Jurisdiction. These consultations were in particular related to the Ballyhooly Road improvements as the administration of this was being led by the City Council.

Two Section 5 Strategic Housing Development tripartite meetings have taken place between the Applicant and the Applicants Design Team, An Bord Pleanála and Cork County Council with Cork City Council also in attendance at the second tripartite meeting. The feedback received from these meetings during the design process have informed the final layout and design and have assisted in the preparation of the EIAR.

The scope and range of issues to be considered within this EIAR follows an initial scoping exercise by CSR, the applicant and their team of consultants and has been prepared in order to address matters including:

- Proposed Development
- Alternatives Examined
- Population and Human Health
- Land and Soils
- Water and Hydrology
- Air Quality and Climate
- Noise and Vibration
- Material Assets
- Biodiversity

- Cultural Heritage
- Landscape and Visual Impact
- Risk Management
- Interaction of the Forgoing Topics
- Mitigation and Monitoring Proposed

A number of assessments have been carried out by specialist consultants which have informed the chapters within the EIAR. These include:

- Cultural Heritage Impact Assessment by John Cronin and Associates
- Natura Impact Statement by Greenleaf Ecology
- Preliminary Construction Environmental Management Plan by MHL and Associates Ltd
- Traffic and Transport Assessment by MHL and Associates Ltd
- Determination Of Potential Odour Emissions To Atmosphere From The Proposed Pumping Station by AWN Consulting Ltd
- Daylight / Sunlight Report by IES Consulting
- Groundwater Seepage Assessment by JBA Consulting
- Site Investigation Reports and Soil Tests by Priority Geotechnical

Consideration of Alternatives

This stage involves consideration of the possible alternative approaches to the proposed development. Reasonable alternatives may relate to matters such as project design, technology, location, size and scale.

Preparation of Environmental Impact Assessment Report

The main part of the EIA process involves a baseline evaluation to determine the status of the existing environment, impact prediction and evaluation and determining appropriate mitigation and monitoring measures where necessary as well as the consideration of alternatives and description of the development.

The examination by the CA of the information presented in the environmental impact assessment report.

The planning authority and An Bord Pleanála must consider each application for development consent on its own merits, taking into account all material considerations, including the reasoned conclusion in respect of EIA, before making its decision to grant, with or without conditions, or to refuse consent.

1.3 Purpose of the Environmental Impact Assessment Report

The purpose of an EIAR is to predict and assess the likely effects (direct and indirect) on the environment arising from the proposed development. The contents of this EIAR have been prepared in accordance with the provisions of Article 5(1) and Annex IV of Directive 2014/52/EU. Article 5(1) states –

“The information to be provided by the developer shall include at least:

- (a) A description of the project comprising information on this site, design, size and other relevant features of the project;*
- (b) A description of the likely significant effects of the project on the environment;*
- (c) A description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, of possible, offset likely significant adverse effects on the environment;*
- (d) A description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;*
- (e) A non-technical summary of the information referred to in points (a) to (d); and*
- (f) Any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected”.*

Annex IV sets out the information for the Environmental Impact Assessment Report as follows:

- 1. Description of the project, including in particular.*
 - (a) A description of the location of the project;*
 - (b) 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;*
 - (c) 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;*
 - (d) 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.*
- 2. 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.

3. *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.*
4. *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 hydromorphological 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.*
5. *A description of the likely significant effects of the project on the environment resulting from, inter alia:*
 - (a) *The construction and existence of the project, including, where relevant, demolition works;*
 - (b) *The use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;*
 - (c) *The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;*
 - (d) *The risks to human health, cultural heritage or the environment (for example due to accidents or disasters);*
 - (e) *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;*
 - (f) *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;*
 - (g) *The technologies and the substances used.*

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 at Union or Member State level which are relevant to the project.

6. *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.*

7. *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, reduce, or offset, and should cover both the construction and operational phases.*
8. *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 or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of the 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.*
9. *A non-technical summary of the information provided under points 1 to 8.*
10. *A reference list detailing the sources used for the descriptions and assessments included in the report.*

The preparation of this Environmental Impact Assessment Report has been coordinated by Cunnane Stratton Reynolds in association with the relevant competent experts as identified below. This EIAR has been prepared in full accordance with the stated requirements of Annex IV.

1.4 Competency

It is a requirement that the EIAR must be prepared by competent experts.

The Planning Regulations (as amended) require “a list of the experts who contributed to the preparation of the report, identifying for each such expert –

- (i) *The part or parts of the report which he or she is responsible for or to which he or she contributed;*
- (ii) *His or her competence and experience, including relevant qualifications, if any, in relation to such parts; and*
- (iii) *Such additional information in relation to his or her expertise that the person or persons preparing the EIAR consider demonstrates the expert’s competence in the preparation of the report and ensures its completeness and quality”.*

The members of the design team and their specific contribution to the preparation of this EIAR are outlined in table 1.1 below and at the beginning of each Chapter.

1.5 Format and Structure of the EIAR

This EIAR is prepared in accordance with the Grouped Format Structure. This means that each topic is considered as a separate chapter in this EIAR. The EIAR is sub divided into three no. volumes as follows:

- Volume I Non-Technical Summary;
- Volume II Environmental Impact Assessment Report appendices to Environmental Impact Assessment Report.

Volume II is presented in Chapters as follows:

Table 1.1 EIAR Chapter Headings and Contributors

Chapter	Consultant	Person Responsible and Qualifications and Summary of Experience
Chapter 1 Introduction	Cunnane Stratton Reynolds	<p>Orla O'Callaghan, BA, MPlan, MIPI</p> <p>Orla is a Senior Planner in Cunnane Stratton Reynolds. She has both private and public sector experience in Ireland and the UK. Orla has been involved in the preparation of a number of EIAR's.</p>
Chapter 2 The Development	Cunnane Stratton Reynolds and Horgan Carroll Architects	<p>Orla O'Callaghan, BA, MPlan, MIPI</p> <p>Paul Horgan, Director Horgan Carroll Architects; Dip. Arch. Tech., Registered Passive House Designer</p>
Chapter 3 Alternatives Examined	Cunnane Stratton Reynolds and Horgan Carroll Architects	<p>Orla O'Callaghan, BA, MPlan, MIPI</p> <p>Paul Horgan, Director Horgan Carroll Architects; Dip. Arch. Tech., Registered Passive House Designer</p>

Chapter 4 Population and Human Health	Cunnane Stratton Reynolds	<p>Elaine Edmonds, BA Hons Environmental Science, MSc Spatial Planning and MSc Urban Development and Regeneration.</p> <p>Elaine is an Executive Planner in Cunnane Stratton Reynolds. Elaine has a specialist interest in environmental planning and has been involved in the preparation of a number of EIAR's.</p>
Chapter 5 Land and Soils	MHL and Associates Ltd	<p>Ken Manley, BE CEng, MIEI, RConsEI HDip Env Eng. Ken is a company director and founding member of MHL and Associates Ltd. He is a member of the Institute of Engineers Ireland (IEI) and the Association of Consulting Engineers of Ireland (ACEI).</p>
Chapter 6 Water and Hydrology	MHL and Associates Ltd and JBA Consulting	<p>Shane Moriarty. Shane is a graduate of Cork Institute of Technology having graduated in 2010 with an Honours Bachelor degree in Sustainable Energy Engineering and an Ordinary Bachelor's degree in Civil, Structural and Environmental Engineering. Shane is currently a Design Engineer with MHL having worked in the United States for eight years as an Engineer for a large natural gas distribution company and a Project</p>

		Manager in the steel industry.
Chapter 7 Air Quality and Climate	EC Environmental	Dr Eoin Collins. Eoin holds a BSc (Hons) in Chemistry (UCD), a PhD in Air Quality (UCD) and an MSc in Energy Management (DIT). He is a member of the Royal Society of Chemistry (MRSC), a member of the British Occupational Hygiene Society (BOHS), and is a current Council member and past president of the Occupational Hygiene Society of Ireland (OHSI). He has over 18 years' experience as a consultant in the field of air quality and has conducted air quality and climate impact assessments for many major infrastructural and commercial projects.
Chapter 8 Noise and Vibration	CLV Consulting	<p>Brian Johnson, Bachelor of Science in Acoustical Engineering Purdue University 1994</p> <p>Certificate of Competence in Building Acoustic Measurements Institute of Acoustics 2016</p> <p>Certificate of Competence in Environmental Noise Measurements Institute of Acoustics 2017</p> <p>LEED Certified Green Professional United</p>

		<p>States Green Building Council 2015</p> <p>Brian Johnson is an internationally experienced acoustic consultant who has been working in the fields of architectural / building acoustics and noise control since 1994. His primary role has been conducting the architectural and mechanical acoustic design for large scale projects of all types over a wide range of geographies. He has also has extensive experience in the field of environmental noise assessments and building acoustic commissioning testing.</p>
<p>Chapter 9 Material Assets</p> <p>Part A Utilities, Services and Waste</p> <p>Part B Traffic and Transport</p>	MHL and Associates Ltd and Cunnane Stratton Reynolds	<p>Ken Manley (MHL) and Orla O'Callaghan (Cunnane Stratton Reynolds)</p> <p>Ken Manley (MHL)</p>
Chapter 10 Biodiversity	Greenleaf Ecology	<p>Karen Banks, BSc (Hons) in Environment and Development from Durham University, and a full member of the Chartered Institute of Ecology and Environmental Management.</p> <p>Karen is an ecologist with 12 years' experience in the field of ecological assessment Karen specialises in ecological field survey</p>

		and impact assessment.
Chapter 11 Cultural Heritage	John Cronin and Associates	<p>Tony Cummins – primary and post-graduate degrees in Archaeology (B.A. (UCC), 1992) and M.A. (UCC), 1994)</p> <p>John Cronin – Archaeology (B.A. (University College Cork (UCC), 1991), Regional and Urban Planning (MRUP) (University College Dublin (UCD) 1993) and post-graduate qualifications in Urban and Building Conservation (MUBC (UCD), 1999)</p> <p>Both individuals have each amassed twenty-five years industry experience in the compilation of archaeological, architectural and cultural heritage impact assessments.</p>
Chapter 12 Landscape and Visual Impact	Cunnane Stratton Reynolds	<p>Jim Kelly, B.Agr.Sc. Landscape Architecture, (University College, Dublin), Post Graduate Diploma Landscape Architecture</p> <p>(University of Central England), Chartered Landscape Architect, CMLI (UK), Member of the Irish Landscape Institute MILI</p> <p>Jim Kelly is a chartered landscape architect with 30 years of experience in the</p>

		field of landscape planning, design and management. Landscape and Visual Impact Assessment (LVIA), and their input to EIA is a core discipline of the practice and Jim has prepared LVIA reports for a wide range of development projects in the last 14 years
Chapter 13 Risk Management	MHL and Associates Ltd	Ken Manley (MHL)
Chapter 14 Interaction of the Foregoing	Cunnane Stratton Reynolds	Orla O'Callaghan, BA, MPlan, MIPI
Chapter 15 Summary of Mitigation and Monitoring	Cunnane Stratton Reynolds	Orla O'Callaghan, BA, MPlan, MIPI

A systematic approach is employed using standard descriptive methods, replicable prediction techniques and standardised impact descriptions to provide an appropriate evaluation of each environmental topic under consideration.

An outline of the general format used in each chapter to examine the environmental topics includes:

- **Introduction:** this section provides an overview of the specialist that prepared this chapter of the EIAR.
- **Study Methodology:** This section of the chapter outlines the method by which the relevant assessment of the impacts of the proposed development has been conducted within that chapter.
- **The Existing Receiving Environment (Baseline Scenario):** This section of the chapter considers the existing receiving environment where the development is proposed. In describing the receiving environment, the **context, character, significance and sensitivity** of the baseline receiving environment into which the proposed development will fit is assessed. This also takes account of any proposed developments that are likely to proceed.
- **Characteristics of the Proposed Development:** Consideration of the 'Characteristics of the Proposed Development' allows for a projection of the 'level of impact' on any particular aspect of the proposed environment that could arise. For each chapter those characteristics of the proposed development which are relevant to the area of study are described; for example the chapter on landscape and visual impact addresses issues such as height and impact on the surrounding landscape.

- The characteristics of projects must be considered, with particular regard to: (a) the size and design of the whole project; (b) cumulation with other existing and/or approved projects; (c) the use of natural resources, in particular land, soil, water and biodiversity; (d) the production of waste; (e) pollution and nuisances; (f) the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge; (g) the risks to human health (for example due to water contamination or air pollution).
- **Potential Impact of the Proposed Development:** This section provides a description of the specific, direct and indirect impacts that the proposed development may have. This is provided with reference to both the Receiving Environment and Characteristics of the Proposed Development sections while also referring to the (i) magnitude and intensity, (ii) integrity, (iii) duration and (iv) probability of impacts. Impact assessment addresses direct, indirect, secondary, cumulative, transboundary, short, medium and long-term, permanent, temporary, positive and negative effects as well as impact interactions.
- **Do Nothing Scenario:** In order to provide a qualitative and equitable assessment of the proposed development, this section considers the proposed development in the context of the likely impacts upon the receiving environment should the proposed development not take place.
- **Avoidance, Remedial and Mitigation Measures: Avoidance:** remedial and mitigation measures describe any corrective or mitigative measures that are either practicable or reasonable, having regard to the potential impacts. This includes avoidance, reduction and remedy measures as set out in Section 4.7 of the Development Management Guidelines 2007 to reduce or eliminate any significant adverse impacts identified.
- **Predicted Impacts of the Proposed Development:** This section allows for a qualitative description of the resultant specific direct, indirect, secondary, cumulative, transboundary, short, medium and long-term, permanent, temporary, positive and negative effects as well as impact interactions which the proposed development may have, assuming all mitigation measures are fully and successfully applied.
- **Monitoring:** This involves a description of monitoring in a post-development phase, if required. This section addresses the effects that require monitoring, along with the methods and the agencies that are responsible for such monitoring.
- **Reinstatement:** While not applicable to every aspect of the environment considered within the EIAR, certain measures need to be proposed to ensure that in the event of the proposal being discontinued, there will be minimal impact to the environment.
- **Interactions:** This section provides a description of impact interactions together with potential indirect, secondary and cumulative impacts.
- **Difficulties Encountered in Compiling:** This section provides an indication of any difficulties encountered by the environmental specialist in compiling the required information.

1.6 Impact Assessment

Each chapter of this EIAR evaluates the impact of the proposed development for the construction and operational stages. The assessment criteria are based on the EPA's Draft

Guidelines on the information to be contained in Environmental Impact Assessment Reports (2017).

Table 1.2 Description of Effects

Quality of Effects	Positive Effects A change which improves the quality of the environment (for example, by increasing species diversity; or the improving 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 nuisance).
Describing the Significance of Effects	Imperceptible An effect capable of measurement but without significant consequences.
	Not Significant An effect which causes noticeable ² 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 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
Describing the Extent and Context of Effects	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, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Describing the Probability of Effects	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 The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Describing the Duration and Frequency of Effects	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)
Describing the Types of Effects	Indirect Effects (a.k.a. Secondary Effects) Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	Cumulative Effects The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	‘Do-Nothing Effects’ The environment as it would be in the future should the subject project not be carried out.
	‘Worst case’ Effects The effects arising from a project in the case where mitigation measures substantially fail.
	Indeterminable Effects When the full consequences of a change in the environment cannot be described.
	Irreversible Effects When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
	Residual Effects The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	Synergistic Effects

	Where the resultant effect is of greater significance than the sum of its constituents, (e.g. combination of SO _x and NO _x to produce smog).
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1.7 Consultation

The following statutory agencies and stakeholders were consulted during the preparation of the planning application and EIAR:

1.7.1 Prescribed Bodies

Statutory Consultees and authorities consulted include the following:

- Irish Water
- The Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs
- The Heritage Council
- An Taisce – The National Trust for Ireland
- Córas Iompair Éireann
- Transport Infrastructure Ireland
- National Transport Authority
- Commission for Energy Regulation
- Irish Aviation Authority
- The Department of Education and Skills
- Local Childcare Committee – Cork County and Cork City Childcare Committee
- The Commission for Railway Regulation
- Department of Justice and Equality
- The Health Service Executive
- The Minister for Agriculture, Food and the Marine
- Responses were received from Transport Infrastructure Ireland (TII), the Irish Aviation Authority (IAA), Department of Education and Skills, the Commission for Railway Regulation (CRR), the Department of Justice and Equality, the Health Service Executive (HSE), The Minister for Agriculture, Food and the Marine and the National Transport Authority (NTA). The responses can be summarised as follows:

TII response noted:

- *The approach to be adopted by TII in making such submissions or comments will seek to uphold official policy and guidelines as outlined in the Spatial Planning and*

National Roads Guidelines for Planning Authorities (Department of the Environment, Community and Local Government, 2012).

- *Consultations should be had with the relevant local authority with regard to locations of existing and future national road schemes and potential traffic management issues.*
- *Traffic and Transport Assessment (TTA) be carried out in accordance with TII's TTA Guidelines (2014) noting traffic volumes attending the site and traffic routes to/ from the site with reference to impacts on the national road network and junctions of lower category roads with national roads. The scheme promoter is also advised to have regard to Section 2.2 of the TII TAA Guidelines which addresses requirements for sub-threshold TTA.*
- *The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required.*
- *Regard should also be had to other relevant guidance available at www.TII.ie.*

IAA response noted:

- *It is the observation of the Irish Aviation Aerodrome Department that should permission be granted, the applicant/ developer should be conditioned to contact the Irish Aviation Authority's Safety Regulation Division of intention to commence crane operations with a minimum of 30 days prior notification of their erection.*

Department of Education and Skills response noted:

- *This Department conducts nationwide demographic exercises into current and future need for primary and post primary school places across the country and these are constantly monitored and updated as further demographic information emerges. While the Department has no current plans for the acquisition and development of the zoned school site at Ballyvolane, this position will continue to be reviewed as part of those nationwide demographic exercises.*

CRR response noted

- *The proposed development is not adjacent to a railway line and CRR makes in further comments.*

The Department of Justice and Equality response acknowledged the receipt of the letter informing them of the proposed development.

The **HSE** response noted:

- *It is advised that meaningful, continual and effective public consultation takes place to ensure the local communities of Ballyvolane, Whites Cross, Upper Glanmire and the surrounding area are informed of the project and kept up to date with any possible changes to the development. There should be a local liaison committee established so as there is full engagement with the public. Local media outlets should be used where possible. In the possible events of complaints being made a complaints management procedure should be clearly set out and designated*

personnel should be responsible for taking and rectifying any complaints that may be made.

- *Noise from the proposed development is likely to impact residents adjacent to the proposed site and surrounding areas during the construction phase of the development. Consideration should be given to the impacts on local residents from the operation of equipment, from construction traffic and from possible lighting systems used to light compounds.*
- *Baseline noise monitoring data should be taken as part of the noise section in the EIS. Consideration should be given to ongoing noise monitoring at noise sensitive locations during the construction phase to achieve accurate calculations on the impact of noise and vibration from the project. There are a number of residential developments close to the site and as a result many noise-sensitive locations exist. Start and finish dates and times should be clearly set to minimise noise pollution complaints.*
- *Consideration should be given to temporary sites used for construction works or housing of construction workers. This may include additional services such as transport access, sewerage, potable drinking water provision, waste disposal, electricity and telecommunications.*
- *A pest control system for the construction site should be considered as construction work could possibly result in the displacement and movement of the rodent population in the area. It is recommended that adequate pest control procedures are put in place as part of the Construction Environmental Management Plan.*
- *The overall impact of the proposal on traffic in the Ballyvolane area and in particular on the Ballyhooly Road should be considered in detail. There is already a heavy burden on the road network in the area and construction traffic may add to this greatly. In addition consideration should be given to possible closure of routes or changes in traffic movement that may impact necessary access to schools and health centres in the local area of Ballyvolane and its surrounds. A Construction Traffic Management Plan should be included in the Environmental Management Plan for the project to ensure there is minimal impact on local residents.*
- *It is recommended that dust abatement mitigation measures are included in the Construction Environmental Management Plan.*
- *Consideration should be given to the possible presence or absence of private wells near the site and the possible impacts that the development may have on the groundwater “zone of influence” if private wells do exist. Consideration should be given to the possible impacts of construction site pollutants to ground water from fuel spillages etc and how these possible impacts may be mitigated against.*
- *Consideration should be given to the quantity and types of waste that may be generated from the site and how waste will be stored and disposed of in a safe manner ensuring compliance with Waste Management Legislation.*
- *Environmental Health comprises those aspects of human health, including quality of life and well-being that are determined by physical, social and psychosocial; factors in the environment. Health Ireland: A Framework for Improved Health and Wellbeing 2013-2015 is a cross sectorial strategy for improving health and wellbeing of the Irish population. This strategy identifies the built environment as a key contributor to*

population health and wellbeing. Access for all residents of the new development to various physical activities should be promoted. Consideration should also be given to connectivity to the city centre for walking and cycling and other such planning and development initiatives to contribute to the development of population health and well-being in the city of Cork.

The Minister for Agriculture, Food and the Marine response acknowledged the receipt of the letter informing them of the proposed development.

The **NTA** response noted:

Strategic issues informing the location of residential development within the Cork Metropolitan Area

- *The NTA acknowledges the zoning objectives relating to the location of the subject proposed development, as specified in the Cobh Municipal District Local Area Plan. The NTA supports the consolidation of Metropolitan Area generated population and employment growth within Cork City/ environs and settlements within certain corridors where it can be demonstrated that the associated development supports the basis for investment in improved and better connected public transport services over time, thus allowing for a reduction in car dependency as growth occurs.*
- *It is the NTAs view that this location should primarily be focused on the City/ Environs and a number of nearby larger settlements located on an east-west corridor, within which stronger trip associations can be developed over time, increasingly on the basis of public transport use, for a range of trip purposes within the Metropolitan Area.*
- *To put the above comments into context, they are guided by the following principles in guiding the location of future development at the strategic (Metropolitan Area) level and in the prioritisation of development locations and planning for development at the local level*
 - *A transition to more consolidated development forms, supporting alternative forms of travel to the private car;*
 - *A strong presumption in favour of walking and cycling for local trips within each settlement centre;*
 - *A strong presumption in favour of public transport and cycling for trips with and between development centres;*
 - *A stronger correlation between development density, population/ employment intensity and centrality within the Metropolitan Area in general and within each settlement centre in turn;*
 - *A stronger emphasis on sequential expansion, focused on the most central and most public transport accessible parts of the Metropolitan Area; and*
 - *A movement from discrete single use development areas towards mixed use development formats.*

Issues that should be addressed in the assessment of the proposed development at the local level.

- *The location of the proposed development presents a number of significant challenges, the principle challenge being to avoid a further replication of the established pattern of car dependency, pertaining to Ballyvolane and the North East City Environs as a whole. The Authority would recommend that the assessment of any further residential development in Ballyvolane, including the subject development site should be informed by a transport assessment relating to the wider Ballyvolane/ North East City Environs areas, having regard to best practice.*
- *Related to the above points a clear demonstration should be provided of how the subject site and the wider Ballyvolane area can be developed in a more permeable manner for bus services, providing good connectivity to local destinations and to the wider Cork Metropolitan Area, and how a significant modal shift away from car dependency can be achieved.*
- *A demonstration needs to be given as to how additional development in this area will not negatively impact on congestion, on the strategic road network within the wider area and on the local road network servicing the subject proposed development. Related to this, it needs to be demonstrated how accessibility to employment destinations, schools and services at the local level can be achieved from the subject site, by walking, cycling and public transport modes.*

The applicant has liaised extensively with Irish Water since 2017 to ensure the delivery of a workable infrastructure solution in the Ballyvolane area. A Project Works Services Agreement (PWSA) has been entered into with Irish Water whereby the Applicant is funding a significant portion of network improvements by IW to both service the Site and to unlock other lands in the area; using a solution that has, prior to now, not been possible. Further information on the PWSA is included elsewhere in this EIAR and in the accompanying planning application reports.

There has also been engagement with Mr Michael McPartland of Inland Fisheries Ireland (IFI). IFI requested clarification regarding whether the proposals will interfere with the bed or banks of any watercourse. Greenleaf Ecology clarified the works proposed in this planning application in an email to IFI. No further response was received from IFI.

In the Opinion issued by An Bord Pleanála to the Applicant on 2nd July 2019 it was advised that the following authorities should be notified in the event of making an application:

- Irish Water
- The Minister for Arts, Heritage, Regional, Rural and Gaeltacht Affairs
- The Heritage Council
- An Taisce – the National Trust for Ireland
- Córas Iompair Éireann
- Transport Infrastructure Ireland
- National Transport Authority

- Commission for Energy Regulation
- Irish Aviation Authority
- Local Childcare Committee.

Full copies of this planning application have been sent to all of the above authorities.

1.7.2 Public Engagement

The Applicant has had significant engagement with local stakeholders including residents of adjacent properties and living in the site area. A public information evening was held in October 2017. Representatives from the design team were in attendance to talk members of the public through the proposed plans and answer any questions. The Applicant Longview Estates Ltd has had ongoing communication with residents in the area during the design development to advise them of development programme progress and take their comments and feedback on board. A number of design elements have been incorporated and amended in the scheme on the basis of discussions with occupants of neighbouring properties including the careful consideration of boundary treatment along the northern site boundary.

1.7.3 Engagement with Local Crèches and Cork City Childcare Committee

A Childcare Provision Assessment was carried out for this planning application. This assessment included contacting existing childcare providers operating within an approximate 3km of the site to check their availability of childcare places. It was not possible to make contact with three of the childcare providers despite a number of attempts. A conservative approach was therefore taken for the purposes of the assessment that those three providers are currently operating at full capacity.

Engagement also occurred with Cork City Childcare Committee. Based on feedback from Ms Janet Dennehy, acting Coordinator of the Cork City Childcare Committee, the crèche was increased in size and the design amended. The Childcare Committee have confirmed that the type of crèche being proposed will meet the projected childcare needs in this area and surrounding area. Please refer to the accompanying Childcare Provision Assessment prepared by Cunnane Stratton Reynolds.

1.8 Difficulties Encountered

No particular difficulties, such as technical deficiencies or lack of knowledge, were encountered in compiling any of the specified information contained in this statement, such that that the prediction of impacts has not been possible. Where any specific difficulties were encountered these are outlined in the relevant chapter of the EIAR.

1.9 Errors

While every effort has been made to ensure that the content of this EIAR document is error free and consistent there may be instances in this document where typographical errors and/or minor inconsistencies do occur. These typographical errors and/or minor inconsistencies are unlikely to have any material impact on the overall findings and assessment contained in this EIAR.

