ATKINS

Member of the SNC-Lavalin Group

Carrigtwohill URDF Initiative

UEA Infrastructure - Environmental Impact Assessment Screening Report

Cork County Council

May 2023

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1. Introduction

Cork County Council (CCC) have appointed Atkins to prepare an Environmental Impact Assessment (EIA) Screening Report for the proposed Carrigtwohill Urban Regeneration and Development Fund (URDF) Initiative Urban Expansion Area (UEA) Infrastructure project in Carrigtwohill, Co. Cork. The EIA Screening Report will be submitted as part of the Part 8 planning submission for the proposed works.

The proposed development comprises infrastructure which will facilitate and accelerate future housing delivery in the Carrigtwohill Urban Expansion Area (UEA) and to support regeneration, compact growth and sustainable development in Carrigtwohill.

1.1. Proposed Project

The proposed development is located to the north of the town of Carrigtwohill, County Cork. The Carrigtwohill URDF Initiative UEA Infrastructure project comprises of new serviced road corridors including pedestrian and cyclist facilities (Western, Eastern and Northern Services Corridor Link Roads), re-alignment and upgrades of existing roads (Wises Road, Station Road, Leamlara Road and Ballydam Road) and two new pedestrian/ cyclist bridges over the Cork to Midleton railway line.

The infrastructure also includes shared cycling/pedestrian paths connecting the new road network with the planned Carrigtwohill to Midleton Inter-urban Cycle Route, areas of green open space, underground services including; surface water drainage networks including detention ponds and attenuation, foul water networks, electrical and fibre optic/ telecoms ducting, and water and gas supply. Services will be connected to existing services/infrastructure in Carrigtwohill as required.

A detailed Construction Environmental Management Plan (CEMP) will be developed by the contractor prior to construction in accordance with UK guidelines LA 120 Environmental management (in the absence of Irish guidelines). The CEMP will outline recommended measures to avoid, minimise and control adverse environmental impacts associated with the construction of the proposed development. The CEMP will document the commitment to safeguarding the environment through the identification, avoidance and mitigation of the potential significant negative environmental impacts which may be associated with the proposed development. An Environmental Clerk of Works or Site Environmental Manager will be appointed to ensure that control measures within the CEMP are upheld. The Environmental Clerk of Works or Site Environmental Manager will monitor construction activities, where they deem required.

A detailed Resource and Waste Management Plan (RWMP) will be developed by the contractor prior to commencement of construction works in accordance with the relevant industry standard guidance document*; 'Best Practice Guidelines for the preparation of resources & waste management plans for construction & demolition projects'* (EPA, 2021). This RWMP will ensure efficient use of material resources, reduce waste at source and reduce the quantity of waste that requires final off-site disposal to landfill in accordance with the waste hierarchy. The RWMP will also help facilitate the transition to a more circular economy thereby minimising the need for new inputs of virgin materials and energy, while reducing environmental pressures linked to resource extraction, emissions and waste management. A Waste Manager will be appointed to ensure that control measures contained within the RWMP are implemented during construction.

1.2. Purpose of this Report

The purpose of this report is to determine whether the proposed infrastructure project requires the preparation of an Environmental Impact Assessment Report (EIAR). This screening report has been prepared to accompany a planning application under Part 8 of the Planning and Development Regulations, 2001 (as amended), from Cork County Council to obtain planning permission for the proposed Carrigtwohill URDF Initiative – UEA Infrastructure Project.

A Stage 1 Screening for Appropriate Assessment has been prepared for the proposed project (Atkins, 2023). The project has been assessed with regards to the likely significant effects of the project on European sites within the zone of influence of the proposed project. The Screening for AA concluded that:

'the proposed development will not, either individually or in combination with other plans or projects, give rise to impacts which would constitute significant effects on the Great Island Channel SAC or Cork Harbour SPA, in view of its/their conservation objectives. Therefore, it is the recommendation of the

authors of this report that Cork County Council, as the competent authority, may determine that Appropriate Assessment is not required in respect of the proposed Carrigtwohill URDF Infrastructure Project. Should any aspect of the design or construction methodology for the proposed development be materially changed, a new AA Screening Report would be required.'

2. Methodology

2.1. Requirement for Environmental Impact Assessment

This project has been screened in accordance with Section 3.2 of the '*Guidelines on the information to be contained in Environmental Impact Assessment Reports* (EPA, 2022), the Environmental Impact Directive (85/337/EEC) and all subsequent relevant amendments and Planning and Development regulations (2001-2023), including S.I. No. 296 of 2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, which came into operation on 1st September 2018. The project has been screened in accordance with the Roads Act, 1993-2022 and the European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulation 2019 S.I. No. 279 of 2019.

Criteria to evaluate whether significant impacts on the receiving environment will arise from a proposed development are listed under Schedule 7 of the relevant Planning & Development Regulations (2001-2023). A list of the relevant information to be provided by the applicant or developer for the purposes of sub-threshold EIA screening is presented in Schedule 7A of the Regulations.

As set out under the relevant legislation (detailed further in Section 2.2 of this report), the following steps are involved when carrying out EIA screening for a particular project:

- **Step 1** is to determine if the proposed infrastructure works represent a project as understood by the Directive and if a mandatory EIAR is required. Such projects are defined in Article 4 of the EIA Directive and set out in Annexes I and II. Projects requiring a mandatory EIAR are included under Planning and Development Regulations (2001-2023), specifically Schedule 5, Part 1 – Development for the purposes of Part 10, Section 50 of the Roads Act (1993-2022), S.I. No. 279 of 2019 amendments, and the prescribed projects listed in Section 8 of the Roads Regulations,1994 (S.I. No. 119 of 1994).

  Subthreshold development - The proposed development is also screened to determine if it requires the preparation of an EIAR under the Planning and Development Regulations (2001-2023) Schedule 5, Part 2 – Development for the purposes of Part 10 (the only type of development to which thresholds do not apply are those considered to always be likely to have significant effects and therefore require an EIAR) or Section 50(1)(b) and 50(1)(c) of the Roads Act 1993-2022.

- **Step 2** is to determine if the project is likely to have significant effects on the receiving environment. Section 50 (1)(b) of the Roads Act (1993-2022) states that *'if An Bord Pleanála considers that any road development proposed (other than development to which paragraph (a) applies) consisting of the construction of a proposed public road or the improvement of an existing public road would be likely to have significant effects on the environment it shall direct that the development be subject to an environmental impact assessment.'*

  Section 50 (1)(c) of the Roads Act (1993-2022) states that '*where a road authority or, as the case may be, the Authority considers that a road development that it proposes (other than development to which paragraph (a) applies) consisting of the construction of a proposed public road or the improvement of an existing public road would be likely to have significant effects on the environment, it shall inform An Bord Pleanála in writing prior to making any application to the Bord for an approval referred to in section 51(1) in respect of the development.'*

  Section 50 (1)(e) of the Roads Act (1993-2022) states '*where a decision is being made pursuant to this subsection on whether a road development that is proposed would or would not be likely to have significant effects on the environment, An Bord Pleanála, or the road authority or the Authority concerned (as the case may be), shall take into account the relevant selection criteria specified in Annex III.'* Annex III as has been transposed into Irish Legislation via Schedule 7 of the Planning and Development Regulations 2001-2023.

  There are no exacting rules as to what constitutes "significant" in terms of environmental impacts. The responsibility is on Planning Authorities to carefully examine every aspect of a development in the context of characterisation of the project; location of the project and type and characteristics of potential impacts. It is generally not necessary to provide specialist studies or technical reports to complete this screening process, rather to investigate where further studies may be required, and where risks, if any, to the integrity of the receiving environment may lie.

For the purposes of screening sub-threshold development for EIA, all the relevant information as presented within EIA Planning and Development Regulations 2001-2023 (Schedule 7A) has been provided on behalf of the applicant, Cork County Council. The potential for the project to pose a significant impact to the receiving environment has also been evaluated in accordance with criteria listed in the Planning & Development Regulations, 2001 - 2023 (Schedule 7).

The findings of the EIA screening assessment prepared for the project has informed our professional opinion as to whether an EIAR is warranted for the proposed project, with due regard to all relevant statutory requirements and technical guidance. However ultimately it is the responsibility of the relevant planning authority to make a determination as to whether an EIAR is required for a particular project, based on screening conducted by the planning authority.

2.2. Relevant Guidance

The Environmental Impact Directive (85/337/EEC) was brought into force in 1985. Subsequent amendments were made with the following pieces of legislation - 97/11/EC, 2003/35/EC, 2009/31/EC, 2011/92/EU and 2014/52/EU. The Directive was originally transposed into Irish Law by the European Communities (Environmental Impact Assessment) Regulations, 1989 (S.I. No. 349/1989). This amended the Local Government (Planning and Development Act) 1963 and introduced the requirement for an Environmental Impact Assessment in certain specified circumstances. The most recent amendment to the Directive is focused on clarifying and simplifying the process of EIA. The screening criteria have been updated, and Member States have a mandate to simplify their assessment procedures. EIA reports are to be made more readily understandable to members of the general public. Section 50 of the Roads Acts 1993 and the 2022 amended Regulation outlines certain categories of roads projects which require an EIAR.

EIA Regulations ((Planning and Development) Environmental Impact Assessment) Regulations 2018 (S.I No. 296 of 2018)) transposing the 2014 EIA Directive came into operation on 1st September 2018. These regulations amend the Planning and Development Regulations 2001 (S.I. No.600 of 2001); they seek to transpose EIA Directive 2014/52/EU and to give further effect to the 2011 Directive.

Criteria to evaluate whether significant impacts on the receiving environment will arise from a proposed project are listed under Schedule 7 of the relevant Planning & Development Regulations (2001-2023). A list of the relevant information to be provided by the applicant or developer for the purposes of sub-threshold EIA screening is presented in Schedule 7A of the Regulations, and summarised below;

1. A description of the proposed project, including in particular:
    a. a description of the physical characteristics of the whole proposed project and, where relevant, of demolition works; and,
    b. a description of the location of the proposed project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.
2. A description of the aspects of the environment likely to be significantly affected by the proposed project.
3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed project on the environment resulting from:
    a. the expected residues and emissions and the production of waste, where relevant: and,
    b. the use of natural resources, in particular soil, land, water and biodiversity.
4. The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7.

In addition to the requirements of the Planning Regulations, the following guidance was also considered in the preparation of this EIA Screening Report:

- Department of the Environment, Community & Local Government (2013). *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment.*
- Department of the Environment, Heritage and Local Government (2003). *Guidance for Consent Authorities regarding sub-threshold Development.* Published by the Stationery Office.
- Department of Housing, Planning and Local Government (2018). Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment.
- Environmental Protection Agency (EPA) (2022). '*Guidelines on the information to be contained in Environmental Impact Assessment Reports'*

- European Commission (2015). *Environmental Impact Assessment – EIA, Overview, Legal context*.
- European Council Directive (EU) 2014/52/EU of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private developments on the environment.
- European Council Directive (EC) 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private developments on the environment.
- European Council Directive (EU) 2009/31/EC on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006.
- European Council Directive (EU) 2011/92/EU on the assessment of the effects of certain public and private developments on the environment.
- European Council Directive (EC) 85/337/EU of 1985 on Environmental Impact Directive.
- Environmental Resources Management (2001). *Guidance on EIA Screening.* Published by the European Commission.
- Statutory Instrument S.I. No. 349/1989. European Communities (Environmental Impact Assessment) Regulations, 1989.
- Statutory Instrument S.I. No. 600 of 2001. Planning and Development Regulations 2001.
- Statutory Instrument S.I. No. 296 of 2018. European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018.
- Statutory Instrument S.I. No. 235/2019. Planning and Development Act 2000 Exempted Development) (No. 2) Regulation 2019.
- Statutory Instrument S.I. No. 46/2020 - Planning and Development (Amendment) Regulations 2020.
- Statutory Instrument S.I. No. 692/2020 - Planning and Development (Amendment) (No. 2) Regulations 2020.
- Statutory Instrument S.I. No. 75/2022 - Planning and Development Act (Exempted Development) Regulations 2022.
- Statutory Instrument No. 1/2023 - Planning And Development And Foreshore (Amendment) Act 2022 (Commencement) Order 2023.

3. Environmental Impact Assessment Screening

3.1. Step 1 - Mandatory Screening for EIA

The proposed project has been screened against the criteria outlined in Section 50(1)(a) of the Roads Act 1993-2022[1] and Article 8 of S.I. No. 119/1994- Roads Regulations, 1994[2]. This project does not fall within any category of development requiring a mandatory EIA; hence the preparation of an EIAR is not required under Section 50 (1)(a). The proposed project has been screened against the criteria outlined in Schedule 5 Part 1 of the Planning and Development Regulations 2001-2023 and it does not fall within any category of development requiring a mandatory EIA; hence the preparation of an EIAR is not required under Schedule 5 Part 1 of the Planning and Development Regulations 2001-2023.

3.1.1. Sub-threshold Development

The proposed project has been screened against the criteria outlined in Schedule 5 Part 2 of the Planning and Development Regulations 2001-2023, as follows:

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> *b (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. (In this paragraph, "business district" means a district within a city or town in which the predominant land use is retail or commercial use.)*

The proposed project is considered to be urban development and is located 'elsewhere' i.e. not in a business district or other parts of a built-up area. The project area is 19.4ha and therefore, it is considered that the preparation of an EIAR, under Schedule 5 Part 2 10(iv) of the Planning and Development Regulations 2001-2023 is not required.

The proposed project has been screened against the criteria outlined in Section 50(1)(b) and 50(1)(c) of the Roads Act 1993-2022, as follows;

> Section 50(1)(b) – *'If An Bord Pleanála considers that any road development proposed (other than development to which paragraph (a) applies) consisting of the construction of a proposed public road or the improvement of an existing public road would be likely to have significant effects on the environment it shall direct that the development be subject to an environmental impact assessment.'*
>
> Section 50(1)(c) – '*Where a road authority or, as the case may be, the Authority considers that a road development that it proposes (other than development to which paragraph (a) applies) consisting of the construction of a proposed public road or the improvement of an existing public road would be likely to have significant effects on the environment, it shall inform An Bord Pleanála in writing prior to making any application to the Bord for an approval referred to in section 51(1) in respect of the development.'*

Therefore, it is considered that the project should undergo an EIA screening to determine if an EIAR would be required in accordance with Section 50(1)(b) and 50(1)(c) of the Roads Act 1993-2022.

3.2. Step 2 - Determining if the project is likely to have significant effect on the receiving environment.[3]

All relevant information as required under Schedule 7A has been provided on behalf of Cork County Council and is presented within this screening report. The potential for this project to pose a significant impact to the receiving environment has also been evaluated in accordance with criteria listed in the Planning & Development Regulations, 2001-2023 (Schedule 7), as presented within this screening report.

[1] https://www.irishstatutebook.ie/eli/2022/si/437/made/en/print
[2] http://www.irishstatutebook.ie/eli/1994/si/119/made/en/print
[3] Pursuant to Schedule 7(A) of the Planning and Development Regulations as amended 2001-2021

3.2.1. Description of the Proposed Project (Schedule 7A (1))

A description of the Physical Characteristics of the Whole Proposed Project and Where Relevant of Demolition Works (Schedule 7A (1) (a))

The proposed project comprises the following:

A. Western (A1) and Eastern (A2) Services Corridor Link Roads connecting Wises Road (L3616-0) on the western side of the UEA with Carrigane Road (L3617-25) on the eastern side of the UEA. The roads will also provide connectivity to Station Road (L3603-0), Leamlara Road (L3607-37) and the Ballyadam Road (L7640-0) and includes the realignment of the Carrigane Road near Ballyadam Bridge;
B. Northern Services Corridor Link Road connecting the Western Services Corridor Link Road with the new Northern Schools Link Road via an existing vehicular underpass below the Cork to Midleton railway line;
C. Upgrade/ re-alignment of Wises Road (C1) from north of its crossing of the Cork to Midleton Railway Line to the L3615-0 to the north of the UEA. The upgrade will also include a pedestrian/ cycle bridge (C2) across the railway line providing connectivity to Wises Road south of the railway;
D. Upgrade/ re-alignment of Station Road (D1) from south of its crossing of the Cork to Midleton Railway Line to the L3615-0 to the north of the UEA. The upgrade will also include a pedestrian/ cycle bridge (D2) across the railway line providing connectivity to Station Road south of the railway line;
E. Upgrade/ re-alignment of Leamlara Road from its junction with Station Road to its new western junction with the Eastern Services Corridor Link Road and from north of the UEA to its new eastern junction with the Eastern Services Corridor Link Road;
F. Upgrade/ re-alignment of Ballyadam Road from its new junction with the Eastern Services Corridor Link Road to the L7639-0 north of the UEA including the permanent closure of the existing Ballyadam Road between the Eastern Services Corridor Link Road and Carrigane Road to vehicular traffic including the junction of the existing Ballyadam Road and Carrigane Road

The infrastructure will also include shared cycling/pedestrian paths connecting the new road network with the planned Carrigtwohill to Midleton Inter-urban Cycle Route, areas of green open space, underground services including surface water drainage networks including detention ponds and attenuation, foul water networks, electrical and fibre optic/ telecoms ducting and water and gas supply. Services will be connected to existing services/ infrastructure in Carrigtwohill as required.

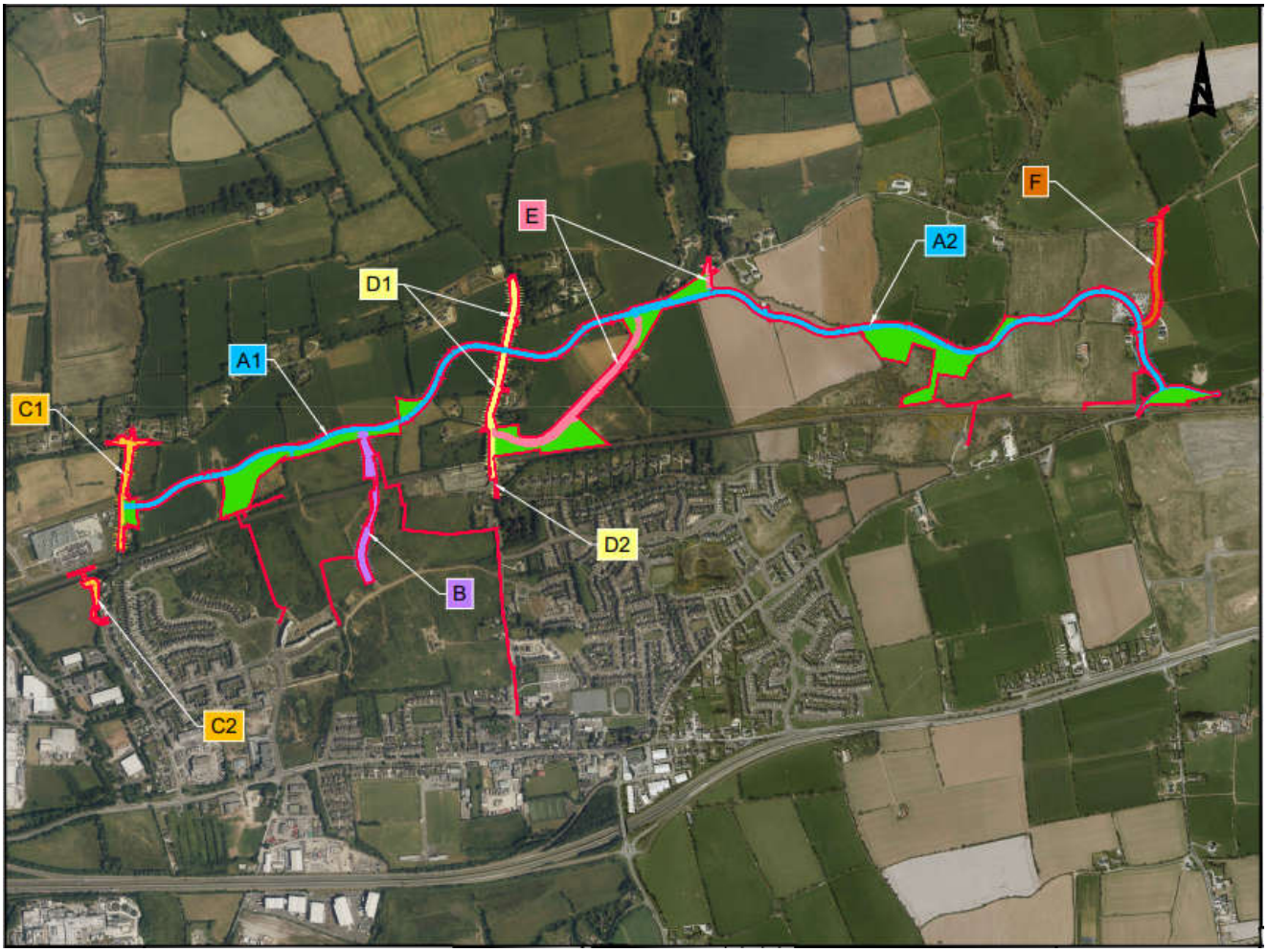

Figure 3-1 - Carrigtwohill URDF Initiative - UEA Infrastructure

3.2.1.1. Eastern and Western Services Corridor Link Roads

The proposed Western and Eastern Services Corridor Link Roads will connect the existing Wises Road (L3161-0) on the western side of Carrigtwohill UEA to the existing Carrigane Road (L3617-25) on the eastern side of the UEA. These roads will also have connectivity to Station Road (L3603-0) and Leamlara Road (L3607-37) within the UEA. The aim of these roads is to provide pedestrian, cyclist and vehicular access to development lands in the Carrigtwohill UEA to facilitate the commencement of development within the UEA. The roads will include all ducts and services to facilitate the future development of housing and associated public infrastructure in the UEA. Water supply and wastewater pipework will also be included within the roads. A segregated cycle track and footpath and bus stops will be provided along both sides of the road. Provision has also been made along the services corridor link roads for from the adjacent lands in the UEA. The construction of the Eastern Services Corridor Link Road requires the demolition of a farm out-building.

3.2.1.2. Northern Services Corridor Link Road

The Northern Services Corridor Link Road is a proposed road connecting the Western Services Corridor Link Road with the new Northern Schools Link Road via an existing vehicular underpass below the Cork to Midleton railway line.

The aim of the road is to provide pedestrian, cyclist and vehicular access to development lands in the Carrigtwohill UEA to facilitate the commencement of development within the UEA. The road will include ducts, services pipework and the provision of surface water drainage, drinking water pipework and wastewater services pipework.

A segregated pedestrian/cycle track will be provided at the existing underpass. Generally segregated footpaths and cycle tracks will be provided along both sides of the road. At the underpass the footpath and cycle track will join the route of the planned Carrigtwohill to Midleton Inter-urban Cycle Route which is being developed as part of a separate project.

3.2.1.3. Upgrade/ Re-alignment of Wises Road, Station Road, Leamlara Road and Ballyadam Road

The upgrade of the above roads is proposed as follows:

- Wises Road from north of its crossing of the Cork to Midleton Railway Line to the L3615-0 to the north of the UEA. The upgrade will also include a pedestrian/ cycle bridge across the railway line providing connectivity to Wises Road south of the railway line. The road upgrade requires the demolition of a former dwelling on the east side of the road;
- Station Road from south of its crossing of the Cork to Midleton Railway Line to the L3615-0 to the north of the UEA. The upgrade will also include a pedestrian/ cycle bridge across the railway line providing connectivity to Station Road south of the railway line;
- Leamlara Road from its junction with Station Road to its new western junction with the Eastern Services Corridor Link Road and from north of the UEA to its new eastern junction with the Eastern Services Corridor Link Road. It is noted that no works are proposed to the south of the existing Leamlara Road boundary i.e. the Woodstock Stream side of the road. No works on the south side of this road will extend into the roadside verge, treeline or hedgerow and the existing buffer between the road and the stream will be maintained;
- Ballyadam Road from its new junction with the Eastern Services Corridor Link Road to the L7639-0 north of the UEA including the permanent closure of the existing Ballyadam Road between the Eastern Services Corridor Link Road and Carrigane Road to vehicular traffic including the junction of the existing Ballyadam Road and Carrigane Road.

3.2.1.4. UEA Community and Open Space Development

Community and Open Space will be provided in different areas of the UEA comprising of shared cycling/pedestrian paths connecting the new roads, footpaths and cycle tracks with the planned Inter-urban Cycle Route. The Community and Open Space will largely be Passive Open Space.

There is a total of approximately 5.5 hectares of passive open space, included in the proposals. This space has been designated as passive to enhance local biodiversity value as appropriate for each area. This will be done through the retention and integration of existing trees and hedgerows, landscaping through the planting of native trees and other suitable plant species and the planting of pollinator friendly species. Planting in each area will be specified by a Landscape Architect under the advice of a suitably qualified and experienced ecologist so that it is most appropriate for the characteristics of that area and to retain connectivity to the wider green infrastructure network.

Surface water detention ponds, stream overflow channels and low lying areas will encourage biodiversity through the creation of new aquatic and wetland habitats. These areas will also have amenity value and provide surface water pollution prevention measures which will also be located in these areas. Planting in these areas will also be specified by a Landscape Architect under the advice of a suitably qualified and experienced ecologist. These areas will also have amenity value and provide surface water pollution prevention measures which will also be located in these areas.

3.2.1.5. Drainage and Services

Surface Water Drainage

A surface water drainage system is proposed to accommodate surface water run-off from the Services Corridor Link Roads and the proposed road upgrades. The proposed system is also designed to accommodate attenuated surface water design flows that would be generated by future UEA development.

The UEA is located within a “Karst” area and the proposed system has been designed to manage the associated risk but also having regard to the potential for nature-based solutions and the objectives within the County Development Plan 2022. While systems of gullies/pipes are proposed in the road pavement for the management of the “Karst” risk, road verges will be used for retention/treatment of surface water run-off upstream and the attenuation/treatment of the flows downstream is being proposed and managed in open ponds/basins situated within open space area/network.

The overall flow attenuation design approach is based on limiting surface water discharge to greenfield run-off rates, based on QBAR (or mean annual peak flow) from existing permeable areas where this does not require significant diversion of watercourses/ removal of hedgerows. The current run-off rates from existing impermeable road areas will also be reduced post-construction. This will result in a reduction in the total discharge rates, and associated impacts, following the construction of the proposed infrastructure to the Woodstock and Poulinska Streams respectively.

There will be several surface water networks serving infrastructure in the western and eastern UEA as summarised below.

1. In the western UEA the main surface water network will comprise of road gullies, pipes and manholes within the road corridors of Wises Road, the western Services Corridor Link Road and the most northern part of Station Road. The run-off will pass through the network into a silt trap and on to a large detention pond which will remove pollutants and which will provide attenuation. Attenuated flows from the pond will discharge to the existing drainage ditch running along the northern boundary of the Cork to Midleton railway line. The drainage ditch connects to the Woodstock Stream at a location south of the railway line.
2. A drainage network is required for the northern part of the Northern Services Corridor Link Road north of it's crossing of the railway line. This will consist of gullies, pipes and manholes. The surface water will pass through a silt trap, a by-pass separator and on to an attenuation tank. It will discharge to a new piped crossing of the railway line before discharging to a 600mm diameter sewer which will be extended from an existing 1050mm surface water sewer at the southern end of Station Road to the railway crossing. Discharge will again be limited to greenfield run-off rates (QBAR).
3. A drainage network is required for the lowest part of the Northern Services Corridor Link Road including the northern approach to the underpass below the Cork to Midleton railway line. This will consist of pipes, gullies, channel drains and manholes. The drainage route will run below the route of the Inter-urban Cycle Route as it passes below the Cork to Midleton railway line and below the Northern Services Corridor Link Road south of the railway line. It will then connect to an existing surface water drainage network in Castlelake via. a silt trap and a by-pass separator.
4. A separate drainage network will be provided for the southern part of Station Road, Leamlara Road and the Western Services Corridor Link Road between Station Road and Leamlara Road. This will consist of gullies, pipes and manholes. The run-off will pass through the network into a silt trap and on to a detention pond south of Leamlara Road which will remove pollutants and which will provide attenuation. Discharge from the attenuation/ treatment pond will be to Woodstock Stream north of the Cork to Midleton railway line.
5. In the eastern UEA the main surface water network will comprise of road gullies, pipes and manholes within the corridors of Leamlara Road and the eastern Services Corridor Link Road. The run-off will pass through surface water networks into a silt trap and on to a detention/ treatment ponds which will remove pollutants and which will provide attenuation. Discharge from the ponds will be to the Poulinska Stream north of the railway line.
6. A separate drainage network will be provided in the eastern UEA for the upgrade of the Ballyadam Road and the Ballyadam Road/ Carrigane Road junction. This network will comprise of road gullies, pipes and manholes within the road corridors. This network will discharge to an attenuation tank via a silt trap and a by-pass separator which will be used to remove hydrocarbons. Discharge from the tank will be to an existing drainage ditch to the west of Ballyadam Road. This drainage ditch discharges to the Poulinska Stream north of the railway line.

Nature based drainage solutions as per 'Nature-based solutions to the Management of Rainwater and Surface Water Runoff – Water Sensitive Urban Design – Best Practice Interim Guidance Document' will be implemented upstream of the main drainage network during the detailed design. There are generous verges proposed along the new roads as well as pockets of green open space. They will be used where possible for the planting of trees and low growing planted area which will retain and treat surface water run-off from adjacent hard standing areas before discharge to the downstream drainage network.

Foul Drainage

Two separate foul gravity sewer pipe networks are proposed to facilitate future development in the Carrigtwohill UEA. It is noted that no wastewater flows will be generated as part of the infrastructure proposed.

In the western part of the UEA a foul sewer pipeline, comprising of manholes and pipes, will be laid within the upgraded Wises Road and the Western Services Corridor Link Road. The sewer pipeline will connect to an existing sewer pipe crossing of the railway line in the western part of the UEA which was laid during the re-construction of the Midleton to Glounthane railway line (in 2009) to allow for wastewater connectivity from the UEA to the existing sewer network south of the railway line. South of the railway line crossing the sewer will connect to the existing Irish Water foul sewers. A response to a pre-connection enquiry to Irish Water states that this connection is feasible subject to identified upgrades being implemented.

In the eastern part of the UEA a foul sewer pipeline will be laid within the Eastern Services Corridor Link Road. The sewer pipeline will connect to an existing sewer pipe crossing of the railway line which was laid to allow for wastewater connectivity from the UEA to the existing Irish Water wastewater pumping station (which is located south of the railway line). A response to a pre-connection enquiry to Irish Water states that this connection is feasible subject to identified upgrades being implemented.

Stub pipework will be provided from the proposed foul sewer network along the Services Corridor Link Road and Wises Road to allow for future connections to accommodate development in the UEA. While sufficient flow capacity will be provided in the pipework, any connections will be subject to Irish Water approval.

3.2.1.6. Other Services

All new roads and road upgrades will also include ducting and services that would be normally required for the commencement of development within the Urban Expansion Area. This will include but not be limited to ESB ducting, Eir ducting, gas mains, water mains, public lighting ducting and Cork County Council spare ducting. All services and ducts will be provided within the new/ upgraded road corridors.

3.2.1.7. Public Lighting

New public lighting will be provided along the extents of the proposed project. The road lighting will be designed to the correct lux levels for the road carriageway, cycle lanes, footpaths and public spaces. The lighting shall be designed in accordance with Cork County Council's Public Lighting Manual and Product Specification 2020 and BS 5489:2013.

3.2.1.8. Signage and Road Markings

Traffic signs and road markings will be provided in accordance with the Department of Transport Traffic Signs Manual.

3.2.1.9. Construction Methodology

For each phase of infrastructure development, the works will commence with site clearance/ accommodation works. Temporary traffic management including measures for pedestrians and cyclists will be put in place. Pre-construction demolition surveys of buildings/ boundary walls necessary for the construction of the works will be undertaken followed by the demolition of these structures. Trees/ vegetation to be retained will be marked/ protected. Natural buffer areas on existing watercourses outside of the infrastructure area will be maintained and protected during the construction of the proposed infrastructure. The site will be cleared of existing vegetation to be removed, redundant fencing and road signage, redundant street lighting . Vegetation clearance will be done in the appropriate season, i.e. outside the bird nesting season (March 1st – August 31st inclusive).

Underground utilities which conflict with the main works will be uncovered using mechanical excavators and hand digging. A utility survey, including slit trenches for verification, will be carried out during the detailed design stage to determine the location of services to the most accurate extent possible. Any service diversions or protection works that are required will be commenced at this stage. This will include the diversion of all overhead lines to underground ducts and chambers on Wises Road, Station Road, Leamlara Road and Ballyadam Road as necessary for that phase of development.

The routes of new roads to be constructed (Western/ Eastern and Northern Services Corridor Link Roads) and roads to be upgraded (Wises Road, Station Road, Leamlara Road, Ballyadam Road) will be excavated to formation/ sub-formation level. It is anticipated that generally the maximum excavation depth for the road build up will be 1 metre. Excavations will be undertaken by mechanical means with any spoil arisings to be removed off site or reused locally where testing confirms its suitability. The new roads, cycle tracks and footpaths will then be constructed.

Generally, the roads will have asphalt surfacing with road widths varying by location as outlined earlier in this report. Sub-base and base layers will be compacted stone materials and asphalt layers respectively. Footpaths will be a mixture of concrete and natural stone finishes. The roads and cycle tracks will have asphalt surfacing.

Drainage works will run in tandem with earthworks and road construction. There is a north to south fall across the site and interceptor filter drains will be installed on the northside of the road prior to the earthworks commencing to prevent overland flows from impacting upon the earthworks. These drains will drain to ground directly or to existing drainage ditches via the detention ponds which are to be excavated as part of the surface water drainage network. Gullies will be connected to a new surface water drainage sewer, consisting of pipes and manholes, to be installed below the new alignment. The maximum anticipated trench excavation depths for the surface water network is 4 metres. The detention ponds will be an anticipated maximum depth of 2 metres.

The foul drainage, consisting of a network of manholes and pipes, will be installed at the same time as the surface water drainage network. The drainage will connect to existing foul sewers south of the railway line. Maximum trench excavation depths for the foul water network will be 4 metres. Other services i.e., gas mains, ESB ducting, Eir ducting etc. will also be installed at the same time.

Road crossings of existing field drains and streams will also run in tandem with earthworks. Smaller culverts of field drains will be pipe culverts up to a diameter of 900mm. Culverts of field drains larger than this will be box culverts with the maximum width to be 1500mm. Crossings of the Woodstock Stream will be small bridge

crossings with abutments constructed outside of the stream embankments. All culverts, headwalls and bridge beams/ decks will be pre-cast concrete. The bed level of the culverts will meet the requirements of 'Guidelines for the Crossing of Watercourses During the Construction of National Road Schemes'. Where proposed drains cross below watercourses/ ditches the methods used to install them will allow for maintaining existing buffer areas where possible.

New road signs, road markings, public lighting columns, traffic signals and bollards will be installed and commissioned where required. Areas of soft landscaping (verges, open space areas) will be top-soiled, seeded and planted following specification by a Landscape Architect working with a suitably qualified and experienced ecologist. Permanent accommodation works will be completed, including the erection of permanent fencing and boundary walls and other required boundary treatments. Temporary traffic management measures will be removed when appropriate.

The new cycle/ pedestrian bridges at the existing Barry's and Wise's Bridges will be constructed on piled foundations and will span across the railway. Necessary clearances, protection and monitoring measures, as required by Irish Rail, will be put in place for the construction of the bridges.

3.2.1.10. Project Phasing

The Cork County Development Plan (2022) notes that infrastructure, necessary for housing development to commence within the UEA, will be delivered in two phased bundles namely 'Bundle A' and 'Bundle B' (subject to funding).

Bundle A includes:

- Western Services Corridor Link Road (from Wises Road to Ballyadam Road)
- Northern Services Corridor Link Road
- Upgrade of Station Road
- Upgrade of Leamlara Road
- Small Park in western UEA (Community and Open Space development)
- Surface water management and other services e.g., water supply, wastewater etc. for western UEA

The County Development Plan also notes that the early phases of development are also likely to require the modification of Barry's Bridge (Station Road) to provide for cyclists and pedestrians. The upgrade of Wises Road is included in special development objective CT-U-04 and is linked to development in the western UEA. The provision of segregated pedestrian/cycle link across the railway at Wises Road is included in Phase 2 of the "Core Off-Site Infrastructure".

Bundle B infrastructure includes:

- Eastern Services Corridor Link Road
- Small Park in eastern UEA (Community and Open Space development)
- Surface water management and other services e.g., water supply, wastewater etc. for eastern UEA

The upgrade of Ballyadam Road is included in special development objective CT-U-20 and is linked to development in the eastern UEA.

The County Development plan proposes to deliver Bundle A first. It also however notes that the phasing arrangements are flexible and in the event that it proves possible to commence development on the eastern part of the UEA, then Infrastructure Bundle 'B' (together with the measures proposed for Station Road Bridge and Leamlara Road Upgrade) will be required at the outset.

A Description of the Location of the Proposed Development, with Particular Regard to the Environmental Sensitivity of Geographical Areas Likely to be Affected (Schedule 7A(1)(b)).

The location of the proposed project is detailed in Section 3.2.1. The environmental sensitivity of geographical areas, which could potentially be affected by the proposed project is evaluated in the following section.

The proposed project is located within Carrigtwohill with surrounding lands designated with the following land use zonings:

- Industry;
- Existing Residential/Mixed Residential and Other Uses;
- Existing Mixed/General Business/Industrial Uses;
- Residential;

- Green Infrastructure;
- Special Policy Area;
- Business and General Employment; and,
- Town Centre/Neighbourhood Centres.

Hydrology and Designated Sites

The proposed project is located within the Lee, Cork Harbour and Youghal Bay Water Framework Directive (WFD) catchment area and Tibbotstown sub-catchment area. There are no EPA mapped watercourses crossed by the proposed project, with a number of drainage ditches and streams crossed. These streams and ditches drain to the Tibbotstown, Anngrove, Woodstock and Poulinska streams or to karst systems and ultimately to Cork Harbour.

There are 2no. European sites within the potential zone of influence of the proposed project;

- Great Island Channel SAC (site code: 001058)
- Cork Harbour SPA (site code: 004030)

The estuary to the south of Carrigtwohill forms part of these designated sites and they are both >1km from the project site. Surface and ground waters from within the Carrigtwohill lands discharge to this area.

The Great Island Channel SAC is designated as a site of international importance for the conservation of natural habitats; Mudflats and sandflats not covered by sea water at low tides, and Atlantic salt meadows (*Glauco-Puccinellietalia maritimae).* The Great Island Channel SAC is selected for 2 No. habitat types.

The Cork Harbour SPA is a site of international conservation status for its importance in hosting the following birds; Little Grebe *(Tachybaptus rufi collis),* Great Crested Grebe *(Podicepts crisatus),* Cormorant *(Phalacro corax carbo),* Grey Heron *(Ardea cinerea),* Shelduck *(Tadorna tadorna),* Wigeon *(Anas penelope),* Teal *(Anas crecca),* Pintail *(Anas acuta),* Shoveler *(Anas clypeata),* Red-breasted Merganser *(Mergus serrator),* Oystercatcher *(Haematopus ostraleagus),* Dunlin *(Calidris alpina),* Black-tailed Godwit *(Limosa limosa),* Bar-tailed Godwit *(Limosa lapponica),* Curlew *(Numenius arquata),* Redshank *(Tringa tetanus),* Black-headed Gull *(Chroicocephalus ridibundus),* Common Gull *(Larus canus),* Lesser Black-backed Gull *(Lavus fuscus),* and Common Tern *(Sterna hirundo).*

There are no proposed Natural Heritage Area (NHA) and no NHA's within the proposed project area. There are 19no. pNHA's within the zone of influence of the project location, with the pNHAs listed in Table 3-1 located within 5km of the project site. The Great Island Channel pNHA is located within the estuary to the south of the proposed project.

Table 3-1 –pNHA's within 5km of the project area

Site Name & Code	Approximate Distance from Project site
Great Island Channel (001058)	>1km south west
Leamlara Wood (001064)	2.4km north
Ballynaclashy House, North Of Midleton (0000099)	3.1km north east
Rockfarm Quarry, Little Island (001074)	4.9km south west

Biodiversity

Cork Harbour is listed as a Wetland of International Importance (site no. 837) under the Convention on Wetlands of International Importance especially as Waterfowl Habitat ("the Ramsar Convention"). Cork Harbour is also recognised as an Important Bird Area (site code: IE088) by BirdLife International. These designations are based on the significant examples of estuarine habitats occurring within and adjoining the harbour, particularly mudflats and saltmarshes, as well as the importance of the harbour for both wintering and breeding waterbirds, with numbers of wintering waterfowl regularly exceeding 20,000 individuals from 22 different species. The proposed development is connected to these sites via surface water pathways and there is also potential for ex-situ impacts on field-feeding waders, e.g. Black-tailed Godwit (*Limosa limosa*) and Curlew (*Numenius arquata*), which may leave these sites to feed in the fields along the proposed URDF Infrastructure alignment.

There are no UNESCO World Heritage or Biosphere Reserve sites, or sites designated under the Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention), in close proximity to the proposed development or within its Zone of Influence.

Douglas Estuary (site code: WFS-67) is a wildfowl sanctuary, which forms part of the wider Cork Harbour complex and within the Zone of Influence of the proposed development. The Lough, Cork (site code: WFS-12) also supports some birds from Cork Harbour/the Zone of Influence.

There are no statutory Nature Reserves or any National Parks designated in close proximity to the proposed development or within its Zone of Influence.

Waterbird surveys were undertaken between November 2022 and March 2023 by Dr. Tom Gittings to *'assess the usage of the Carrigtwohill URDF Initiative lands by field-feeding waterbirds'* (Atkins, 2023). Survey results are included in the AA Screening (Atkins, 2023) which supports this application and are summarised as follows:

- Curlews were recorded field feeding in the Carrigtwohill URDF Initiative lands on the first four surveys, but not on any of the subsequent surveys, with the largest record coming from one area in the central part of the Carrigtwohill URDF Initiative lands, in a triangular group of fields enclosed by the two roads that fork from the Station Road after it crosses Barry's Bridge. The same flock was recorded during a later survey in a large field across the road to east with a single Curlew recorded in the Carrigtwohill URDF Initiative lands in the smaller field of rough grassland just to the east of Barry's Bridge.
- Black-tailed Godwits were recorded within the Carrigtwohill URDF Initiative lands on two occasions; both times the Black-tailed Godwits were recorded with the Curlews
- Records of single Black-headed Gulls on two dates were the only records of other waterbird species in the Carrigtwohill URDF Initiative lands.

Breeding bird surveys were conducted during summer months, during which 22no. species were recorded. None of these species recorded were Annex I or Red-listed species, with 3no. Amber-listed species recorded; Robin, House Sparrow and Swallow. Robin and House Sparrow were recoded as possibly breeding while the Swallow was confirmed to be breeding. No bat roosts were confirmed during bat surveys with several trees and structures with features of moderate or high suitability for bat roosting identified.

Mammal surveys were carried out by Greenleaf Ecology (2020) and the EcIA identifies that Otter and Badger are not considered to be key ecological receptors (KER) for the proposed project. Additionally, due to the 'limited evidence of other mammal species found during the surveys, their conservation and protection status, their habitat requirements and high degree of mobility, they are not considered KERs for the proposed development.' (Atkins, 2023).

4no. species which are classed as vulnerable have been reported within 10km of the project, however there is no connectivity between the project site and these locations. Weasel's-snout or Lesser Snapdragon (Misopates orontium) classed as endangered in Wyse Jackson et al. (2016) was recorded in the vicinity of Carrigtwohill in 1892, with no more recent recordings for this species. This species was not observed during any of the field surveys which informed the EcIA and is therefore considered unlikely to be present.

Surveys for Vascular Plants was undertaken in June/July 2020 (Greenleaf Ecology, 2020) which did not identify any species which are protected under the Flora (Protection) Order, 2022 or listed on Annex II, IV or V to the Habitats Directive. All species recorded are classified as Least Concern on *Ireland Red List No. 10: Vascular Plants (Wyse Jackson et al., 2016).*

An Ecological Impact Assessment Report (EcIA) was prepared by Atkins (2023) to assess the likely effects of the proposed project, '*individually and in combination with other plans and projects, on the sites, habitats, species and other ecological features of Local Importance (Higher Value) or above which were identified within the footprint of the proposed development and its Zone of Influence.'* This EcIA also 'proposed suitable measures to avoid or reduce the likely effects on those features and evaluated any residual effects' in line with Cork County Council's policy in relation to Biodiversity Net Gain. The EcIA concluded that '*the Carrigtwohill URDF Infrastructure Project, provided that it is implemented in accordance with the measures proposed in this EcIA, will not give rise to any significant negative effects on the biodiversity or ecology of the receiving environment and will be aligned with the principle of Biodiversity Net Gain.'*

Hydrogeology

The GSI (2023) groundwater wells and springs database identifies 1no. well which is potentially within the proposed project site, or the immediate vicinity. This borehole (GSI Ref. 1707SWW132) is used for domestic purposes and located to a 2km locational accuracy.

The GSI (1999) provides a framework for the protection of groundwater source zones (i.e. zone of contribution to water supply bore holes). There are no public supplies with designated source protection areas within a 5km radius of the proposed project**.**

The groundwater vulnerability rating beneath the site is predominantly 'moderate' with the northern portion classified as 'high' and 'extreme' and a small portion running from north to south (ca.400m west of Ballyadam Road) classified as 'rock at or near surface or karst' (GSI, 2023). These latter classifications indicate that groundwater is shallow and vulnerable to contamination.

According to the GSI (2023), the proposed project is underlain by 3no. aquifers. The area is predominantly underlain by a locally important bedrock aquifer which is moderately productive only in local zones. The southern portion is underlain by a regionally important aquifer – karstified (diffuse). A gravel aquifer also underlies the western portion of the site which is classified by GSI (2023) as a *'locally important aquifer'*.

The northern section is within the Ballinhasig East GWB (European code IE_SW_G_004) and the southern section is within Midleton GWB (European code IE_SW_G_058). The Ballinhasig GWB is of 'good' WFD status but is identified as 'at risk' of failing to meet good quality status by 2027. The Midleton GWB is of 'good' status with its likelihood of meeting good quality status by 2027 currently under review (EPA, 2023). A key component of the groundwater classification is the assessment of the impact of pollution on the groundwater body. The groundwater status classification process accounts for the ecological needs of the relevant rivers, lakes and terrestrial ecosystems that depend on contributions from groundwater.

Geology

The proposed project is primarily underlain by till derived from Devonian Sandstones, with very minor portions of Gravels derived from Devonian sandstones underlying the western portion of the project (GSI, 2023).

The proposed project site is underlain by 3no. geological formations; Ballysteen Formation (dark muddy limestone, shale) is the predominant formation, the Waulsortian Limestone (massive, unbedded limestone) lies under the southern portion of the proposed development and the northern portion is underlain by the Cuskinny Member (Kinsale Formation) (flaser-bedded sandstone and mudstone).

There are a number of karst features reported by GSI (2023) within the general area of the proposed project, with a Turlough (GSI Ref. 1707SWK006) reported to a 20m locational accuracy located in the eastern portion of the proposed project. A second Turlough (GSI Ref. 1707SWK005) is located within 50m north of the project site in this area and is potentially connected to the Turlough within the project site.

There are no Geological Heritage Sites within the vicinity of the proposed project.

There are no EPA licenced facilities within the site or its immediate environs (EPA, 2023). The closest licenced facility, Fournier Laboratories Ireland Limited T/A AbbVie (P1046-01), is located ca. 0.3km west of the site.

Flooding

A search of OPW floodmaps (2023) does not indicate a probability of flooding risk within the proposed project site.

A flood risk assessment (FRA) has been undertaken in accordance with under the Planning System and Flood Risk Management Guidelines for Planning Authorities (Department of Environment, Heritage and Local Government & Office of Public Works, 2009). The FRA was completed to inform the proposed development as it relates to flood risk and is included as part of the Part 8 planning application.

A hydraulic model was developed to assess the fluvial flood risk to the proposed development. The model results showed overland flows during the 1% and 0.1% AEP events along the Woodstock Stream, which pass through the UEA lands. Mitigation measures, including a proposed open channel, culverts, and a flow storage, have been incorporated into the model to address these risks as well as risk from pluvial flooding. The flood risk assessment shows that the proposed development, along with the mitigation measures, will not result in increased flood extents or flood levels.

Archaeology and Cultural Heritage

National Monuments Features

An Archaeological and Built Heritage Assessment of Carrigtwohill URDF Initiative - UEA Infrastructure has been undertaken by John Cronin and Associates (2023). The report concludes that *'no recorded sites on the Sites and Monuments Record for Cork are directly or indirectly impacted by the proposed UEA infrastructure. All undisturbed green field locations retain the potential to contain unrecorded features of archaeological origin and a programme of pre-construction geophysical survey and licensed archaeological testing is required to establish if any such features exist within the four green fields. It is noted that relatively small sections of the four green fields will be impacted by the proposed infrastructure. In the event that any previously unrecorded archaeological remains are identified during these site investigations, they will be recorded in situ and the Planning Authority*

and the National Monuments Service will be consulted in relation to any required further mitigation, i.e., preservation in situ (avoidance) or preservation by record (archaeological excavation). Preservation in situ will be undertaken if possible. This would allow for a negligible magnitude of effect resulting in a potential not significant/imperceptible significance of residual effect on the unrecorded, potential archaeological resource. In the event that preservation in situ is not possible preservation by record will be undertaken. This would result in a high magnitude of effect, albeit ameliorated by the creation of a full and detailed archaeological record, the results of which would be publicly disseminated. This would result in a potential moderate significance of effect in the context of residual impacts on the unrecorded archaeological resource. Overall, it is considered that the probability that features of archaeological significance will be uncovered below the footprint of the road and that mitigation by preservation in-situ is not possible is low and it is considered unlikely that there will be significant effects on the archaeology of the site.'

Architectural Heritage Features

The National Inventory of Architectural Heritage (NIAH) database identifies 3no. Architectural Heritage sites within the boundary of the proposed development (20907550 – Barry's Bridge, 20907551 – Carrigtwohill Railway Station and, 20907553 – Wises Bridge) and 5no. NIAH features within ca. 50m of Station Road. As identified within the Archaeological and Built Heritage Assessment prepared by John Cronin & Associates, the proposed development will not directly impact any structures identified by the National Inventory of Archaeological Heritage (NIAH). There will be a slight negative indirect impact from the proposed pedestrian/ cycle bridge adjacent to Barry's Bridge on the former railway station and former station master's house.

Local Heritage

A former forge building in Terry's-land is of local heritage significance and, the scheme has been designed to allow its preservation. Demolition of the associated dwelling (which is of less significance) is unavoidable. It is recommended that a detailed Building Survey of the dwelling associated with the former forge building is undertaken in order to compile a full record of the extant structure(s) in written, drawn and photographic formats. It is recommended that the sections of boundaries to be removed be documented and described prior to their removal.

Population and Human Health

There are 21no. Seveso (Control of Major Accident Hazards Regulations (COMAH)) establishments within 15km of the proposed project site, the closest being Merck Millipore Ltd., which is a lower tier site, ca.0.7km south of the project site. Due to the distance of this Seveso site from the proposed project site and the activity carried out at this site the proposed project is not located in a high-risk area with respect to major accidents/ disasters. Due to the nature, scale and location of the proposed project, there will be no impact on any of these Seveso sites.

The proposed project site is located within an urban area with a number of sensitive receptors in terms of dust nuisances and noise and vibration nuisances located within the vicinity of the project including (but not limited to) residential houses.

Given the requirement for works within the confines of road corridors and associated verges in places throughout the project site, there will be local impacts on traffic.

Given the location of the proposed project partially within agricultural lands and along field boundaries, land take is required and therefore there is potential for impacts to agricultural practices.

The environmental sensitivity of geographical areas likely to be affected by the proposed project are evaluated further within Section 3.3.1 of this report ('*Location of proposed project - The environmental sensitivity of geographical areas likely to be affected by the proposed project'*) as required under Schedule 7 of the relevant regulations.

3.2.2. Description of Aspects of the Environment Likely to be Significantly affected by the Proposed Project (Schedule 7A (2)).

The proposed project is located <1km north of Great Island Channel SAC / pNHA (Site Code 001058), Cork Harbour SPA (Site Code 004030) / pNHA (Site Code: 000268). The proposed project does not lie within any nature reserves or natural heritage areas (detailed in Section 3.2.1 of this report). The Stage 1 Screening for Appropriate Assessment concluded that *'the proposed development will not, either individually or in combination with other plans or projects, give rise to impacts which would constitute significant effects on the Great Island Channel SAC or Cork Harbour SPA, in view of its/their conservation objectives. Therefore, it is the recommendation of the authors of this report that Cork County Council, as the competent authority, may determine that Appropriate Assessment is not required in respect of the proposed Carrigtwohill URDF*

Infrastructure Project. Should any aspect of the design or construction methodology for the proposed development be materially changed, a new AA Screening Report would be required.'

The other relevant aspects of the environment (including human health), which could potentially be significantly affected by the proposed project are receiving groundwater environment, surface water environment, soils and geology, air quality environment, the receiving noise and vibration environment, and the receiving traffic environment, during the proposed project.

The project will involve excavations to a maximum depth of 4m below ground level (bgl). Groundwater vulnerability in the northern portion of the proposed project is classified as 'high' and 'extreme' with a small portion running from north to south (ca.400m west of Ballyadam Road) classified as 'rock at or near surface or karst' indicating that groundwater is potentially shallow and vulnerable to contamination. A dewatering management plan will be developed by the contractor as required in consultation with the design team and client and implemented during construction. The plan will include at a minimum anticipated areas and depths of groundwater, anticipated volumes, proposed discharge location, environmental site setting, need for any permits or consents and all required details for water treatment as required.

Refuelling will only occur at site compounds. All vehicles and equipment will be inspected on a daily basis for potential fuel leaks. All site vehicles and equipment will be supplied with spill kits. Due to the nature and scale of the project there will be no likely significant impact on groundwater.

There is potential for contamination associated with urban soils and made ground within the vicinity. In the unlikely event that contaminated materials are encountered these will need to be segregated from all uncontaminated soils, temporarily stored (any stockpiles should be lined and covered by heavy duty 1000-gauge plastic), sampled and analysed for relevant parameters (Waste Acceptance Criteria suite e.g., Rilta Disposal Suite). Any contaminated soils must be characterised as per the requirements of the relevant Waste Acceptance Criteria (WAC) under the relevant European Communities Council Decision (EC) (92003/33/EC) and classified in accordance with the requirements of the EPA as set out in the following documents 'Waste Classification List of Waste & Determining if Waste is Hazardous or Non-hazardous' (EPA, 2018). Any contaminated soils must be transported by appropriately permitted hauliers and disposed of to an appropriate EPA licensed Waste Facility in accordance with all relevant waste management legislation.

Surface water drainage from the proposed infrastructure will be collected in a new drainage network. Run-off from most of the infrastructure will be treated and attenuated in detention ponds. Where detention ponds are not feasible due to topography/ ground conditions run-off will be treated in by-pass separators and attenuated in underground attenuation tanks. Discharge from the surface water drainage network will generally be restricted to greenfield run-off rates using flow control devices. Accordingly, no significant adverse impacts are anticipated with respect to surface quality, levels or flow.

The proposed project location partially lies within sub-urban lads with sensitive receptors adjacent to a number of locations i.e. residential properties. Dust may be generated during the construction phase. Construction will require the use of machinery such as dump trucks, mechanical excavators etc. The presence of such machines may result in a temporary increase in noise and dust. The air quality at the proposed project is *'Good'* (EPA, 2023). However, management of dust will be in line with relevant best practice measures such as those set out in *'Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes'* (NRA, 2011). Due to the nature and scale of the proposed project, no significant impact on air quality is anticipated.

Noise levels will not exceed the indicative levels of acceptability for construction noise in an urban environment as set out in the NRA guidance '*Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes'* (NRA, 2014). It is anticipated that the works will be scheduled during day-time hours. Construction contractors will be required to comply with the requirements of the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations, 1988 as amended in 1990 and 1996 (S.I. No. 320 of 1988, S.I. No. 297 of 1990 and S.I. No. 359 of 1996), and the Safety, Health and Welfare at Work (Control of Noise at Work) Regulations, 2006 (S.I. No. 371 of 2006). Due to the nature and scale of the project it is anticipated that the construction works, and operation of the proposed project will not have a significant impact on noise.

Due to the scale and nature of the project it is not anticipated that there will be impacts on traffic volumes during the construction phase of the project. There will be impacts on existing roads where upgrades are proposed and where other works are required within existing roads. These will be local in nature. Traffic Management will be implemented and continuously monitored during construction works so as to manage impacts on traffic flows.

3.2.3. A Description of Any Likely Significant Effects (To the Extent of The Information Available on Such Effects) of The Proposed Project on The Environment (Schedule 7A (3)).

The Expected Residues and Emissions and the Production of Waste where relevant (Schedule 7A (3)(a)).

The proposed project may give rise to air, noise, water emissions and waste. Standard mitigation measures will be implemented by the Contractor to address potential air and noise emissions during the construction phase. The Contractor will ensure that onsite storm water management during the construction phase is carried out in accordance with relevant best practice measures as set out in Construction Industry Research and Information Association (CIRIA) guidance *'C532 - Control of Water Pollution from Construction Sites'.*

Demolition works are proposed as part of the proposed project. 2 no. buildings will be demolished as previously outlined. An asbestos survey shall be carried out prior to any demolition works taking place. The demolition contractor shall review the survey report and allow for the specialist removal of asbestos should this be required. Any asbestos material should be removed by a suitably experienced specialist asbestos removal contractor prior to commencement of any demolition or construction works commencing. Asbestos waste will be hazardous and should be transported and disposed of by a specialist waste disposal contractor (i.e. Rilta Environmental Ltd.). Written confirmation must be obtained to ensure that all structures scheduled for demolition have been certified to be clear of asbestos material before demolition works occur. No demolition works will be permitted to commence until written confirmation has been obtained that all structures scheduled for demolition have been certified to be clear of asbestos material. During the demolition phase the following waste streams will be generated: soil, construction and demolition (C&D) waste, wood etc.

During the construction phase the following waste streams will be generated: construction and demolition (C&D) waste including footways and asphalt / road surface, soil arisings, mixed municipal waste (MMW), recyclables such as plastic wrapping, wooden pallets and paper. All waste will be removed offsite and disposed of by the Contractor to an appropriately licenced waste recovery or waste disposal facility. All waste generated will be disposed of by the Contactor in accordance with all relevant waste management legislation. The Contractor will be responsible for segregating each waste type as per the relevant List of Waste (LoW) (also referred to European Waste Catalogue (EWC) code). All waste materials must be removed offsite by a suitably permitted waste haulage contractor who holds a current valid waste collection permit issued by the National Waste Collection Permit Office (NWCPO). The Contractor will be obliged to ensure all works are carried out in accordance with the relevant guidelines *'Best Practice Guidelines for the preparation of resource & waste management plans for construction & demolition projects'* prepared by the EPA (2021).

The proposed scheme is not likely to have a significant environmental effect with regard to expected residues and emissions and the production of waste.

The Use of Any Natural Resources in particular soil, land, water and biodiversity (Schedule 7A (3)(b)).

The project works will partially be within agricultural lands and therefore natural resources will be required. Trees and vegetation to be retained shall be protected as required in accordance with BS:587:2012 during all works. Existing road upgrades have generally been limited to widening on one side so that treelines/ hedgerow removal is limited to one side of the road upgrade only. In total, it will be necessary to remove approximately 1,960m of hedgerows/ treelines to construct the infrastructure. This will be mitigated by the replacement of this with a minimum of 1,960m of new hedgerows/ treelines aligned to the new infrastructure as well as new areas of planting at various locations of 'passive green space' throughout the UEA.

No works are proposed to the south of the existing Leamlara Road boundary i.e. the Woodstock Stream side of the road. No works on the south side of this road will extend into the roadside verge, treeline or hedgerow and the existing buffer between the road and the stream will be maintained. Natural buffer areas on existing watercourses outside of the infrastructure area will be maintained and protected during the construction of the proposed infrastructure. An exclusion zone around these buffers will be formed using protection fencing to ensure that construction does not encroach on these areas. Where proposed drains cross below watercourses/ ditches the methods used to install them will allow for maintaining existing buffer areas i.e. trenchless methods. An ecological buffer area between the Eastern Services Corridor Link Road and the Poulinska Stream has been maintained in the design where the road runs parallel to the stream.

The proposed project involves an anticipated maximum excavation depth of 4m bgl. All soil requiring disposal offsite will require waste classification in accordance with EPA requirements as set out in the documents 'Waste Classification List of Waste & Determining if Waste is Hazardous or Non-hazardous' (EPA, 2015), and 'Determining if waste is hazardous or non-hazardous' (EPA, 2018), and all relevant waste management legislation. In addition to screening against relevant WAC, the preparation of a waste classification tool (hazwaste

online / EPA paper tool or similar etc.) will be required to be carried out in order to determine the relevant LoW / EWC code for the transport of any waste soils which require offsite removal and disposal.

Therefore, based on the environmental setting, and taking account of the nature, scale and location of the proposed project (during both construction and operational phases), the proposed project will not have a significant impact on natural resources.

3.2.4. The Compilation of The Information at Paragraphs 1 To 3 Shall Take into Account, where Relevant, the Criteria set out in Schedule 7 (Schedule 7A (4)).

All relevant criteria set out in Schedule 7 of the Regulations is presented in Section 3.3 *('Criteria for Determining Whether Development Listed in Part 2 of Schedule 5 Should be subject to an EIA')* of this screening report.

During the preparation of Sections 3.2.2 to 3.2.3 (i.e. Schedule 7A (1) to (3)) all pertinent Schedule 7 information has been taken account of as required, with specific details presented in the following section of this report (Section 3.3 and 3.4).

3.3. Criteria for Determining Whether Development Listed in Part 2 of Schedule 5 Should be subject to an EIA

The size and design of the whole of the proposed project (Schedule 7(1)(a))

Refer to Section 3.2.1 under '*A description of the Physical Characteristics of the Whole Proposed Project and Where Relevant of Demolition Works (Schedule 7A (1) (a))*'.

Cumulation with other existing development and/or development the subject of a consent for proposed project for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment (Schedule 7(1)(b))

Committed Development

A search of Cork County Council Planning records has been undertaken for the applications submitted within the past 5 years in the vicinity of the proposed development (last reviewed 25/04/2023). Some of the granted applications have already been completed and of those which are not completed, most are generally small scale in nature (i.e., residential extension works, or property improvement works). Completed or granted applications of such small scale (such as residential improvements) have not been considered further in terms of potential for cumulative impacts.

There are 33no. large scale projects/committed developments, which have been further evaluated with respect to cumulative impacts with the proposed project, listed in Table 3-2.

Table 3-2 – Committed developments within vicinity of the proposed project

Competent Authority	Application No.	Applicant Name	Location	Description	Screening for significant cumulative environmental impacts
Cork County Council	234362	Merseycove Ltd	Cluain Cairn, Station Road, Carrigtwohill, Co.Cork	Construction of 8 no. 2-storey dwelling houses and all ancillary site development works at the Cluain Cairn residential development at Station Road, Carrigtwohill, Co. Cork	This development is located ca. 50m from the proposed development. However based on the nature and scale of this project, no significant cumulative environmental impacts are likely to arise associated with the proposed development.
Cork County Council	234514	Murnane & O'Shea Limited	Carrightohill, Carrigtwohill, Co. Cork	Construction of a residential development of 99 No. units and all ancillary site works including bicycle and bin stores. Access to the proposed development will be provided via the existing estate entrance from the Carrigane Road and internal road network of the Elmbury residential development which is currently under construction.	This development is located ca. 200m from the proposed development. However based on the nature and scale of this project, no significant cumulative environmental impacts are likely to arise associated with the proposed development.
An Bord Pleanála	ABP.313827	BAM Property Limited	Castlelake, Terrysland, Carrigtwohill, Co. Cork.	Construction of 716 no. residential units (224 no. houses, 492 no. apartments), creche and associated site works.	Based on the location, nature and scale of this project it is considered that there is a potential risk for cumulative environmental impacts to arise. Accordingly this project has been assessed further below, with regards to potential cumulative impacts.
Cork County Council	225005	Murnane & O'Shea Limited	Elmbury, Carrigtohil (townland), Carrigtwohill, Co. Cork	Construction of 47 no. dwelling houses and all ancillary site works. Access to the proposed development will be provided via the estate entrance and internal road network from the Carrigane Road permitted by planning reference 19/4124 and extended by planning reference 21/5150 and provides for	Based on the location, nature and scale of this project it is considered that there is a potential risk for cumulative environmental impacts to arise. Accordingly this project has been assessed further below, with regards to potential cumulative impacts.

				the extension of the permitted spine road.	
Cork County Council	234313	Murnane & O'Shea Limited	Elmbury, Carrigtohill Td., Carrigtwohill, Co.Cork	Construction of a single storey creche and all ancillary site works including car/bicycle parking and bin stores.	Based on the nature and scale of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	194124	Murnane & O'Shea Limited	Carrigane Road, Carrigtohill (townland), Carrigtwohill, Co. Cork	Construction of 94 no. dwelling houses and all ancillary site works. The proposed residential development represents a change of house type from that permitted under Cork County Council planning reference 06/10171 [as amended under planning reference 09/4276 and subsequently extended under planning reference 14/4654]	Based on the location, nature and scale of this project it is considered that there is a potential risk for cumulative environmental impacts to arise. Accordingly this project has been assessed further below, with regards to potential cumulative impacts.
Cork County Council	22/05378	Merck Millipore Ltd.	Fota Retail and Business Park, Killacloyne, Carrigtwohill, Co. Cork	Construction of an access road, a temporary unsurfaced carpark, temporary security hut, temporary bus shelter building, temporary portaloo toilets, temporary lighting, temporary fencing and ancillary works.	Based on the nature and scale of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
An Bord Pleanála	225032	Irish Water	Ownparks, Broomfield West, & Knockgriffin (Imokilly), Midleton, Co. Cork.	Midleton North Wastewater Pumping Station and Network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), associated works; (2) construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock Pumping Station); (3)construction of c. 30m of an	Based on the location of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.

				underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground.	
Cork County Council	217374	IDA Ireland	Ballyadam, Hedgy Boreen Carrigtohill, Carrigtwohill, Co Cork	New site access, local road improvement works and site development works comprising; new vehicular site entrance from L- 7642 including approx. 34m of internal stub road; road improvement works to approx. 140m of the northern end of the L-7642 to widen approx. 80m of carriageway and provide a grass verge and new set back boundary to the north and south of proposed entrance; improvement of sightlines along L-3617 from the L-7642 by lowering of vegetation at the junction and set back boundary on the northern side of the site; provision of IDA-branded signage; associated site development and landscaping works; all on a site of approximately 1.5Ha.	Based on the location, nature and scale of this project it is considered that there is a potential risk for cumulative impacts to arise. Accordingly, this project has been assessed further below, with regards to potential cumulative impacts.
Cork County Council	217130	Connaught Trust Limited	Ballyadam and Carrigtohill (townlands), Carrigtwohill, Co. Cork	Construction of a residential development of 63 no. residential units consisting of 47 no. dwelling houses and 16 no. duplex apartment units and all ancillary site development works. Ancillary site works include the provision of bin/bicycle stores, an inter-urban greenway along the sites northern boundary which will provide pedestrian/cyclist access onto the Carrigane Road. Vehicular access to	Based on the location, nature and scale of this project it is considered that there is a potential risk for cumulative impacts to arise. Accordingly, this project has been assessed further below, with regards to potential cumulative impacts.

				the proposed development will be provided via an upgraded site entrance from the Bog Road.	
Cork County Council	216240	Compass Homes Ltd	Station Road, Carrigtwohill, Carrigtohill (townland), Co. Cork	Demolition of 2no. existing dwellings and the construction of 38 no. apartments and a café (with outdoor seating) and includes for site access, car parking, landscaping, open spaces and boundary treatments, bin and bicycle storage, and all associated and ancillary site development works.	Based on the location, nature and scale of this project it is considered that there is a potential risk for cumulative impacts to arise. Accordingly, this project has been assessed further below, with regards to potential cumulative impacts.
An Bord Pleanála	ABP-310798-21	EirGrid plc	County Cork, between the existing Knockraha substation in the townland of Ballynanelagh in County Cork and Claycastle Beach in Youghal in the townland of Summerfield in Co. Cork	That portion of the Celtic Interconnector project to be constructed onshore in Ireland, to the Mean High Water Mark (HWM), including an electricity converter station in the townland of Ballyadam east of Carrigtwohill in County Cork.	Based on the nature and anticipated programming of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	21/5965	Kilsaran Concrete Unlimited Company	Barryscourt and Rossmore townlands, Carrigtwohill, Co. Cork	The development will comprise continuance of use of the existing quarry development within an overall application area of c. 24.ha; extraction to the permitted level of 40m below Ordnance Datum, within the area permitted under P. Ref. 03/4570.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	21/6983	Lagan Materials Ltd	Rossmore Townland, Carrigtwohill, Co. Cork	Permission sought for deepening the existing quarry from -20mOD to -50mOD within the existing permitted quarry footprint (P. Ref. S/02/5476; ABP Ref. PL04.203762; & ABP Ref. PL04.QD.0010) within an application area of 12ha.	Based on the location and nature and of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	21/7265	Dawn Meats Ireland and	Lands at Water Rock, Midleton, Co. Cork	Two separate residential developments on adjoining sites at Water Rock, Midleton. EMR	Based on the existing land use within footprint of and adjoining this project and the sensitivities of the Great Island Channel

		EMR Projects Ltd		development will consist of 284no. residential units and associated buildings. Dawn Meats development will consist of 434no. residential units and associated buildings.	SAC and Cork Harbour SPA, and given the nature and scale of this project it does not have potential to give rise to adverse ecological effects, or adverse effects on any Natura 2000 sites in combination with the proposed development. Based on the location of this project, no significant cumulative environmental impacts are likely to arise associated with the proposed development.
An Bord Pleanála	ABP-315087-22	Córas Iompair Éireann (CIÉ)	Traverses through the townlands of Anngrove; Ballyadam, Ballyrichard More; Broomfield East; Broomfield West; Carrigane; Carrigtwohill; Harpers Island; Johnstown; Killacloyne; Killahora, Co. Cork	Twin tracking of the existing single-track sections of railway between Glounthaune and Midleton, Co. Cork.	Based on the existing land use within footprint of and adjoining this project and the sensitivities of the Great Island Channel SAC and Cork Harbour SPA, and given the nature and scale of this project it does not have potential to give rise to adverse ecological effects, or adverse effects on any Natura 2000 sites in combination with the proposed development. Based on the location, nature and scale of this project it is considered that there is a potential risk for cumulative environmental impacts to arise. Accordingly this project has been assessed further below, with regards to potential cumulative impacts.
Cork County Council	17/5659	Janssen Sciences Ireland UC	Barnahely, Ringaskiddy, Co. Cork	An extension to the existing biomedicines manufacturing facility (proposed gross floor area c. 19,116m2).	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
An Bord Pleanála	PL04.248154	GE Healthcare Life Sciences BioPark	Barnahely, Raheens East, Ringaskiddy, Co. Cork	BioPark and all ancillary site development works including landscaping.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to

					arise associated with the proposed development.
Cork County Council	17/7428	John Garde	Courtstown Industrial Estate, Courtstown, Little Island, Co. Cork	Construct a building (6625m2) containing a waste transfer and recycling facility. The proposed development also includes the construction of a separate two storey administration block (178m2).	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
EPA	P0778-02	Janssen Sciences Ireland UC	Barnahely, Ringaskiddy, County Cork	5.16 The production of pharmaceutical products including intermediates.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	18/7200	Country Clean Recycling Unlimited Company	Courtstown Industrial Estate, Courtstown, Little Island, Co. Cork	Construct a building containing a waste transfer and recycling facility along with a separate Administration Block, ESB Sub-Station, weighbridges, underground tanks, service yard, new boundary treatments and all associated drainage and site works.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
EPA	n/a	Indaver Ireland Limited	Ringaskiddy, County Cork (National Grid Ref. E179055, N064279)	Waste to Energy Facility (waste incinerator with energy recovery) for the treatment of residual household, commercial and industrial waste which includes up to 24,000 tonnes of suitable hazardous waste with an annual capacity of 240,000 tonnes per annum.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork City Council	n/a	Tower Development Properties Ltd	The Custom House site at North Custom House Quay and South Custom House Quay, Custom House Street, Cork City	Refurbishment of the existing buildings on site including the Custom House and Bonded Warehouses, construction of a 34-storey tower c. 140m over the Revenue Building, a distillery, remedial works to quay	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.

				walls, and the provision of a new public realm.	
An Bord Pleanála	n/a	Progressive Commercial Construction Ltd	Site of Carey Tool Hire and the former Sextant bar, Albert Quay, Cork City	A Strategic Housing Development of 201no. Build To Rent apartments in a building that ranges in height from 8 to 11 to 24 storeys over ground floor, ancillary resident & communal facilities; cafe; private rented office; public bar/restaurant; basement.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	19/6783	Belvelly Marino Development Company DAC	Belvelly Port Facility, Marino Point, townlands of Marino, Belvelly and Oldcourt, Cobh, Co. Cork	Demolition, site infrastructure improvements, and utility upgrade works to stabilise the existing site and to provide capacity for future industrial development proposals.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	19/6964	Architectural and Metal Systems Limited	Wallingstown, Little Island, Co. Cork, T45 VP40	Construction of a new single-storey extension for the surface treatment (anodising) of aluminium sections, underground services and associated site works.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Minister for Public Expenditure and Reform	DPE63-18-2018	Commissioners for Public Works	Blackpool, Cork	Flood Relief Scheme for Blackpool, Cork involving the construction of direct flood defences and conveyance improvement measures along a stretch of the River Bride and its tributaries in Blackpool, Cork.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Minister for Public Expenditure and Reform	DPE63-9-2018	Commissioners for Public Works	Glanmire/Sallybrook, Cork	Flood Relief Scheme for Glanmire/Sallybrook, Cork involving the construction of direct flood defences and conveyance improvement measures along the Glashaboy River and its tributaries.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	20/5627	Portfolio Concentrate Solutions UC ("PepsiCo Ireland")	Ballytrasna, Little Island, Co. Cork	Extension to the existing Production Building, expansion of the Site Utility Services and provision of a new Waste Water Treatment Plant.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.

An Bord Pleanála	n/a	Marina Quarter Limited	Former Ford Distribution Site, Centre Park Road, Cork	Permission for a Strategic Housing Development at the Former Ford Distribution Site, Centre Park Road, Cork, comprising demolition of existing structures and construction of a mixed-use development including apartments, commercial and community facilities.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	20/6955	Goulding Chemicals Limited and Belvelly Marino Development Company DAC	Belvelly Port Facility, in the townland of Marino, Marino Point, Cobh, Co. Cork	The construction of a new agricultural fertiliser facility for use by Goulding Chemicals Limited; and additional port operational use of the jetty to facilitate cargo vessels. An EIAR, and NIS will be submitted with the application.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork City Council	n/a	University College Cork & Tyndall National Institute	University College Cork, Distillery Fields, North Mall, Cork, T23 XA50	Construction of a new purpose-built research facility comprising of approximately 16,325m2 (GIA) rising from 4 storeys at the east to 7 storeys at the west accommodating mix of research laboratories, seminar rooms, offices, exhibition space and café.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	21/5132	Pfizer Ireland Pharmaceuticals	Townlands of Ballintaggart and Ballybricken, Ringaskiddy, County Cork, P43 X336	The construction of a new five-storey clinical manufacturing building, associated buildings, utilities, piperack, and associated site development works.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork City Council	n/a	Progressive Commercial Construction Ltd	Carey Tool Hire site, Albert Quay, Cork City, bounded by Albert Quay East to the north, Albert Street to the west, Albert Road to the south, and Navigation Square to the east	Office building 5-12-14-16 storeys over ground floor, external terraces at Levels 2, 6, 13, & 15; two levels of basement for parking; café/deli & restaurant with outdoor seating; refurbishment 2no. Protected Structures; Demolition of Carey Tool Hire.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.

Cork County Council	21/5965	Kilsaran Concrete Unlimited Company	Barryscourt and Rossmore townlands, Carrigtwohill, Co. Cork	The development will comprise continuance of use of the existing quarry development within an overall application area of c. 24.ha; extraction to the permitted level of 40m below Ordnance Datum, within the area permitted under P. Ref. 03/4570.	Based on the nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	21/6983	Lagan Materials Ltd	Rossmore Townland, Carrigtwohill, Co. Cork	Permission sought for deepening the existing quarry from -20mOD to -50mOD within the existing permitted quarry footprint (P. Ref. S/02/5476; ABP Ref. PL04.203762; & ABP Ref. PL04.QD.0010) within an application area of 12ha.	Based on the nature and of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	21/7265	Dawn Meats Ireland and EMR Projects Ltd	Lands at Water Rock, Midleton, Co. Cork	Two separate residential developments on adjoining sites at Water Rock, Midleton. EMR development will consist of 284no. residential units and associated buildings. Dawn Meats development will consist of 434no. residential units and associated buildings.	Based on the location of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork City Council	n/a	Leeside Quays Limited	Kennedy Quay, Marina Walk, Victoria Road and Mill Road, South Docklands, Cork City	3.1426ha at Kennedy Quay & Marina Walk, South Docks, Cork City. Mixed Use: residential, office, entertainment, food & beverage, cinema, retail and public open space including Odlums Building (RPS ref. PS856) and rehabilitation hospital, all over double basement.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
EPA	n/a	Irish Water	Cork Lower Harbour Ringaskiddy, Shanbally, Co. Cork	The provision of wastewater collection systems and treatment facilities in the Cork Lower Harbour area, with the wastewater treatment plant treating waste from Carrigaline, Crosshaven, Shanbally, Coolmore, Ringaskiddy,	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.

				Passage West, Glenbrook, Monkstown & Cobh.	
An Bord Pleanála	ABP-313216-22	Estuary View Enterprises 2020 Limited	Bessborough, Ballinure, Blackrock, Cork	Facilities, café, crèche, and all ancillary site development works.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
An Bord Pleanála	ABP-313206-22	Estuary View Enterprises 2020 Limited	Bessborough, Ballinure, Blackrock, Cork	Demolition of 10no. existing agricultural buildings/sheds and log cabin residential structure and the construction of a residential development of 140no. apartment units, resident amenity facilities, crèche, and all ancillary site development works.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
An Bord Pleanála	ABP-313277-22	Tiznow Property Company Limited (Comer Group Ireland)	Former Tedcastles Yard, Centre Park Road and the Marina, Cork	The demolition of existing structures and the construction of a strategic housing development of 823no. apartments in 6no. buildings ranging in height from part-1 to part-35no. storeys over lower ground floor level.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork County Council	n/a	Merck Millipore Ltd	Tullagreen, Carrigtwohill, Co. Cork, T45KD29	The demolition of an existing switch room and an existing drum store and the construction of a new 3-storey manufacturing building, a two storey Utilities Building, a single drum store, expansion to WWTP and Tank Farm with all associated site works.	Based on the existing land use within footprint of and adjoining this project and the sensitivities of the Great Island Channel SAC and Cork Harbour SPA, and given the nature and scale of this project it does not have potential to give rise to adverse ecological effects, or adverse effects on any Natura 2000 sites in combination with the proposed development. Based on the location of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.

An Bord Pleanála	ABP-313720-22	Reside Investments Limited	Kilmoney Road, Carrigaline, Co. Cork	Consists of Strategic Housing Development providing 224no. residential units, a creche/childcare facility and 3no. retail units and all associated works.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
An Bord Pleanála	ABP-313919-22	Hibernia Star Limited	Jacobs Island, Ballinure, Mahon, Cork	The development will consist of the construction of 489no. apartments, creche and offices in 5 no. buildings ranging in height from part-1 to part-8 no. storeys over lower ground and semi-basement podium levels.	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.
Cork City Council	22/41675	University College Cork & Tyndall National Institute	Lee Maltings, Dyke Parade, Cork, T12 PX46 to North Mall, Cork, T23 XA50	Construction of a circa 65m long × 3.5-4.5m wide tri-span bridge on two structural piers connecting the existing Tyndall National Institute campus on the south to Tyndall National Institute's New Facility on the North (subject to OPW Section 50 approval).	Based on the location and nature of this project, no significant cumulative environmental impacts are anticipated to arise associated with the proposed development.

Based on proximity to the proposed Carrigtwohill URDF Infrastructure Project as well as the nature, scale and anticipated programme, the following projects were identified as having the potential to result in cumulative impacts associated with the proposed development:

- Murnane & O'Shea Limited; Construction of 94 no. dwelling houses and all ancillary site works;
- Murnane & O'Shea Limited; Construction of 47 no. dwelling houses and all ancillary site works;
- BAM Property Limited; Construction of 716 no. residential units, creche and associated site works.
- CIÉ; Twin tracking of the existing single-track sections of railway between Glounthaune and Midleton;
- IDA Ireland; New site access, local road improvement works and site development works;
- Connaught Trust Limited; Construction of a residential development of 63 no. residential units; and
- Compass Homes Ltd; Demolition of 2no. existing dwellings and the construction of 38 no. apartments and a café

A Waste Management & Construction Management Plan has been prepared (OSL, 2020 & 2022) for the Murnane & O'Shea Ltd. Developments which will be implemented during construction to avoid / reduce the potential for significant environmental impacts from the project.

The BAM Property Limited Strategic Housing Development was subject to an Environmental Impact Assessment Report which found that there will be no significant environmental impacts.

The CIÉ twin tracking project was subject to an Environmental Impact Assessment Report which found that there will be no significant environmental impacts given that mitigation measures would be implemented.

A Report to inform EIA Screening was prepared (RPS, 2021) for the IDA Ireland project which found that 'no likely significant impacts' are anticipated during the construction or operational phases.

A Preliminary Construction Environmental Management Plan has been prepared (MHL & Associates Ltd., 2021) for the Connaught Trust Ltd. Development which will be implemented during construction to avoid / reduce the potential for significant environmental impacts from the project.

A Construction Environmental Management Plan has been prepared (DOSA, 2021) for the Compass Homes Ltd. Development which will be implemented during construction to avoid / reduce the potential for significant environmental impacts from the project.

Furthermore, a Construction Environmental Management Plan and Traffic Management Plan will be implemented by the contractor during the construction phase of the proposed development. Accordingly, and taking account of the nature of the proposed development, the risk of significant adverse cumulative effects arising from the proposed development in combination with the projects assessed above is considered to be low. No likely significant environmental cumulative adverse effects will arise.

Given the nature and scale of the other projects listed in Table 3-2 above, it is considered that they do not have any potential to give rise to significant adverse environmental cumulative impacts with the proposed development.

Other Key Infrastructure Projects

Additionally, a number of key infrastructure projects are currently being implemented in Carrigtwohill as follows:

Carrigtwohill URDF Initiative – Public Realm Infrastructure Bundle

Cork County Council approved Part 8 planning for the Carrigtwohill URDF Initiative – Public Realm Infrastructure Bundle in 2022. This project includes a wide range of public realm enhancement measures and junction upgrades in Carrigtwohill along Station Road, Main Street and at N25 Junction 3 (Cobh Cross). The works include: -

- Main Street and Station Road Public Realm Works including footpath widening, provision of off-road cycling facilities, road re-alignment, resurfacing, signalisation, traffic calming measures, street lighting, demolition of buildings at the junction of Main Street and Station Road along with other small-scale demolition works and provision of new public spaces.
- Upgrade of Wises Road junction.

- Additional capacity measures at N25 Junction 3 (Cobh Cross) including widening and realignment of approach roads to the roundabout.

These proposed works are complimentary to the proposed Carrigtwohill UEA Infrastructure. Together both projects will: -

- Support regeneration, compact growth, and sustainable development in Carrigtwohill.
- Provide better quality streetscapes and public spaces to unlock the potential of Carrigtwohill Town.
- Improve connectivity between Carrigtwohill Town Centre and residential developments (existing and future), Carrigtwohill train station, schools, business parks, commercial premises etc.
- Encourage sustainable modes of transport by reducing car dominance and providing safe pedestrian and cyclist facilities.

Station Road Schools Campus

Cork County Council granted planning permission (Planning reference: 19/5707) for a new school's campus on Station Road. This campus, which is currently under construction, comprises of two primary schools and one post-primary school. It also includes two new link roads connecting Station Road and Castlelake. These link roads include segregated cycling facilities on both sides.

Midleton to Dunkettle Inter-urban Cycle Route

The Midleton to Dunkettle Inter-urban Cycle Route (IU-1) is proposed in the Cork Metropolitan Area Transport Strategy 2040. This cycle route will connect major employment centres such as Little Island (10,000+ employees) and Carrigtwohill IDA Business Park (3,800 employees) with existing and proposed residential areas including in Carrigtwohill, Midleton, Glanmire and Glounthaune. The Midleton to Dunkettle route will form part of the Cork to Waterford Inter-urban Demonstrator which is included in the Department of Transport Pathfinder Programme. Sections of this route will provide connectivity to the Carrigtwohill UEA as described below.

Bury's Bridge Cycleway

Cork County Council granted Part 8 planning permission for a strategic cycleway scheme connecting Bury's Bridge at Dunkettle outside Cork City with Carrigtwohill. This scheme, part of which has now been constructed, provides approximately 7.7 kilometres of pedestrian and cycle path segregated from vehicular traffic. The cycleway enters the east side of Carrigtwohill to the north of Cobh Cross (N25 Junction 3). It runs parallel to Carrigtwohill Main Street before turning north and running along the Castlelake Access Road. It then joins the link roads associated with the new schools' campus as described above.

Carrigtwohill to Midleton Inter-urban Cycle Route Phase 1

The Carrigtwohill to Midleton Inter-urban Cycle Route received Part 8 Planning Approval from Cork County Council in 2022. This section of IU-1 runs to the north of Carrigtwohill, primarily through the Carrigtwohill UEA, connecting the IDA Business Park in the west with lands zoned for Industry to the south of Carrigane Road in the east. It will provide a sustainable transport link to the Carrigtwohill UEA lands. It will also provide a link to existing and future employment centres in Carrigtwohill, Carrigtwohill Train Station, the planned Carrigtwohill school's campus on Station Road which has obtained planning permission and existing and planned residential developments along Wises Road, Station Road and Leamlara Road in Carrigtwohill. As a section of IU-1 it will also provide sustainable transport connectivity from Carrigtwohill to the major employment centre in Little Island.

The above key infrastructure projects will complement the proposed Carrigtwohill URDF Infrastructure Project and will ensure connection between the various land uses within the vicinity. Given the nature and scale of the above projects / schemes, it is considered that these infrastructure projects will not result in significant adverse environmental impacts. Additionally, a Construction Environmental Management Plan will be implemented by the relevant contractor during the construction of each of these projects, further reducing the potential for adverse environmental impacts. It is considered that the proposed Carrigtwohill URDF Initiative UEA Infrastructure project, will not result in significant environmental impacts. There is no potential for other projects to act in combination

with the proposed project to give rise to cumulative significant environmental effects. Additionally, a CEMP and Traffic Management Plan will be implemented during the construction works of the proposed project.

The nature of any associated demolition works (Schedule 7(1)(c))

Refer to Section 3.2.1 under *'A description of the Physical Characteristics of the Whole Proposed Project and Where Relevant of Demolition Works (Schedule 7A (1) (a))'.*

The use of natural resources, in particular land, soil, water and biodiversity (Schedule 7(1)(d))

Refer to Section 3.2.3 under '*The Use of Any Natural Resources in particular soil, land, water and biodiversity (Schedule 7A (3)(b)).*

The production of waste (Schedule 7(1)(e))

Refer to Section 3.2.3 under '*The Expected Residues and Emissions and the Production of Waste where relevant (Schedule 7A (3)(a)).'* The proposed project is not likely to have a significant environmental effect with regard to the production of waste. All waste will be removed to an appropriately licenced/ permitted waste disposal/ recovery facility.

Pollution and nuisances (Schedule 7(1)(f))

Refer to Section 3.2.2 under '*Description of Aspects of the Environment Likely to be Significantly affected by the Proposed Project (Schedule 7A (2))'.*

Potential pollution impacts arising from construction activities (including site preparation) include pollution of surface waters and groundwater by sediment, cementitious materials (e.g. concrete), hydrocarbons (e.g. diesel, hydraulic oils and lubricating oils) and other deleterious matter. In the case of the proposed project, these include fine sediment from excavations and earthworks, fuels and other hydrocarbons from vehicles, plant and machinery, concrete and other construction materials, and waste from on-site welfare facilities.

As noted in project description, interceptor drains will be installed prior to the earthworks commencing in order to prevent overland flows interacting with earthworks. These will drain either directly to ground or to existing ditches/streams via the new detention ponds. A construction compound(s) will also be established within the red line boundary and will not be located in close proximity to any drains or surface water features through which sediment or pollutants such as hydrocarbons could be discharged to Cork Harbour. The development lands and construction activities will be managed following routine practices and procedures for the control of pollution from construction sites, including the relevant, well-established guidelines from CIRIA and TII, as listed in the outline Construction Environmental Management Plan (CEMP) included with the application. These include controls on the phasing of works, waste management, location of site compounds, and surface water management.

Given the works sequence and methodology, the probability of any significant pollution event occurring is minimal and the magnitude of any negative water quality impacts, were they do occur, would be low and their duration brief or temporary.

A Stage 1 Screening for Appropriate Assessment has been prepared (Atkins, 2023). The project has been assessed with regards to the likely significant effects of the project on European sites within the zone of influence of the proposed project. The Screening for AA concluded that:

'the proposed development will not, either individually or in combination with other plans or projects, give rise to impacts which would constitute significant effects on the Great Island Channel SAC or Cork Harbour SPA, in view of its/their conservation objectives. Therefore, it is the recommendation of the authors of this report that Cork County Council, as the competent authority, may determine that Appropriate Assessment is not required in respect of the proposed Carrigtwohill URDF Infrastructure Project. Should any aspect of the design or construction methodology for the proposed development be materially changed, a new AA Screening Report would be required.'

Biosecurity protocols will be implemented during the proposed project to prevent the introduction of invasive species listed on the third schedule of the EC (Birds and Natural Habitats) Regulations 2011, as amended, to site.

The proposed project may generate waste such as metals, asphalt, construction and demolition waste, plastic wrapping, wooden pallets or soil arisings. As outlined previously (under 'The production of waste (Schedule 7(1)(e))), appropriate robust waste management procedures will be implemented by the Contractor to ensure that any minimal volumes of waste which will be generated during the construction phase do not pose a pollution / nuisance risk to the receiving environment.

In the event that any excavated soils need to be disposed of offsite as part of the proposed project, such soils/waste material will require waste classification in accordance with EPA requirements as set out in the documents 'Waste Classification List of Waste & Determining if Waste is Hazardous or Non-hazardous' (EPA, 2015), and 'Determining if waste is hazardous or non-hazardous' (EPA, 2018), and all relevant waste management legislations. In addition to screening against relevant WAC, the preparation of a waste classification tool (hazwaste online / EPA paper tool or similar etc.) will be required to be carried out in order to determine the relevant LoW / EWC code for the transport of any waste soils/material which require offsite removal and disposal.

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 (Schedule 7(1)(g))

A flood risk assessment (FRA) has been undertaken in accordance with the Planning System and Flood Risk Management Guidelines for Planning Authorities (Department of Environment, Heritage and Local Government & Office of Public Works, 2009). The FRA was completed to inform the proposed development as it relates to flood risk and is included as part of the Part 8 planning application.

A hydraulic model was developed to assess the fluvial flood risk to the proposed development. The model results showed overland flows during the 1% and 0.1% AEP events along the Woodstock Stream, which pass through the UEA lands. Mitigation measures, including a proposed open channel, culverts, and a flow storage, have been incorporated into the model to address these risks as well as risk from pluvial flooding. The flood risk assessment shows that the proposed development, along with the mitigation measures, will not result in increased flood extents or flood levels.

There are 21no. Seveso (Control of Major Accident Hazards Regulations (COMAH)) establishments within 15km of the proposed project site, the closest being Merck Millipore Ltd., which is a lower tier site, ca.0.7km south of the project site. Due to the distance of this Seveso site from the proposed project site and the activity carried out at this site the proposed project is not located in a high-risk area with respect to major accidents/ disasters. Due to the nature, scale and location of the proposed project, there will be no impact on any of these Seveso sites.

It is considered that the overall risk of major accidents and / or disasters associated with the proposed project is extremely low and does not warrant further consideration.

The risks to human health (for example, due to water contamination or air (Schedule 7(1)(h)) pollution)

Dust may be generated during the construction phase. However, management of dust will be in line with best practice such as that set out in '*Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes'* (NRA, 2011).

Noise levels during the proposed project, will not exceed the indicative levels of acceptability for construction noise in an urban environment as set out in the NRA guidance '*Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes*' (NRA, 2014). The Contractor will be required to comply with the requirements of the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations, 1988 as amended in 1990 and 1996 (S.I. No. 320 of 1988, S.I. No. 297 of 1990 and S.I. No. 359 of 1996), and the Safety, Health and Welfare at Work (Control of Noise at Work) Regulations, 2006 (S.I. No. 371 of 2006). No significant impact on human health due to noise pollution is anticipated to occur during the operational phase of the project.

There is one reported well (GSI, 2023) within the vicinity of the project site, reported to 2km locational accuracy. The exact location of this will well be determined prior to construction and should protection measures be required, these will be implemented as required. Accordingly, there will be no significant impact on human health. The proposed project is predominantly underlain by a locally important bedrock aquifer which is moderately productive only in local zones. The southern portion is underlain by a regionally important aquifer – karstified (diffuse). A gravel aquifer also underlies the western portion of the site which is classified by GSI (2023) as a *'locally important aquifer'*. If dewatering is required, a dewatering management plan will be developed by the contractor as required in consultation with the design team and client and implemented during construction. The plan will include at a minimum anticipated areas and depths of groundwater, anticipated volumes, proposed discharge location, environmental site setting, need for any permits or consents and all required details for water treatment as required. Due to the nature and scale of the proposed project it is not anticipated to have a significant impact on groundwater quality, resources or flow.

Given the location, nature and scale of the proposed project, the overall risk to human health is low.

3.3.1. Location of proposed project - The environmental sensitivity of geographical areas likely to be affected by the proposed project (Schedule 7(2))

The existing and approved land use (Schedule 7(2)(a))

The project will be constructed within a rural setting with the majority of the proposed site currently being used for agricultural purposes. The location of the proposed project has been detailed previously in Section 3.2.1 under Schedule 7A (1)(a).

The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground (Schedule 7(2)(b))

Refer to Section 3.2.3 under *The Use of Any Natural Resources in particular soil, land, water and biodiversity (Schedule 7A (3)(b)).*

The absorption capacity of the natural environment, paying particular attention to the following areas (Schedule 7(2)(c)):

(i) Wetlands, riparian areas, river mouths

Cork Harbour is located >1km from the proposed project and is listed as Wetland of International Importance. There are no EPA reported surface water features within the project site or its immediate vicinity, with a number of drainage ditches and streams crossed by the proposed project. These streams and ditches drain to either Tibbotstown, Anngrove, Woodstock or Poulinska streams or to karst systems and ultimately to Cork Harbour. Based on the findings of the Stage 1 Appropriate Assessment, there will be no significant impacts on the quality of Cork Harbour. Based on the nature and scale of the proposed works, no significant impacts on wetlands, riparian habitats or river mouths are anticipated.

(ii) Coastal zones and the marine environment

The proposed project is located >1km from transitional waters of Cork Estuary. Based on the nature and scale of the proposed works, it is not anticipated that it will have a significant impact on the coastal zone or marine environment. A Flood Risk Assessment has been prepared which included for hydraulic modelling of fluvial flood risk. This FRA concludes that 'the model results showed overland flows during the 1% and 0.1% AEP events along the Woodstock Stream, which pass through the UEA lands. Mitigation measures, including a proposed open channel, culverts, and a flow storage, have been incorporated into the model and subsequently the proposals to address these risks as well as risk from pluvial flooding. The flood risk assessment shows that the proposed development, along with the mitigation measures, will not result in increased flood extents or flood levels.

(iii) Mountain and forest areas

There are no mountain or forest areas within 2km of the proposed project site and therefore no impacts on this habitat type.

(iv) Nature reserves and parks

There are no nature reserves or national parks located within 15km of the proposed project site.

(v) Areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive

The proposed project lies >1km from Cork Harbour SPA (004030) and Great Island Channel SAC (001058).

Based on the findings of the Stage 1 Appropriate Assessment Screening report (Atkins, 2023) there will be no potential significant adverse effects to European sites arising from the proposed project.

There are 19no. pNHA's within the zone of influence of the project location, the closest of which is Great Island Channel pNHA located within the estuary to the south of the proposed project. There is no anticipated potential for significant impact on areas classified or protected under legislation.

(vi) Areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure.

The proposed project lies within the Ballinhasig East and Midleton GWBs. The Ballinhasig GWB is of 'good' WFD status but is identified as 'at risk' of failing to meet good quality status by 2027. The Midleton GWB is of 'good' status with its likelihood of meeting good quality status by 2027 currently under review (EPA, 2023). A CEMP will be developed and implemented by the appointed contractor during construction works which will set out standard control measures for the protection of

groundwater and an Environmental Clerk of Works or Site Environmental Manager will be appointed to monitor construction activities, where they deem required. Due to the nature and scale of the works it is not anticipated to significantly impact groundwater quality.

The proposed project is located within the Lee, Cork Harbour and Youghal Bay Water Framework Directive (WFD) catchment area and Tibbotstown sub-catchment area.

Air quality in the area is reported as 'good' (EPA, 2023). Dust may be generated during the proposed project which has the potential to impact on human health. However, management of dust will be in line with best practice such as that set out in 'Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes' (NRA, 2011). A CEMP will be developed and implemented by the appointed contractor during construction works which will set out standard control measures for the protection of air quality. Due to the nature and scale of the works it is anticipated that there will be no significant impact on air quality.

It is anticipated that there may be a temporary increase in noise volumes. Noise levels shall not exceed the indicative levels of acceptability for construction noise in a rural environment as set out in the TII guidance 'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes' (TII, 2014). A CEMP will be developed and implemented by the appointed contractor during construction works which will set out standard control measures for the protection of noise nusciances.

It is considered that due to the nature and scale of the project there will be no significant impact on baseline air and water quality from the proposed project.

(vii) Densely populated areas

The proposed project is located within rural lands and is therefore not located within a densely populated area. It has been considered that there may be an increase in population within the area in the future. Given the scale and nature of the proposed development, it is not expected that impacts to or from the proposed infrastructure development will be significant. It is anticipated that the impacts of the proposed infrastructure development will be primarily positive in terms of the local population and Human Health effects as it will provide for connections to surrounding lands, and access to sustainable transport options. Based on the scale and nature of the project, there will be no likely significant negative effect on the local population.

(viii) Landscapes and sites of historical, cultural, or archaeological significance

Refer to 3.2.1 under '*A Description of the Location of the Proposed Project, with Particular Regard to the Environmental Sensitivity of Geographical Areas Likely to be Affected (Schedule 7A(1)(b)).'*

There are no ZoN for SMR features crossed by the proposed project, with the closest ZoN located ca.18m from the project. There are 7no. SMR features within 200m, but none of these lie within the site boundary. 3no. NIAH features are identified within the site boundary, with 5no. additional sites within 50m of the site boundary.

An Archaeological and Built Heritage Assessment of Carrigtwohill URDF Initiative - UEA Infrastructure has been undertaken by John Cronin and Associates. The report concludes that '*no recorded sites on the Sites and Monuments Record for Cork are directly or indirectly impacted by the proposed UEA infrastructure. All undisturbed green field locations retain the potential to contain unrecorded features of archaeological origin and a programme of pre-construction geophysical survey and licensed archaeological testing is required to establish if any such features exist within the four green fields. It is noted that relatively small sections of the four green fields will be impacted by the proposed infrastructure. In the event that any previously unrecorded archaeological remains are identified during these site investigations, they will be recorded in situ and the Planning Authority and the National Monuments Service will be consulted in relation to any required further mitigation, i.e., preservation in situ (avoidance) or preservation by record (archaeological excavation). Preservation in situ will be undertaken if possible. This would allow for a negligible magnitude of effect resulting in a potential not significant/imperceptible significance of residual effect on the unrecorded, potential archaeological resource. In the event that preservation in situ is not possible preservation by record will be undertaken. This would result in a high magnitude of effect, albeit ameliorated by the creation of a full and detailed archaeological record, the results of which would be publicly disseminated. This would result in a potential moderate significance of effect in the context of residual impacts on the unrecorded archaeological resource. Overall, it is considered that the probability that features of archaeological significance will be uncovered below the footprint of the road and that mitigation by preservation in-situ is not possible is low and it is considered unlikely that there will be significant effects on the archaeology of the site.'*

It is recommended that a detailed Building Survey of the dwelling associated with the former forge building is undertaken in order to compile a full record of the extant structure(s) in written, drawn and photographic formats. It is recommended that the sections of boundaries to be removed be documented and described prior to their removal.

It is considered that due to the nature and scale of the project there will be no significant impact on landscapes and sites of historical, cultural or archaeological significance from the proposed project.

3.3.2. Types and characteristics of potential impacts (Schedule 7(3))

The likely significant effects on the environment of the proposed project has been evaluated taking into account the following specific criteria.

The magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected) (Schedule 7(3)(a))

The spatial extent of potential impacts is limited to the localised footprint of the proposed project site. Based on the location, current site setting, and the nature of the proposed project there is potential for localised impact to field drains and watercourses, groundwater and ecological sensitive areas, however impacts will not be significant in nature. Additionally, a CEMP will be developed and implemented by the contractor during construction, further reducing the potential for environmental impacts. There will be no likely significant impacts from the proposed project..

The nature of the impact (Schedule 7(3)(b))

Based on the nature and scale of the proposed development as described in section 3.2.1 – 3.2.3, there is potential for localised impacts. However, noting that a CEMP and RWMP will be developed and implemented during the construction phase, it is not anticipated that impact on the receiving environment arising from the proposed project is significant in nature (during the construction or operational phases).

The transboundary nature of the impact (Schedule 7(3)(c))

There is no potential for transboundary impacts as a result of the proposed project (during the construction or operational phases).

The intensity and complexity of the impact (Schedule 7(3)(d))

Based on the nature and scale of the proposed development as described in section 3.2.1 – 3.2.3, there is potential for localised impacts. However, given that a CEMP and RWMP will be developed and implemented during the construction phase, it is not anticipated that impact on the receiving environment arising from the proposed project is significant in nature (during the construction or operational phases).

The probability of the impact (Schedule 7(3)(e))

Based on the nature and scale of the proposed development as described in sections 3.2.1 – 3.2.3, the probability of significant impact is considered to be low. Furthermore, a CEMP and RWMP will be developed and implemented during the construction phase, which will further reduce the potential for significant impact via. the implementation of standard control measures for the onsite management of any pollution / nuisance issues which could arise during the construction phase.

The expected onset, duration, frequency and reversibility of the impact (Schedule 7(3)(f))

It is considered that there is potential for significant permanent impacts from the proposed works on existing habitats within the project site. Ca. 1,960m of hedgerows/ treelines will be required to be removed. This will be mitigated against / compensated via. the replacement of this with a minimum of 1,960m of new hedgerows/ treelines aligned to the new infrastructure as well as new areas of planting at various locations of 'passive green space' throughout the UEA. Trenchless technologies will be used where proposed drains cross watercourses / ditches to ensure minimal impact on existing buffer areas along watercourses outside of the project site. Based on the nature and scale of the proposed development as detailed in section 3.2.1, as well as the proposed construction methodologies (see section 3.2.3), it is considered that these impacts will not be insignificant in nature and no reversibility of significant impacts will be required.

The cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed project for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment (Schedule 7(3)(g))

As previously detailed no significant cumulative impacts associated with the project (during the construction or operational phases) have been identified, arising from other existing and/or approved projects. Refer to Section 3.3 under '*Cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A) (b) of the Act and/or development the subject of any*

development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment (Schedule 7(1) (b)).

The possibility of effectively reducing the impact (Schedule 7(3)(h))

Based on the nature and scale of the proposed development as described in section 3.2.1 – 3.2.3, there is potential for in-significant impacts. As previously mentioned, ca. 1,960m hedgerow / treeline will be lost because of the proposed development, however, will be mitigated against / compensated via. the replacement of this with a minimum of 1,960m of new hedgerows/ treelines aligned to the new infrastructure as well as new areas of planting at various locations of 'passive green space' throughout the UEA; therefore reducing the possibility of significant impacts.

Additionally, a CEMP will be developed and implemented by the contractor during construction, further reducing the potential for environmental impacts. There will be no likely significant impacts from the proposed project.

3.4. Potential for Significant Effects on the Receiving Environment

All relevant information as required under Schedule 7A has been provided on behalf of Cork County Council and is presented within Section 3.2 of this screening report. The potential for the proposed project to pose a significant impact to the receiving environment has also been evaluated in accordance with criteria listed Planning and Development Regulations (2001-2023) (Schedule 7), as presented within Section 3.3 of this screening report.

Based on the information provided within Section 3.2 and 3.3 of this report, and summarised below, it is considered that due to the size, nature, and characteristics of the proposed project, no significant effects on the receiving environment are expected; hence the preparation of a sub-threshold EIAR is not required.

4. Conclusion

This EIA screening report has been carried out in accordance with the Planning and Development Regulations as amended 2001- 2023 (which give effect to the provisions of EU Directive 2014/52/EU), and the Roads Acts 1993-2022. The report assessed the impact of the Carrigtwohill URDF Initiative UEA Infrastructure project in conjunction with committed developments in the surrounding area.

Based on all available information, and taking account of the scale, nature and location of the proposed project it is our opinion that the preparation of an EIAR is not a mandatory requirement. The proposed project is deemed a sub-threshold development; hence the potential for significant environmental effects arising as a result of the proposed project has been evaluated, in accordance with the requirements of Schedule 7A and Schedule 7 of the Planning and Development Acts 2001-2023.

No significant adverse impacts to the receiving environment will arise as a result of the proposed development. Therefore, it is our opinion that the preparation of an EIAR is not required.

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