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EIA SCREENING REPORT

Irish Water

Whitegate-Aghada Sewerage Scheme (UTAS Cork Bundle)

Environmental Impact Assessment Screening Report

Issue 2 | 3 November 2020

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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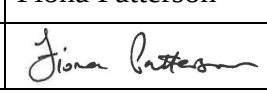
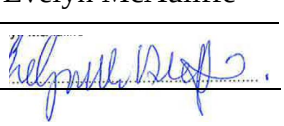
		Signature			
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Contents

1 Introduction

1.1 Introduction

Arup has prepared an Environmental Impact Assessment (EIA) screening report on behalf of Irish Water for the proposed Whitegate-Aghada Sewerage Scheme, County Cork. This report is included in the planning application for the proposed scheme (proposed development). As part of the proposed scheme, Irish Water proposes to provide new wastewater treatment infrastructure for Whitegate and Aghada and to remove a number of untreated wastewater discharges. The proposed development consists of a new wastewater treatment plant with a marine outfall, three proposed new wastewater pumping stations with interconnecting pipework and the upgrading of part of the existing sewer network. The proposed development provides for a 10-year horizon population equivalent of approximately 2,480 and a 30-year horizon population equivalent of 3,700.

This document provides the competent authority Cork County Council, with the information necessary to make an EIA screening determination in respect of the proposed development.

1.2 Background

Whitegate/Aghada is one of 44 agglomerations in Ireland where untreated sewage is discharged to receiving waters, either directly from sewer network outfalls, or via septic or holding tanks where the level of treatment provided is negligible.

There are currently no treatment facilities in place for this area. The majority of the agglomeration is served by collection networks which discharge untreated sewage into Cork Harbour. One public septic tank is located at Ardnabourkey, with effluent from the septic tank discharging to a percolation area.

The Whitegate/Aghada agglomeration is located on the eastern shoreline of the entrance to Cork Harbour. The agglomeration consists of the collection networks serving the villages of Whitegate, Upper Aghada, Lower Aghada and Rostellan in County Cork. The Whitegate/Aghada agglomeration is subject to marginal seasonal population fluctuations, with a relatively small number of the properties utilised as summer dwellings.

Whitegate, Lower Aghada and Rostellan are all located along the east coast of Cork harbour and are accessed by the R630. Upper Aghada is located on elevated ground to the northeast of Whitegate and south of Lower Aghada. The town nearest to the study area is Midleton, approximately 14km northeast from the village of Whitegate.

In order to ensure compliance with the Urban Wastewater Treatment Directive (91/271/EEC), the provision of a number of new wastewater treatment services has been proposed by Irish Water. These services will also be required to provide for sufficient wastewater treatment capacity to cater for the expected future population growth in Whitegate and Aghada.

In relation to the existing sewerage facilities in the area, the *East Cork Municipal District Local Area Plan 2017* (2017) (LAP) states that "*the existing sewerage scheme is a combined sewerage scheme that currently discharges to the lower harbour at a number of locations though primarily at Long Point*" and that *"provision of a new foul sewer system and a new waste water treatment plant is required prior to any further development taking place in Whitegate and Aghada."*

The approximate locations of Whitegate, Aghada, Rostellan and the proposed effluent outfall location and WWTP are indicated in **Figure 1**. Refer also to the drawings which accompany the planning application.

Figure 1: Discovery Map showing approximate location of the proposed development (indicated by stars) | Source: OSI | Not to scale.

2 Legislation, Guidance and Requirements for EIA Screening

This section outlines the relevant legislation and guidance reviewed in the compilation of this EIA screening report. This section also examines the mandatory requirement for EIA against the relevant EIA classes and outlines the requirement for screening of sub-threshold developments.

2.1 Introduction

The current requirements for EIA for projects are set out by the European Union in Council Directive 2011/92/EU[1] on the Assessment of the Effects of Certain Public and Private Projects on the Environment as amended by Directive 2014/52/EU[2].

The Planning and Development Act 2000, as amended and the Planning and Development Regulations 2001, as amended, were both amended by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296 of 2018) to take account of the requirements of the EIA Directive (Directive 2014/52/EU).

Section 172 of the Planning and Development Act 2000, as amended, sets out the requirement for EIA whilst the prescribed classes of development and thresholds that trigger a mandatory EIA are set out in Schedule 5 of the Planning and Development Regulations, 2001, as amended.

Section 103 of the Planning and Development Regulations 2001, as amended, sets out the requirements for screening a sub-threshold development for EIA. Finally, the information to be provided by the applicant or developer for the purposes of screening sub-threshold development for EIA is set out in Schedule 7A of the Planning and Development Regulations 2000, as amended.

A review of the above legislation was undertaken for the purpose of this EIA screening report and is further analysed in the sections below. The following guidance and consultation documents have also been considered during the preparation of this report:

- Department of Housing, Planning, Community and Local Government (2018) *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018);*
- Department of Housing, Planning, Community and Local Government (2017) *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems*;

[1] Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification).
[2] Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

- Department of Housing, Planning, Community and Local Government (2017) *Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on the Administrative Provisions in Advance of Transposition*;
- Department of the Environment, Heritage and Local Government (DoEHLG), 2003. *Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Sub-threshold Development*. Dublin, Ireland.
- Environmental Protection Agency (2017) *Revised Guidelines on the Information to be contained in Environmental Impact Statements (Draft August 2017)*;
- Environmental Protection Agency (2015) *Advice Notes for Preparing Environmental Impact Statements Draft September 2015*;
- Environmental Protection Agency (2003) *Advice Notes on Current Practice in the Preparation of Environmental Impact Statements*;
- Environmental Protection Agency (2002) *Guidelines on the Information to be contained in Environmental Impact Statements*;
- European Commission (2017) *Guidance on EIA Screening*; and
- European Commission (2015) *Interpretation of definitions of project categories of annex I and II of the EIA Directive*.

2.2 EIA Directive 2014/52/EU

Directive (2014/52/EU) sets out the requirements of the EIA process, including screening the need for an EIA. Projects listed in Annex I of the EIA Directive require a mandatory EIA whilst projects listed in Annex II require screening to determine whether an EIA is required.

Articles 4(4) and 4(5) of the EIA Directive set out the requirements for EIA screening of Annex II projects as follows:

> ***"4(4) Where Member States decide to require a determination for projects listed in Annex II, the developer shall provide information on the characteristics of the project and its likely significant effects on the environment. The detailed list of information to be provided is specified in Annex IIA. The developer shall take into account, where relevant, the available results of other relevant assessments of the effects on the environment carried out pursuant to Union legislation other than this Directive. The developer may also provide a description of any features of the project and/or measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.***
>
> ***4(5) The competent authority shall make its determination, on the basis of the information provided by the developer in accordance with paragraph 4 taking into account, where relevant, the results of preliminary verifications or assessments of the effects on the environment carried out pursuant to Union legislation other than this Directive. The determination shall be made available to the public and:***
>
> ***(a) where it is decided that an environmental effect assessment is required, state the main reasons for requiring such assessment with reference to the relevant criteria listed in Annex III; or***

(b) where it is decided that an environmental effect assessment is not required, state the main reasons for not requiring such assessment with reference to the relevant criteria listed in Annex III, and, where proposed by the developer, state any features of the project and/or measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment."

The Planning and Development Act 2000, as amended and the Planning and Development Regulations 2001, as amended have been amended by the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296 of 2018) to take account of the requirements of the EIA Directive (Directive 2014/52/EU). Refer to the sections below for further details.

2.3 Requirement for EIA under S.172 of Planning and Development Acts 2000, as amended

Section 172 of the Planning and Development Act 2000, as amended, sets out the requirement for Environmental Impact Assessment as follows:

[172 (1) An environmental impact assessment shall be carried out by the planning authority or the Board, as the case may be, in respect of an application for consent for proposed development where either—

(a) the proposed development would be of a class specified in—

(i) Part 1 of Schedule 5 of the Planning and Development Regulations 2001, and either—

(I) such development would exceed any relevant quantity, area or other limit specified in that Part, or

(II) no quantity, area or other limit is specified in that Part in respect of the development concerned, or

(ii) Part 2 of Schedule 5 of the Planning and Development Regulations 2001 and either—

(I) such development would exceed any relevant quantity, area or other limit specified in that Part, or

(II) no quantity, area or other limit is specified in that Part in respect of the development concerned, or

(b)(i) the proposed development would be of a class specified in Part 2 of Schedule 5 of the Planning and Development Regulations 2001 but does not exceed the relevant quantity, area or other limit specified in that Part, and

(ii) the planning authority or the Board, as the case may be, determines that the proposed development would be likely to have significant effects on the environment.]

2.4 Analysis of requirement for mandatory EIA - Schedule 5 of the Planning and Development Regulations 2001, as amended

The prescribed classes of development and thresholds that trigger a mandatory Environmental Impact Assessment are set out in Schedule 5 of the Planning and Development Regulations, 2001, as amended. The classes under Schedule 5 that are relevant to this project are listed and discussed below.

Waste Water Treatment Plants

Part 1: Class 13:

Waste water treatment plants with a capacity exceeding 150,000 population equivalent as defined in Article 2, point (6), of Directive 91/271/EEC.

Part 2: Class 11:

Other projects

(c) Waste water treatment plants with a capacity greater than 10,000 population equivalent as defined in Article 2, point (6), of Directive 91/271/EEC not included in Part 1 of this Schedule.

The proposed development includes for a 10-year horizon population equivalent of 2,480 and a 30-year horizon population equivalent of 3,700. The proposed development is a "type" of development listed in the above classes but it does not meet the threshold for mandatory EIA. Therefore, a mandatory EIA is not required under those classes.

Pipelines

Part 1: Class 16:

Pipelines with a diameter of more than 800mm and a length of more than 40km:

- *for the transport of gas, oil, chemicals, and,*
- *for the transport of carbon dioxide (CO2) streams for the purposes of geological storage, including associated booster stations.*

The proposed development includes the construction of rising mains, gravity sewers and an effluent outfall pipeline however none of these pipelines will have a diameter of more than 800mm, nor will they have a length of more than 40km and neither will they transport any of the above listed materials. Therefore, it is considered that Part 1: Class 16 does not apply to this development.

Urban Development

Part 2: Class 10:

Infrastructure projects

(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 development could be interpreted as "*urban development*[3]" located in "*other parts of a built-up area*" and could therefore be a "*type*" of development listed in the above class however it does not meet the threshold for mandatory EIA (which is an "*area greater than 10 hectares*"). The total area extent for the proposed development is approximately 9.03 hectares. Given the location of the proposed development, which is not in a business district, it is clear that the proposed development does not exceed the threshold of either 10 ha (other parts of a built-up area) or 20 ha (elsewhere). Therefore, a mandatory EIA is not required.

Extensions

Part 1: Class 22:

22. Any change to or extension of projects listed in this Annex where such a change or extension in itself meets the thresholds, if any, set out in this Annex.

Part 2: Class 13:

Infrastructure projects

13. Changes, extensions, development and testing.

(a) Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension referred to in Part 1) which would: -

(i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, and

(ii) result in an increase in size greater than –

- *25 per cent, or*
- *an amount equal to 50 per cent of the appropriate threshold, whichever is the greater.*

The proposed development does not comprise a change to or an extension to a project which will result in the development being of a class listed in Part 1 or Part 2 of this Schedule and which will meet the thresholds above. Therefore, a mandatory EIA is not required.

[3] European Commission (2015) *Interpretation of definitions of project categories of annex I and II of the EIA Directive* states that "projects to which the terms 'urban' and 'infrastructure' can relate, such as the construction of sewerage and water supply networks, could also be included in the Annex II (10)(b) category.

2.5 Sub-Threshold EIA

2.5.1 S. 103 of Planning and Development Regulations 2001, as amended

Section 92 of the Planning and Development Regulations 2001, as amended, defines sub-threshold development as *'development of a type set out in Part 2 of Schedule 5 which does not equal or exceed, as the case may be, a quantity, area or other limit specified in that Schedule in respect of the relevant class of development.*

The proposed development is considered to be of a development type set out in Schedule 5 but it does not exceed the relevant quantity, area or other limit specified in that Schedule. Therefore, it is a sub-threshold development and requires to be screened for EIA as detailed below.

Section 103 of the Planning and Development Regulations 2001, as amended, sets out the requirements for screening a sub-threshold development for EIA as follows:

103.

(1) (a) Where a planning application for sub-threshold development is not accompanied by an EIAR, the planning authority shall carry out a preliminary examination of, at the least, the nature, size or location of the development.

(b) Where the planning authority concludes, based on such preliminary examination, that—

(i) there is no real likelihood of significant effects on the environment arising from the proposed development, it shall conclude that an EIA is not required,

(ii) there is significant and realistic doubt in regard to the likelihood of significant effects on the environment arising from the proposed development, it shall, by notice in writing served on the applicant, require the applicant to submit to the authority the information specified in Schedule 7A for the purposes of a screening determination unless the applicant has already provided such information, or

(iii)there is a real likelihood of significant effects on the environment arising from the proposed development, it shall—

(I) conclude that the development would be likely to have such effects, and

(II) by notice in writing served on the applicant, require the applicant to submit to the authority an EIAR and to comply with the requirements of article 105.

(1A) (a) Where an applicant is submitting to the planning authority the information specified in Schedule 7A, the information shall be accompanied by any further relevant information on the characteristics of the proposed development and its likely significant effects on the environment, including, where relevant, information on how the available results of other relevant assessments of the effects on the environment carried out pursuant to European Union legislation other than the Environmental Impact Assessment Directive have been taken into account.

(b) Where an applicant is submitting to the planning authority the information specified in Schedule 7A, the information may be accompanied by a description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment of the development.

2.5.2 Schedule 7A of the Planning and Development Regulations, 2001, as amended

The information provided in this report provides details on the characteristics of the proposed development and its likely significant effects (if any) on the environment. It provides the relevant details under each of the criteria set out in Schedule 7A of the Planning and Development Regulations 2001, as amended. Regard has also been given to the criteria set out in Schedule 7 and to the Guidance for Consent Authorities regarding Sub-threshold Development (DoEHLG, 2003) in the compilation of this report.

This information will assist the competent authority, Cork County Council to make a screening determination under Section 103 of the Planning and Development Regulations 2001, as amended.

The criteria in Schedule 7A is presented in **Table 1**.

Table 1: Criteria outlined in Schedule 7A of the Planning and Development Regulations 2001-2019 – Information to be provided by the applicant or developer for the purposes of screening sub-threshold development for Environmental Impact Assessment

Schedule 7A requirements	Relevant section of this screening report
1. A description of the proposed development, including in particular: (a) a description of the physical characteristics of the whole proposed development and, where relevant, of demolition works; and (b) a description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.	Section 3
2. A description of the aspects of the environment likely to be significantly affected by the proposed development.	Section 4
3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development 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.	Section 4
4. The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7	

The criteria in Schedule 7 is presented in **Table 2**.

Table 2: Criteria outlined in Schedule 7 of the Planning and Development Regulations 2001-2019 (Criteria for determining whether development listed in Part 2 of Schedule 5 should be subject to an Environmental Impact Assessment)

1. Characteristics of proposed development
The characteristics of proposed development, in particular-
(a) the size and design of the whole of the proposed development,
(b) 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,
(c) the nature of any associated demolition works,
(d) the use of natural resources, in particular land, soil, water and biodiversity,
(e) the production of waste,
(f) pollution and nuisances,
(g) 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, and
(h) the risks to human health (for example, due to water contamination or air pollution).
2. Location of proposed development
The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to-
(a) the existing and approved land use,
(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground,
(c) the absorption capacity of the natural environment, paying particular attention to the following areas: (i) wetlands, riparian areas, river mouths; (ii) coastal zones and the marine environment; (iii) mountain and forest areas; (iv) nature reserves and parks; (v) areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and; (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; (vii) densely populated areas;
3. Type and characteristics of the potential impacts
The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act, taking into account—
(a) the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected),
(b) the nature of the impact,
(c) the transboundary nature of the impact,

(d) the intensity and complexity of the impact,
(e) the probability of the impact,
(f) the expected onset, duration, frequency and reversibility of the impact
(g) the cumulation of the impact with the impact of other existing 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 EIA Directive by or under any other enactment, and
(h) the possibility of effectively reducing the impact.

3 Description of the Proposed Development

3.1 Introduction

The first criterion included in Schedule 7A of the Regulations relates to a description of the proposed development (and where relevant, of demolition works), and a description of the location of the proposed development with particular regard to the environmental sensitivity of the geographical areas likely to be affected (refer to **Table 1** above). The compilation of the above information also takes into account, where relevant, the criteria set out in Schedule 7 of the Regulations (refer to **Table 2** above).

3.2 Operation

The overall proposed Whitegate-Aghada sewerage scheme will consist of 3 no. separate pumping stations, rising mains connections, gravity sewer connections, a Waste Water Treatment Plant (WWTP) and an effluent outfall pipeline. The three new pumping stations will be required to transfer wastewater to the WWTP, each of which will incorporate storm water storage facilities as presented in **Figure 2** below.

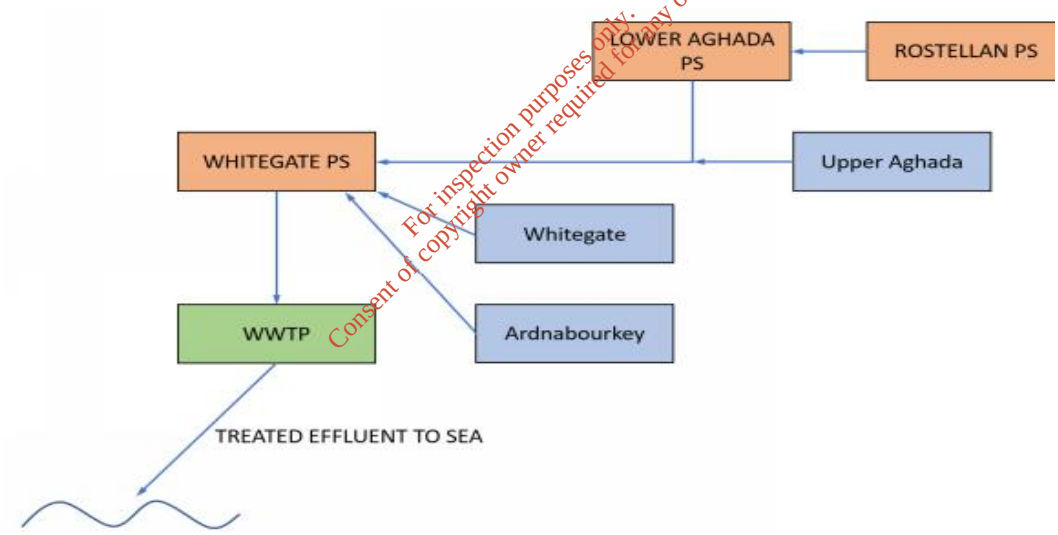

Figure 2: Flow diagram of the Whitegate-Aghada Sewerage Scheme

3.2.4 Rostellan Pumping Station

The proposed underground wastewater pumping station will be located in the northern part of the Thomas Kent Memorial Park in Rostellan townland. There is a sculpture, a commemorative plaque, flag pole, outdoor tables and seats located within the memorial park. An information sign and bollard and chain fencing are also located at the entrance to the park. There is also a sycamore tree located within the park.

The pumping station will be located approximately 17.6m from the nearest dwelling and will located underground with control kiosks, a vent stack, paved area and new access to be erected above ground.

The control kiosk will be located at the eastern side of the site, along the boundary with the public road. There will be a new access gate from the public road at the northern end of the Memorial Park, a proposed paved area and entrance gate and a proposed 7.6m high vent stack which will be designed in the form of a streetlight pole.

It is noted that a section of the memorial park is located within the Cork Harbour SPA. Refer to Section 4.4 below for further details.

It is proposed that a rising main is constructed to connect the Rostellan pump station to a proposed new pump station at Lower Aghada. The rising main will be constructed under the public road or in the verge alongside the public road, located in Rostellan, Ballynafarsid and Aghada townlands.

3.2.5 Lower Aghada Pumping Station

The proposed underground wastewater pumping station will be located in land to the west of the junction leading to the pier in Lower Aghada townland. The pumping station will be located approximately 41m from the nearest dwelling. The pumping station will be an underground installation and the proposed control kiosks, proposed vent stack and paved area and perimeter fencing will be erected above ground.

The control kiosk will be located at the eastern side of the site, along the boundary with the public road. The existing gate access location would be used for access to the new pump station. A 7.6m high vent pipe will be constructed and designed in the form of a pole for public lighting.

This site is currently used as the location for a package sewage treatment plant, which will be decommissioned when the new pump station is constructed.

It is proposed that a rising main will be constructed to connect the Lower Aghada pump station to a gravity sewer located in Aghada townland. The rising main will be constructed under the public road.

3.2.6 Whitegate Pumping Station

The proposed underground wastewater pumping station will be located in the Square at Whitegate village square, on open space in the townlands of Ballinacarroonig and Mosestown. The proposed pumping station will be located approximately 18m from the nearest dwelling and will be an underground installation. The proposed associated control kiosks, 7.6m high vent sack and paved areas will be erected above ground.

This site is currently a public open space area and since the new pump station would be underground, the space will continue to function as public open space with a grass finish after construction.

One of the proposed control kiosks will be located adjacent to the R630, immediately to the north of the Square (in a grass verge). The second proposed control kiosk would be located at the Square in Whitegate village.

It is proposed that a rising main will be constructed to connect the Whitegate pumping station to the proposed new Wastewater Treatment Plant at Ballytigeen townland.

The proposed rising main will be constructed under the public road in the townlands of Mosestown, Corkbeg, Ardnabourkey and Ballytigeen and along a privately-owned track in Corkbeg and Ballytigeen.

The existing pumping station at Whitegate village will be decommissioned following completion of the construction works at this location.

3.2.7 Wastewater Treatment Plant and Effluent Outfall

The proposed Wastewater Treatment Plant (WWTP) at Ballytigeen will be located in lands currently used for agricultural purposes, in a site off the R630, between Whitegate village and Gyleen to the south. The closest dwelling is approximately 515m from the proposed boundary of the proposed WWTP site.

Access to the proposed site will be through a privately-owned track, for which a permanent wayleave and permanent right of way has been granted by An Bord Pleanála under the CPO for the scheme.

Treated effluent from the WWTP will be discharged at White Bay via a proposed marine outfall. The final effluent will comply with the requirements of the Urban Waste Water Treatment Directive. The outfall will consist of a terrestrial section and a marine section. The terrestrial section will be constructed along a public road, through agricultural fields and along White Bay beach. The length of the marine section (offshore) will be approximately 295 metres from the high water mark and will extend approximately 190m beyond the low water mark.

3.2.8 Proposed Upgrade Works to Existing Sewers in Aghada and Curragh

It is proposed to upgrade the existing sewerage system by the replacement of an existing 143m long, 150mm diameter sewer with a 225mm diameter sewer located below ground in public road at the townlands of Aghada and Curragh.

3.2.9 Proposed Gravity Sewer at Ardnabourkey

A proposed gravity sewer is to be constructed along a local road in the townland of Ardnabourkey. The proposed sewer will connect into the proposed rising main at the R630 junction.

3.3 Construction

It is expected that construction will commence in Q2 2021, subject to planning approval. The total duration of all construction works is expected to be 16 months. However, some elements of the works, such as the construction of the individual pumping stations and the laying of the rising mains, will be completed in a considerably shorter duration than others, such as the construction of the WWTP.

3.3.1 Pumping Stations

Each pumping station will be located entirely below ground except for their control kiosks, vent stack, paved areas/access roads/perimeter fencing etc. which will be erected above ground.

The pumping stations will consist of a shaft which will be installed as a concrete caisson, while the control kiosks above ground will be constructed from Glass Reinforced Plastic (GRP). Typical open cut excavation methodology will be used. All excavated material generated from the development of the pumping stations will be removed from site to suitably licensed/permitted facilities.

Dewatering and over pumping are likely to be required at the pumping station works areas close to Cork Harbour such as the Rostellan Pumping Station. However, the level of dewatering and over pumping required will be minimal and will therefore have a limited impact on the groundwater resource and on receiving waters (refer also to the mitigation measures proposed in Section 4.4 below). No groundwater wells or springs are located within the proposed development area or in its immediate vicinity.

During construction of the proposed Rostellan Pumping Station located in the Thomas Kent Memorial Park, it is proposed that the existing sculpture, commemorative plaque, flag pole, outdoor tables and seats, information sign at the entrance and the bollard and chain fencing be removed and stored safely off-site. They will be placed back in approximately their current position on completion of the construction works. Topsoil will be reinstated, and grass seeded, to ensure that the finished Memorial Park would be similar to the existing Park.

It is possible that some root damage to the existing sycamore tree located in the memorial park may arise during the construction works. It is intended to retain the tree if at all possible. An aboriculturalist will assess the condition of the tree during and following the completion of site works. The aboriculturalist may specify a crown reduction to minimise the risk of wind blow or in worst case scenario may specify removal. It is proposed that three evergreen oaks (*Quercus ilex*) will be planted within the memorial park to ensure that tree cover is maintained.

The existing pumping station at Whitegate village will be decommissioned following completion of the construction works at this location.

3.3.2 Rising Mains and Gravity Mains Connections

Rising main connections of various lengths will be laid between each of the 3 no. pumping stations and the existing gravity network. Gravity main connections of various lengths will be required in some areas to convey flows. These connections will be laid below existing ground levels and, in most locations, within existing roads. Excavations will be open cut with excavated material used for backfill. Any surplus material generated will be removed from site to suitably licensed/permitted facilities.

3.3.3 Gravity Sewer Connections

Gravity sewer connections of various lengths will be required to divert flows to the new pumping stations and to the effluent outfall. Excavated material generated during the construction of these connections will generally be used as backfill material in the pipeline trenches.

3.3.4 Wastewater Treatment Plant

The elements involved in the construction of the proposed WWTP will include the following:

- *Inlet works* – required earthworks, formwork and concrete, incoming and outgoing pipework and associated chambers, inlet channel, inlet screen, screenings handling unit, bypass channel with screen and associated control, testing and commissioning equipment.
- *Primary settlement and Stormwater Balance Tanks*– required earthworks, formwork and concrete, incoming and outgoing pipework and associated chambers, pyramidal prefabricated primary settlement tanks, circular stormwater tanks, desludging valves and pipework and associated control, testing and commissioning equipment.
- *Sea outfall* – required pipework and diffuser(s).
- *Sludge handling* – required earthworks, formwork and concrete, incoming and outgoing pipework and associated chambers, circular storm tank, storm tank mixer and associated testing and commissioning equipment.
- *Miscellaneous* – land purchase (agricultural), site clearance, road to site, road within site, green paladin fencing, control kiosks, welfare facilities, manholes, watermain to site, watermain within site and water supply break tank.

3.3.5 Effluent Outfall Pipeline

The WwTP at Whitegate will include an outfall pipeline from the proposed WwTP to White Bay which will discharge treated effluent from the proposed WwTP site. The outfall will consist of a terrestrial section and a marine section. The terrestrial section will be constructed along a public road, through agricultural fields and along White Bay beach. The length of the marine section will extend approximately 295m beyond the high water mark and approximately 190m beyond the low water mark.

Overview

The proposed outfall will discharge in a water depth range of between 4.3m and 8m during a typical spring tide. The outfall has been designed as a 315mm OD HDPE pipe terminating at an 80mm diameter diffuser port.

A 40m wide pipe corridor (i.e. 20m either side of the outfall) is included in the consent application, to allow flexibility for construction activities required within this corridor.

It is envisaged that the terrestrial section of the outfall will be constructed via open cut excavation at an average depth of 2-3m.

The access road to White bay beach and the beach itself is currently used by the public. Whilst every effort will be made to maintain public access to the beach, it may be necessary to temporarily close a section of the beach to facilitate the safe construction of the outfall. It is envisaged that closure may be required for a period of approximately 3 months.

There are several methods by which the marine section of the outfall can be constructed, and the contractor's methodology will ultimately depend on their available plant and equipment as well as their previous experience with laying marine outfalls. The contractor is responsible for determining which method is most appropriate.

The likely methods to construct the sea outfall are presented below, based on the site constraints/characteristics. These are:

- Horizontal directional drilling method;
- Float and Flood method; and
- Bottom-pull method.

Construction of the outfall will include works from both the land and sea. It is expected that several vessels may be required during the construction of the outfall and that diving support is likely to be required at times.

The marine outfall area is calculated to be 1.16 Hectares. Refer to **Figure 3**.

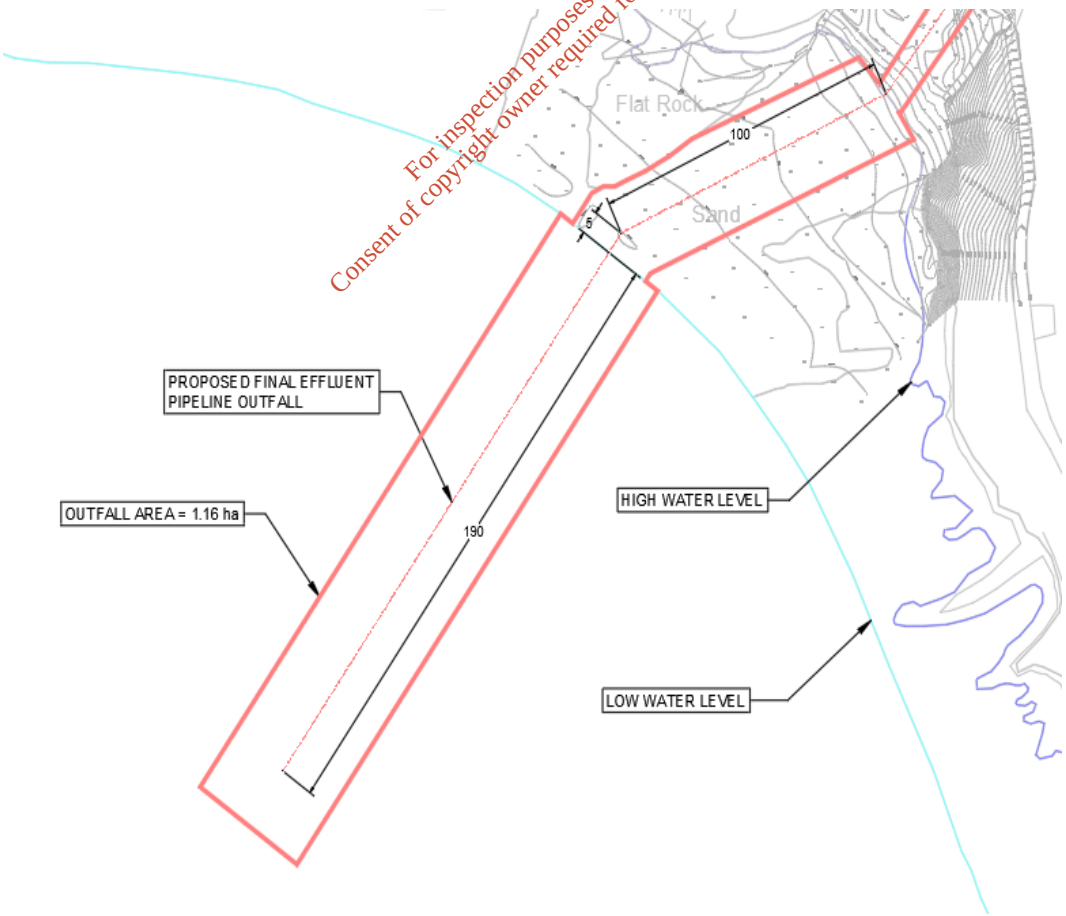

Figure 3: Proposed Marine Outfall

Horizontal Directional Drilling Method

Construction of the outfall using the horizontal directional drilling method would comprise three phases: pilot boring, pre-reaming and pipe positioning, each of which are illustrated in **Figure 4.**

It is assumed that the HDD process would occur from a drilling rig located close to the beach (as this is the reasonable worst case for the purpose of the assessment).

It is noted that this method would not involve any change in the seabed geometry during construction or operation (as the pipeline would be tunnelled) and therefore there is no need to install scour protection along the route of the outfall.

It should be noted that the contractor may locate the rig on a suitable barge or jack-up platform (i.e. on the seaward end of the outfall). In this case, pilot boring would be undertaken from the seaward end of the outfall towards the landward end and thus geotechnical risks associated with exiting the seabed would be avoided. This would avoid loose sand material at the exit point and improve support to the hole at the seaward end of the outfall (as the hole can be supported with casing from the platform). The reaming and pull-back stages would be undertaken from the landward side of the outfall.

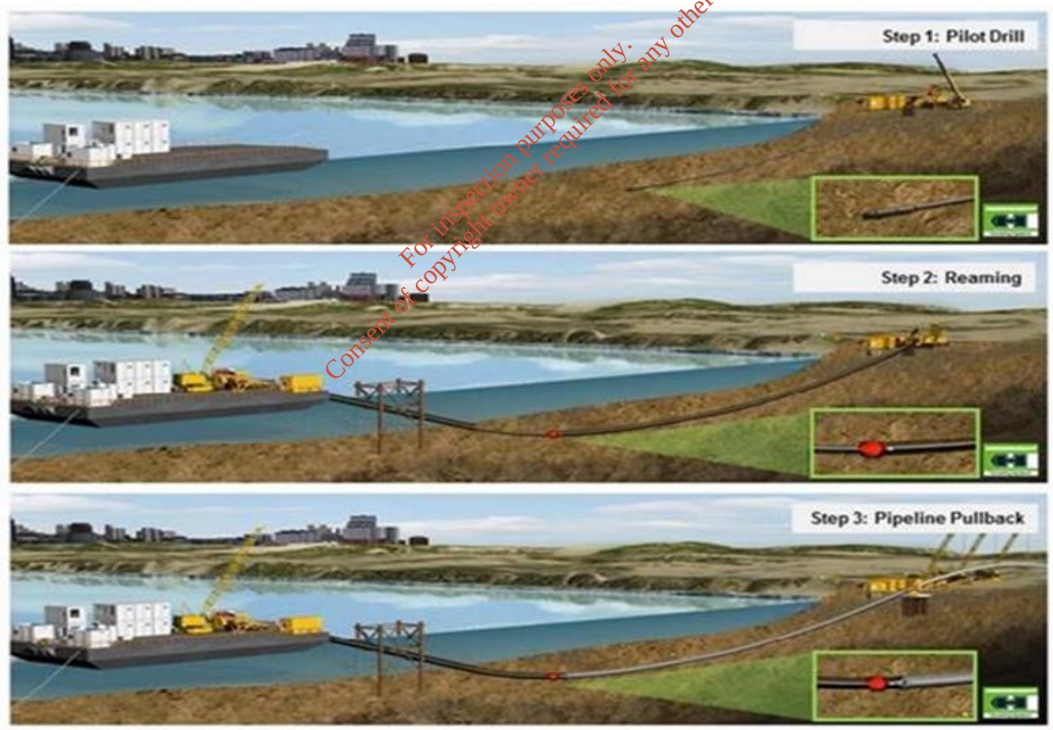

Figure 4: Typical HDD process for a sea outfall (Source: Stevens[4])

[4] Stevens (2015) Trenchless solutions for sewer networks and sea outfalls. Available from: https://www.imesa.org.za/wp-content/uploads/2015/11/Paper-10-Trenchless-solutions-for-wewer-networks-and-sea-outfalls-Frank-Stevens.pdf [Accessed 30 October 2019]

Float and Flood Method

The use of the float and flood method would require the formation of trenches and the placement of suitable excavated material to support and protect and cover the sea outfall once it is in position. Refer to **Figure 5** for an overview of the float and flood method.

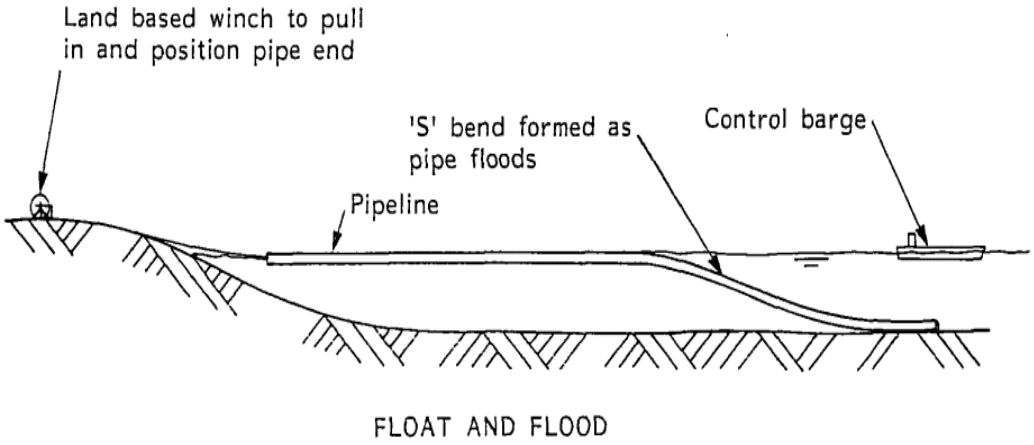

Figure 5: Float and Flood method of installing the outfall (Source: WRC[5])

Bottom Pull Method

The use of the bottom-pull method would, in a similar manner to the float and flood method, require the formation of trenches and the placement of suitable bedding material to support and protect the positioned pipeline. The trenching, placement of the bedding layer, backfilling of the trench, the diffuser assembly and scour protection procedures would also be similar to methods used for the flood and float method.

For the laying of the outfall, the bottom-pull method would involve joining and pulling sections of the outfall pipeline towards the sea by using a barge. The pipes would be pulled into place by the barge as illustrated in **Figure 6**.

[5] WRC (1990) Design guide for marine treatment schemes: Volumes I - IV

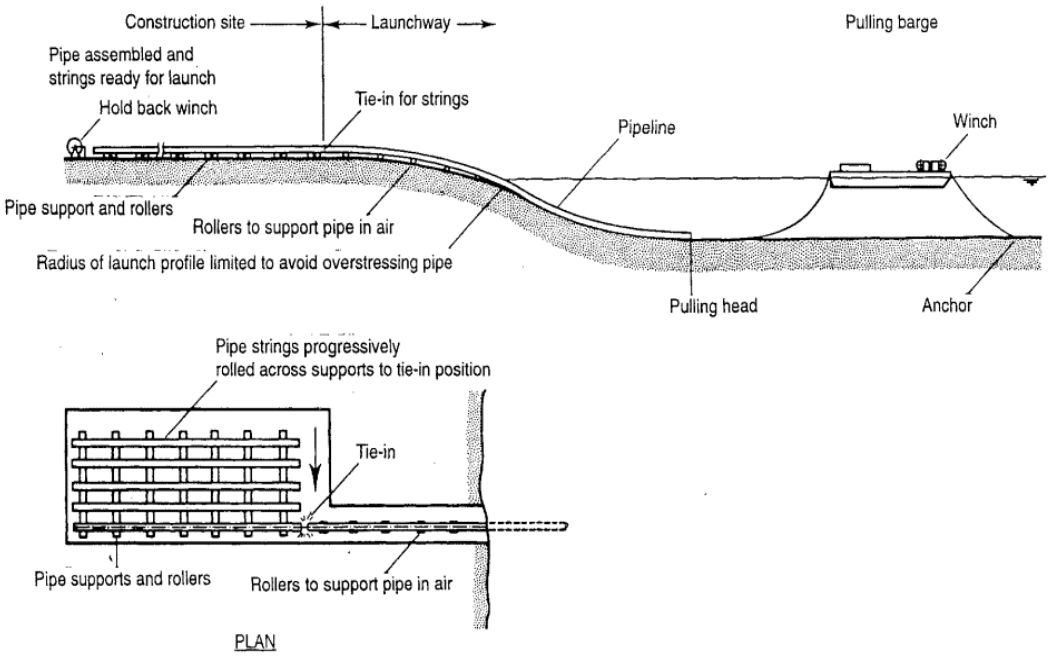

Figure 6: Bottom pull method of installing the outfall (Source: CIRIA[6])

[6] CIRIA (1996) Sea outfalls - construction, inspection and repair: Report 159.

4 Baseline Environment and Likely Significant Effects

4.1 Introduction

The second criterion included in Schedule 7A of the Regulations relates to a description of the aspects of the environment likely to be significantly affected by the proposed development (refer to **Table 1** above). This description is divided into the sub-headings below, which are based on the environmental factors specified in paragraph (b)(i)(I) to (V) of section 171A of the Planning and Development Act 2000, as amended.

> ***S.171 of Planning and Development Act 2000, as amended.***
>
> *(b)(i)*
>
> *(I) population and human health;*
>
> *(II) biodiversity, with particular attention to species and habitats*
>
> *protected under the Habitats Directive and the Birds Directive;*
>
> *(III) land, soil, water, air and climate;*
>
> *(IV) material assets, cultural heritage and the landscape;*
>
> *(V) the interaction between the factors mentioned in clauses (I) to (IV), and*
>
> *(ii) as regards the factors mentioned in subparagraph (i)(I) to (V), such examination, analysis and evaluation of the expected direct and indirect significant effects on the environment derived from the vulnerability of the proposed development to risks of major accidents or disasters, or both major accidents and disasters, that are relevant to that development;*

This section also addresses the third criterion included in Schedule 7A of the Regulations which relates to a description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from:

- the expected residues and emissions and the production of waste, where relevant; and
- the use of natural resources, in particular soil, land, water and biodiversity.

The compilation of the information in this section also takes into account, where relevant, the criteria set out in Schedule 7 of the Regulations (refer to **Table 2** above).

It is noted that there are no transboundary impacts associated with the proposed development.

4.2 Population and Human Health and Major Accidents and Disasters

4.2.1 Pollution, Nuisance Control, Accidents and Risks to Human Health

The proximity of sensitive (human) receptors has been taken into account in the design, construction and operation of the proposed development especially with regard to the potential for emissions during construction and operational phases as detailed below.

Much of the proposed development will take place within the urban confines of Rostellan, Lower Aghada, Upper Aghada and Whitegate. The distance from the proposed development to sensitive (human) receptors (such as residential properties) is provided in Section 3 above.

The construction methodology proposed is well understood and any temporary negative impacts can be easily managed. The main construction impacts on people to be considered include noise, dust, vibration (refer to Section 4.3.7 below) and traffic delays but these can easily be controlled as part of the Construction Environmental Management Plan (CEMP). These impacts will be temporary and are not deemed to be significant.

There will be minor inconvenience caused to some properties and agricultural landholdings during the construction phase, but this will be managed through specific control measures such as a traffic management plan. Careful and considered local consultation will be carried out with all affected landowners and nearby residences to ensure that the minimum amount of disturbance will be caused.

A CEMP has prepared and is included in the planning application. The Contractor will further develop this CEMP following appointment and prior to commencing works on site. Implementation of the CEMP will ensure disruption and nuisance are kept to a minimum.

The main operational impacts on people to be considered include odour and effluent discharge. The design has taken these potential impacts into account (refer also to section 4.3.8 below regarding odours). Significant effects are not expected.

The risk of any major accidents and/or disasters during the construction and operational stages will be managed in accordance with relevant health and safety legislation and through the design. The construction works are standard in nature and well understood. The risk of major accidents/disasters, having regard to substances or technologies used is very low and therefore will not result in a significant effect.

It is therefore considered unlikely that there will be any risks to human health.

The proposed development will have a positive impact on the population of Rostellan, Lower Agahda, Upper Aghada and Whitegate, and visitors to these areas, in that it will upgrade the existing wastewater treatment services for these areas.

This will ensure that the practice of discharging untreated sewage into Cork Harbour is ceased, thereby positively impacting water quality in the Harbour area. It will also provide sufficient wastewater treatment capacity to cater for the expected future population growth in the agglomeration.

It is not anticipated that significant negative effects will arise in relation to population and human health and major accidents/disasters.

4.2.2 Traffic Management

To ensure that significant traffic nuisance will not arise on either the national or regional roads, a Construction Traffic Management Plan will be prepared by the appointed Contractor, in consultation with Cork County Council. Traffic will be disrupted in different works areas during the construction works. Full road closures will be avoided in so far as possible. Where a full road closure is required, it will be for a short period of time only and alternative routes will be provided. Traffic management is likely to include the use of traffic lights or flagmen as appropriate in order to maintain one-way traffic flows using a 'stop and go' system during the works where possible. Access to residences and commercial premises will be maintained at all times and the disruption to the ease of access will be temporary as it will be for the duration of the works only. On-street parking will be prohibited in the vicinity of pipelaying works on the street in order to maintain at least one-way traffic. Sufficient alternative parking within walking distance of the affected parking locations are available at the Rostellan and Lower Aghada pumping station sites. It is not envisaged that any public parking spaces will be removed permanently as a result of the construction of the proposed development.

It is not anticipated that significant negative effects will arise in relation to traffic.

4.3 Land, Soil, Water, Noise, Vibration, Air and Climate

4.3.4 Land Use

Much of the proposed development will take place within the urban confines of Rostellan, Lower Aghada, Upper Aghada and Whitegate. The land in the area proposed for development at the WwTP is classified as 'non-irrigated arable land' according to the EPA CORINE (Coordination of Information on the Environment) land cover classification. Some of the pumping stations will be located in green areas however these will be located below ground and any disturbed areas will be landscaped and reinstated once construction is completed.

There will be no significant impacts on land use. An Bord Pleanála has confirmed the CPO for the proposed Sewerage Scheme, details of which accompany this planning application.

The construction works will temporarily require additional areas of land for construction compounds and other ancillary works. The temporary works areas will all be selected to minimise impacts on the surrounding environment.

Further, these areas will be required only for the construction stage and will be fully reinstated on completion of the works. Roads will be fully repaired and reinstated. It is therefore considered that there will not be any significant impact on land use from the proposed development.

See Section 4.5.3 below for details on Landscape.

4.3.5 Soils and Geology

The bedrock in the different works areas is classified as 'flaser-bedded sandstone & mudstone', 'flaser-bedded sandstone & minor mudstone and 'green sandstone, siltstone & mudstone' according to the Geological Survey of Ireland (GSI) Groundwater Data Viewer. The underlying soils are classified as 'Devonian sandstone till', while there are also areas of made ground and areas where rock is at the surface according to the GSI Groundwater Data Viewer.

This is a small-scale project that will requires a limited amount of natural resources associated with the construction phase. Excavations will take place for all elements of the construction works. Typical open cut excavation methodology will be used. Excavations will be open cut with excavated material used for backfill. Where excavation material may not be re-used within the proposed works the contractor will endeavour to send material for recovery or recycling so far as is reasonably practical. See also Section 4.5.1 below regarding waste management. Refer to section 3.3.5 above for construction details on the marine outfall.

Refer to Section 4.3.7 below for details on vibration.

A pre-construction condition survey of properties shall be undertaken by the contractor in consultation with a structural engineer prior to the commencement of works on all roads considered likely to be impacted by the works. If deemed necessary, tell-tale crack monitors shall be installed at properties identified by the structural engineer during the survey. Following construction, a post-construction condition survey shall be undertaken within a two to six-week period after the completion of the works and shall include the same areas surveyed pre-construction.

There is not expected to be significant potential for soil contamination in the different works areas. However, this will be confirmed by intrusive site investigation surveys prior to the commencement of the construction works.

It is not envisaged that the proposed development will result in significant impacts on soils and geology.

4.3.6 Water

Water Quality

Treated effluent will be discharged to Cork Harbour from the proposed marine outfall linked to the WwTP.

Dispersion modelling was carried out during the design process, the results of which are included in the "Whitegate Aghada Far Field Modelling" report, included in this planning application.

The conclusions of the report are summarised as follows:

"Our results indicate that the 95%ile concentrations of both E. Coli and Intestinal Enterococci as well as the 50%ile concentrations of the other modelled nutrients are increased in the vicinity of the proposed outfall location. The increases however do not lead to the EQS at any of the designated EPA Surface Water Regulation monitoring points to be exceeded. It has also been demonstrated that the Whitebay shoreline still retains excellent water quality with the proposed outfall in place. The proposed scheme therefore does not cause any of the EQS thresholds in Cork harbour to be exceeded and the discharges from the proposed WwTP for Whitegate are in full compliance with the relevant EU water regulations".

The pumping stations will be designed to hold a recommended quantity of storm flows and all pumping stations will have emergency overflow pipelines to receiving waters. Storm water discharges will overflow from the pumping stations to receiving waters infrequently and will be dilute. These overflows will occur during periods of high flows in the receiving waters, because of the high rainfall occurring at that time, so dilution levels in the receiving waters will be high. All overflow facilities have been designed to comply with relevant Irish Water (IW) standards. Because of these factors the impact of emergency overflows on the receiving environment will be low.

Three small streams are located nearby the proposed development areas. Farrannamangh stream, Ardnabourkey stream and White Bay stream flow into Cork Harbour at Rostellan, Whitegate and White Bay respectively. Current EPA water quality results indicate that each of these streams is classified as a stream that is 'not at risk' as per the Water Framework Directive. The proximity of these streams to the proposed development has been taken into account in the design, construction and operation of the pumping stations, WwTP and treated effluent outfall and especially with regard to the potential for emissions during the construction and operational phases.

During construction, it is not possible to entirely dismiss the risk of minor accidental spillage and potential contamination of watercourses/Cork Harbour, but it is considered that the situation does not present a significant risk of harm to the environment. Given the small-scale, temporary nature of the works and plant required, the capacity for large-scale, prolonged contamination is extremely limited. Control measures are presented in the CEMP which accompanies the planning application.

It is not anticipated that significant negative effects will arise on water quality.

Groundwater Supply

The aquifer beneath the site is classified according to the Geological Survey of Ireland (GSI) as a 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones.' Dewatering and over pumping are likely to be required at the pumping station works areas close to Cork Harbour.

However, the level of dewatering and over pumping required will be minimal and will therefore have a limited impact on the groundwater resource and on receiving waters.

No groundwater wells or springs are located within the proposed development area or in its immediate vicinity. It is not anticipated that significant negative effects will arise on local water supplies.

Flooding

A Stage 1 and Stage 2 flood risk assessment has been prepared for the proposed development and accompanies the planning application. A Justification Test has been carried out in Section 5 of the Stage 2 Flood Risk Assessment. It has demonstrated that the proposed development satisfies the criteria of the development management Justification Test.

The Stage 2 Flood Risk Assessment demonstrates that the risks relating to flooding can be managed and mitigated to acceptable levels and therefore comply with DoEHLG/ OPW and the Cork County Development Plan (2014) guidance.

It is not anticipated that significant negative effects will arise due to flooding.

4.3.7 Noise and Vibration

Noise will be generated during the construction of the proposed development due to construction traffic, construction machinery, excavation works, etc. However, the impact of construction noise on residential dwellings or other noise sensitive locations in the immediate vicinity of the site will be temporary due to the short duration and the linear nature of the construction works. No works will take place outside of normal construction working hours (i.e. 07:00-19:00, Mondays – Fridays and 08:00-14:00 on Saturdays), ensuring no noise impacts outside of these times.

The employment of control measures the proposed development will serve to minimise the risk of noise emissions. Refer to the CEMP included as part of this planning application for a full list of proposed measures. These measures will be implemented by the contractor in advance of the construction works.

As rock breaking will be required in some areas for the construction works, vibration impacts are also expected. The main vibration source during the construction phase will be from the proposed excavation works. A variety of potential vibration causing items of plant are likely to be used such as excavators, breakers, pneumatic drills, lifting equipment and dumper trucks. Vibration and noise impacts will be managed by the implementation of control measures. Refer to the CEMP which accompanies the planning application for the suite of measures to be employed.

Noise emissions from the proposed pumping stations and WwTP will occur during the operational phase. However, these will be minimal as the main pumping equipment associated with the pumping stations will be submerged underground, while no air blowers, typically high noise generating equipment, are proposed at the WwTP.

It is not anticipated that significant negative noise effects will arise.

4.3.8 Odours, Air and Climate

During the construction phase, the potential for dust emissions will only arise in respect of excavations in dry weather and during such activities, the levels of dust are likely to be small. Dust may be raised by wind from dry surfaces and stockpiles. The employment of control measures for the proposed development will serve to minimise the risk of dust emissions. Air emissions from the exhausts of construction plant, machinery and haulage trucks will also be elevated during construction but are not expected to be significant.

Refer to the CEMP provided as part of this planning application for a full list of proposed measures. These measures will be implemented by the contractor in advance of the construction works.

No odour emissions are envisaged from the proposed construction works.

There is potential for odour generation at the pumping stations during the operational phase. Odour control units will be put in place at each of the pumping stations to ensure that no issues arise. These control units will be in the form of a stack located above the vents of the pumping stations. Odour control equipment will be installed at the WwTP to treat air coming from the sludge holding tank and associated chambers. The sludge holding tank is the part of the treatment plant from which strong odours can arise. Odours arising from all other parts of the treatment plant are relatively low level and will not require treatment. Significant impacts from odours will not arise.

Given the nature of this type of development (i.e. a sewerage scheme) it is not envisaged that significant effects will arise on climate. The design has taken climate change into consideration such as sea level change (Refer to the Flood Risk Assessment included in the planning application).

It is not anticipated that significant negative effects on air and climate will arise.

4.4 Biodiversity

DixonBrosnan Environmental Consultants were commissioned by Arup to prepare an Ecological Impact Assessment Report (EcIA). This report is included in the planning application package.

There are no mountain and forest areas, nature reserves or national parks within the proposed development boundary. Much of the proposed development area does not form part of any Natura 2000 site. However, the proposed Rostellan Network pumping station site and sections of the proposed rising main to Lower Aghada network are within the boundary of Cork Harbour Special Protection Area (SPA). Refer to the Ecological Impact Assessment Report (EcIA) and the NIS included in the planning application for further details on Biodiversity and impacts on Natura 2000 sites. The primary water feature located nearby the proposed development is Cork Harbour.

The EcIA report concluded the following:

"Overall the development will impact primarily on low value habitats. There will be a net loss of a common terrestrial habitats and moderate value intertidal habitat. No adverse impact on designated sites or their conservation objectives will occur.

No particular difficulties in the effective implementation of the prescribed environmental protection measures have been identified. With the exception of localised impacts and short-term impacts during construction, no significant impacts on fauna are envisaged. The implementation of standard protection measures will prevent significant impacts on seals, otters and cetaceans from arising. The loss of habitat will result in the loss of some feeding habitats for some mammals and bird species. It is considered probable that these species will be displaced into the surrounding area or to alternative roosting sites. The implementation of standard mitigation measures will prevent the impact from the spread of invasive species will occur.

During operation, levels of noise and activity will not be significant in the context of the surrounding landscape. The discharge will be required to meet applicable water standards. It is expected that the effluent discharge plume will be quickly dispersed into the harbour and levels will quickly return to background concentrations such that there will not be a significant impact on water quality."

Potential impacts on designated Natura 2000 sites (SAC/cSAC/SPA) were specifically addressed in a Natura Impact Statement which is included in the planning application package. This report concluded that:

"Following a comprehensive evaluation of the potential direct, indirect and cumulative impacts on the qualifying interests and conservation objectives for the Cork Harbour SPA, it has been concluded by the authors of this NIS that the proposed development on its own and in combination with other plans or projects will not have an adverse effect on the integrity of the Cork Harbour SPA or any other Natura 2000 sites".

The CEMP, which accompanies the planning application includes a number of mitigation measures with respect to biodiversity and Natura 2000 sites, which will be implemented by the contractor. These mitigation measures will ensure that there is no significant effect from the proposed development.

4.5 Material Assets, Cultural Heritage and the Landscape

4.5.1 Waste

There will be no major demolition works associated with the proposed development. The use of natural resources and the generation of waste will be kept to an absolute minimum. However, some waste will be generated during the construction phase such as excess inert soils and subsoils and any existing concrete excavated that is not required for use as fill on site.

There is not expected to be significant potential for soil contamination in the different works areas. However, this will be confirmed by intrusive site investigation surveys prior to the commencement of the construction works.

All waste generated during construction will be appropriately managed and disposed of or re-used offsite in accordance with the waste hierarchy and relevant waste management guidance and legislation.

Construction activities including the storage of materials and works will be restricted to within the defined works boundaries.

During operation, sludge waste will be produced and stored on site before being transported to a licensed facility for disposal.

All wastes generated during operation will be appropriately managed and disposed of or re-used offsite in accordance with the waste hierarchy and relevant waste management guidance and legislation.

It is not anticipated that significant negative effects will arise due to waste generation and management.

4.5.2 Utilities and Services

A number of utility and service diversions are likely to be required as part of the proposed development. However, as a first principle, utility and service diversions will be avoided, where possible.

The power demand for the proposed WwTP will be greater than that of the pumping stations. A transformer will therefore be required to supply the WwTP at this location. This transformer will be located within the WwTP site area and will be minimal in size. An ESB mini pillar may also be required at each pumping station. The power supply design for each of the above elements will comply with all ESB requirements.

Construction materials will include concrete, glass-reinforced plastic (GRP), tank sections, steel support structures, pipework, signage etc. It is not considered that there will be a significant use of these resources as part of the proposed works.

Mobile generators will be used during the construction phase while a permanent power supply will be required during the operational phase for each pumping station and at the proposed WwTP. However, the power supply required in all areas will be minor.

It is not anticipated that significant negative effects will arise.

4.5.3 Landscape

The landscape within the proposed development area is classified as a landscape of national importance that is of very high value with a very high sensitivity according to the Cork County Development Plan 2014 – 2020, the East Cork Municipal District Local Area Plan 2017 – 2020 and the Draft Landscape Strategy for Cork County 2007.

Scenic route S51 passes through the proposed development area, covering the R630 regional road, the local road from Ballynacorra via East Ferry to Whitegate, Roche's Point views of the estuary and harbour, Roche's Point and the rural coastal environment. The majority of the rising mains proposed (to be located underground) as part of the development will be located along scenic route S51. However, visual impacts when travelling along scenic route S51 will be temporary only as they will be limited to the duration of the construction works.

Following construction, the majority of the proposed development will be located below ground. The exceptions to this will be the WwTP building and associated tanks as well as some elements associated with each pumping station. The main pumping equipment associated with the pumping stations will be submerged underground. However, a small kiosk, an odour control unit and low-level fencing will be constructed above ground.

The WwTP building will be located in an agricultural, sparsely populated area to the southwest of Whitegate town and directly south of the Whitegate Power Station. It will not be visible from Roches Point, a location on scenic route S51, based on the topography of the area. Visibility to the WwTP from the R630, a separate element of scenic route S51, will also be limited as both the location where the WwTP is proposed and the nearby R630 are screened naturally by belts of trees.

The pumping stations will not result in significant visual impacts. The only visible features in these areas will primarily be the control kiosks.

It is possible that some root damage to the existing sycamore tree located in Thomas Kent Memorial Park may arise during the construction works of the Rostellan pumping station. This tree lacks the structural elements that would provide potential bat roosts and as an isolated non-native species is considered of low ecological value. However, it is a locally important visual element in the context of the local landscape. It is intended to retain this tree if at all possible. An aboriculturalist will assess the condition of the tree during and following the completion of site works. The aboriculturalist may specify a crown reduction to minimise the risk of wind blow or in worst case scenario may specify removal. It is proposed that three evergreen oaks (*Quercus ilex*) will be planted within the memorial park to ensure that tree cover is maintained.

4.5.4 Heritage

Given the location of the proposed development within the Whitegate/Aghada area, there are sites of historical, cultural or archaeological significance in the vicinity. Refer to the Archaeological Impact Assessment Report (prepared by Archaeological Consultancy Services Unit) included in the planning application for further details. A summary of the report findings is presented below.

"The site of the treatment plant and the routes of the proposed upgrades at Whitegate/Aghada Co. Cork contain no Recorded Monuments listed within the Record of Monuments and Places (RMP). However, the townlands within which the project is located contain a relatively high concentration of Recorded Monuments that will not be physically affected by the scheme, but serve as indicators of the overall landscapes archaeological potential.

The report concludes that the proposed works have the potential to directly impact archaeological deposits where they exist. It is recommended that all groundworks associated with the development be subject to archaeological monitoring and that test trenching is carried out within any green field areas associated with the upgrade works. All further archaeological assessments should be carried out by a suitably qualified archaeologist, under licence to the Department of Culture, Heritage and the Gaeltacht. It should be noted that there are a number of period buildings located along the routes of the proposed upgrade works and these structures are listed in the NIAH and some are also protected structures. It is recommended that these are avoided by the proposed works and protected from heavy machinery. These recommendations are subject to the approval of the National Monuments Section of the Department of Culture, Heritage and the Gaeltacht"

Mizen Archaeology carried out an Underwater Archaeological Survey (included in the planning application). A summary of the report findings is presented below.

"No archaeological sites or features were recorded during the underwater assessment. However, the absence of definitive archaeological features on the seabed surface does not necessarily reflect the potential buried archaeological content within the sediment.

Review of the borehole results returned only one indicator of possible archaeological material, which came from TCBH601, located outside the limits of the dive survey and buried to a depth of at least 3.10m. This is located beyond the proposed end of the outfall.

The likelihood of the proposed works impacting on unknown potential archaeology is considered moderate.

All ground disturbance associated with the outfall construction should be archaeologically monitored under archaeological license issued from the National Monuments Service.

It is suggested that sub-bottom profiling be undertaken prior to any ground disturbance work in the region of borehole TCBH601. This would help determine the source of the timber identified in the borehole results"

It is not anticipated that significant negative effects on heritage will arise.

4.6 Interaction between the above factors and cumulative effects

The interaction of the above factors has been taken into account in this screening assessment. For example, the improvement in water quality will have a beneficial impact on both people and biodiversity. Similarly, noise and vibration impacts have been considered in terms of impacts on people, biodiversity and protected structures.

The Cork County Council online planning records for the area were consulted in February 2020. There are no other known proposed projects in the vicinity of the proposed development with which the proposed development will interact and which could result in in-combination or cumulative effects during both construction and operation stages.

The design chosen is that which is deemed to have the least environmental impact, taking into account all site location factors, sensitivities and constraints. Significant impacts from the proposed development are not predicted. Therefore, in-combination effects with other developments will not arise.

5 Conclusions

Arup has prepared an Environmental Impact Assessment (EIA) Screening report on behalf of Irish Water for the proposed Whitegate/Aghada Sewerage Scheme, County Cork. This report is included in the planning application for the proposed scheme.

The prescribed classes of development and thresholds that trigger a mandatory Environmental Impact Assessment are set out in Schedule 5 of the Planning and Development Regulations, 2001, as amended. A review of the project types listed in the aforementioned Schedule 5 has been carried out. The proposed development is considered to be of a type set out in Schedule 5 as described previously but it does not exceed the relevant quantity, area or other limit specified in that Schedule. Therefore, it is considered that a mandatory EIA is not required and that it is a sub-threshold development.

The information provided in this report provides details on the characteristics of the proposed development and its likely significant effects (if any) on the environment. It provides the relevant details under each of the criteria set out in Schedule 7A of the Planning and Development Regulations, 2001, as amended.

Based on the information provided in this report, it is the opinion of Arup that there is no real likelihood of significant effects on the environment arising from the proposed development and that an EIA is not required.

Cork County Council, as the competent authority, will make the EIA screening determination.

6 References

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