

SECTION D – EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

Attachment D1: WATER QUALITY MODELLING, ECOLOGICAL IMPACT ASSESSMENT, EIA SCREENING

- Attachment D.1.d: Castletownbere EIA Screening

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Irish Water
Castletownbere Sewerage Scheme
Environmental Impact Assessment
Screening Report

EIA Screening Report

Issue | 9 December 2019

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50 Ringsend Road
Dublin 4
D04 T6X0
Ireland
www.arup.com

ARUP BYRNE LOOBY

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		Name	Simon Grennan	Fiona Patterson	Fiona Patterson		
		Signature					
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		Name	Conor Enright	Kevin O'Sullivan	Evelyn McAuliffe		
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Appendix A

Preliminary Construction Environmental Management Plan

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1 Introduction

1.1 Introduction

Arup has prepared an Environmental Impact Assessment (EIA) Screening report on behalf of Irish Water for the proposed Castletownbere Sewerage Scheme, County Cork. This report is included in the planning application for the proposed scheme. The main elements to be constructed as part of the proposed development include 4 no. separate pumping stations, rising main connections, gravity sewer connections, Waste Water Treatment Plant (WWTP) and an effluent outfall pipeline. The proposed development includes for a 10-year horizon population equivalent of approximately 2200 and a 30-year horizon population equivalent of approximately 3,250.

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

1.2 Background

Castletownbere is a coastal town in West Cork. It is approximately 33km south-west of the town of Glengarriff along the R572 (Refer to **Figure 1**). As of the 2016 census, Castletownbere has a population of 860.

Currently, wastewater is collected in ten separate drainage sub-catchments and released back into the environment with little or no treatment. The majority of the Castletownbere agglomeration, including the town centre, is served by a collection network which discharges untreated wastewater into Berehaven Harbour. There are a number of septic tanks and package plants within the agglomeration that provide some level of treatment to the wastewater prior to being discharged to the Harbour including:

- 5 public septic tanks (3 of which discharge into Berehaven Harbour and 2 of which discharge to a percolation field);
- 1 privately-owned septic tank; and
- 3 wastewater treatment package plants (2 private and one public).

The practice of discharging untreated wastewater into the local environment is unsustainable and no longer acceptable. The proposed sewerage scheme in Castletownbere is required to ensure compliance with the Urban Wastewater Treatment Directive (91/271/EEC) and to provide for sufficient wastewater treatment capacity to cater for the expected future population growth in Castletownbere.

The *North and West Cork Strategic Plan 2002 to 2020* identifies Castletownbere as an urban development node where considerable growth is predicted.

The West Cork Municipal District Local Area Plan (LAP) 2017 gives the following as an objective for Castletownbere:

“The existing sewer network in the town is limited. It is a combined system which discharges directly to the sea at a number of locations. There is no wastewater treatment plant in Castletownbere. The provision of sewer collection network and Wastewater Treatment Plant is required to accommodate proposed growth in the town. The Castletownbere Sewerage Scheme Network Upgrade and Wastewater Treatment Plant are under review by Irish Water.”

Hence, the proposed scheme is in line with the above objective and is critical to facilitate future development in the area.



Figure 1: Discovery Map of West Cork area showing Castletownbere | 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/EU¹ on the Assessment of the Effects of Certain Public and Private Projects on the Environment as amended by Directive 2014/52/EU².

The Planning and Development Acts 2000 to 2019 and the Planning and Development Regulations 2001 to 2019 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).

Section 172 of the Planning and Development Acts 2000 to 2019 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 to 2019.

Section 103 of the Planning and Development Regulations 2001 to 2019 sets out the requirements for screening a sub-threshold planning application 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 to 2019.

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 (2003) *Environmental Effect Assessment (EIA) Guidance for Consent Authorities regarding Sub-threshold Development*;
- 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 as to 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 Acts 2000 to 2019 and the Planning and Development Regulations 2001 to 2019 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).

2.3 Requirement for EIA under S.172 of Planning and Development Acts 2000 to 2019

Section 172 of the Planning and Development Acts 2000 to 2019 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 to 2019

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 to 2019. 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 approximately 2,200 and a 30-year horizon population equivalent of approximately 3,250. 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. Thus, a mandatory EIA is not required.

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 development³” and could therefore be a “type” of development listed in the above class however it does not meet the threshold for mandatory EIA. The total area extent for proposed development is approximately 0.94 hectares⁴. It does not 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 or 20 hectares 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.

⁴ It is intended to submit the Hospital Pumping Station as a separate planning application (refer to cover letter of planning application for details), the remainder of the sewerage scheme is included in another planning application. This EIA Screening report has assessed the sewerage scheme in its entirety including the overall site development area for the two planning applications.

From an assessment of Schedule 5 of the Planning and Development Regulations 2001 to 2019, as detailed above, it is considered that none of the criteria requiring a mandatory EIA under this Schedule apply to the proposed development. Therefore, it is considered that a mandatory EIA is not required.

2.5 Sub-Threshold EIA

2.6 S. 103 of Planning and Development Regulations 2001 to 2019

Section 92 of the Planning and Development Regulations 2001 to 2019 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 to 2019 sets out the requirements for screening a sub-threshold planning application 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.

2.7 Schedules 7A and 7 of Planning and Development Regulations 2001 to 2019

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 to 2019. 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 to 2019.

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: <ul style="list-style-type: none"> (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: <ul style="list-style-type: none"> (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

Schedule 7A requirements	Relevant section of this screening report
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.

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3 Description of proposed development

3.1 Introduction

The first criterion included in Schedule 7A of the Regulations relates to a description of the whole 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). Regard has also been given to the Guidance for Consent Authorities regarding Sub-threshold Development (DoEHLG, 2003) in the compilation of this report.

3.2 Operation

The overall proposed Castletownbere sewerage scheme will consist of 4 no. separate underground wastewater pumping stations, rising main connections, gravity sewer connections, a Waste Water Treatment Plant (WWTP) capable of primary treatment and the effluent outfall pipeline⁵. The four new pumping stations will be required to transfer wastewater to the WWTP, each of which will incorporate stormwater storage facilities as presented in **Figure 2** below.

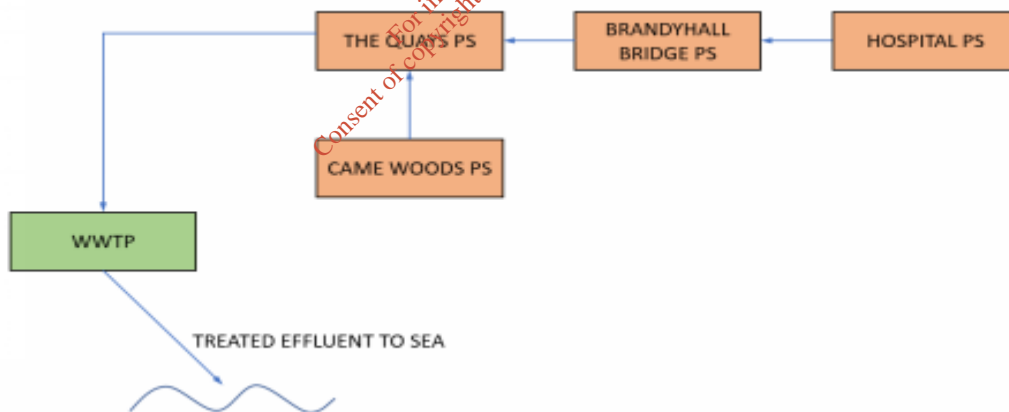


Figure 2: Flow diagram of the Castletownbere Sewerage Scheme

⁵ It is intended to submit the Hospital Pumping Station as a separate planning application (refer to cover letter of planning application for details), the remainder of the sewerage scheme is included in another planning application. This EIA Screening report has assessed the sewerage scheme in its entirety including the overall site development area for the two planning applications.

3.3 Hospital Pumping Station

The proposed Hospital wastewater pumping station will be located within the grounds of St. Joseph's Hospital (also known as Castletownbere Community Hospital) to the south of the R572 in the townland of Derrymihin West. Refer to **Figure 3**. The pump station would be set back approximately 40m from the nearest hospital building, on the eastern corner of the hospital site. The closest residential property is c. 70m to its north. An existing septic tank which services the Hospital, St. Martin's Avenue and St. Joseph's Village, is located adjacent to the site of the proposed pump station.

The main components of the Hospital pumping station will include a diversion of an existing gravity sewer, an underground wastewater pumping station, the reuse of the existing outfall as an overflow facility, valve and flowmeter chambers and rising main to convey pumped wastewater (flows) to a proposed discharge manhole on the R572. It will then flow by gravity to the existing foul sewer network and onwards to the proposed Brandyhall Bridge wastewater pump station. The existing hospital septic tank will also be decommissioned. In addition, there will also be a new access road, new access gate, a 1.2m high post and rail perimeter fencing and a control kiosk.

Access to the proposed site would be through a private road owned by the HSE. The proposed site itself is currently in the ownership of the HSE.

The proposed site is low lying and its immediate surrounding area has a good covering of trees. Refer to the Ecological Impact Assessment Report (EcIA) included in the planning application.



Figure 3: Location of proposed Hospital pumping station (red boundary) (not to scale – refer to planning drawing for further details)

3.4 Brandyhall Bridge Pumping Station

The proposed wastewater pumping station at Brandyhall Bridge will be located immediately to the south of the R572, approximately 50m south of Brandyhall Bridge (Refer to **Figure 4**). The Brandyhall Bridge crosses over the Derrymihin West stream. Brandyhall Bridge itself is a protected structure.

The main components of the Brandyhall Bridge pumping station will include a diversion of an existing gravity sewer, an underground wastewater pumping station, the reuse of the existing outfall as an overflow facility, valve and flowmeter chamber, a rising main to convey pumped wastewater (flows) to a proposed discharge manhole on the R572 and another rising main to transfer flows from this manhole on the R572 via the existing gravity network to the Quays wastewater pump station on Main street. The existing septic tank will also be decommissioned. In addition, there will also be a new access road, new access gate, a 1.2m high post and rail perimeter fencing and a control kiosk. The proposed Brandyhall pumping station will also be designed to accommodate flows from the Mariner's View drainage area to the north, although no connecting sewers will be laid under the current scheme.

The closest residential property is c. 25m to its east.



Figure 4: Location (red boundary) of proposed Brandyhall Bridge pumping station (not to scale – refer to planning drawing for further details)

3.5 Foildarrig

Wastewater (flows) emerging from the Foildarrig drainage area to the north of the town are currently discharged to a percolation area to the rear of a row of council-owned dwellings. Under this scheme, these flows will be conveyed via a proposed gravity sewer to the main gravity network within the town, and onwards to the WWTP via the Quays pump station. At Foildarrig, it is proposed to install a gravity sewer to transfer flows from the council owned properties to the existing sewer network at Chapel Lane.

3.6 Came Woods Pumping Station

The proposed wastewater pump station at Came Woods will be located adjacent to the existing public road which leads to the Beara Coast Hotel. The site is part of a wide grass verge adjacent to the public road in public space controlled by Cork Co. Council (Refer to **Figure 5**). The main components of the Came Woods pumping station will include a diversion of an existing gravity sewer, an underground wastewater pumping station, the reuse of the existing outfall as an overflow facility and rising main to convey pumped wastewater (flows) to a proposed discharge manhole on the R572. In addition, there will also be a control kiosk.

The kiosk would be located approximately 6m back from the kerb-line and would be approximately 40m from the nearest dwelling house.



Figure 5: Location of proposed Came Woods pumping station (red boundary) (not to scale – refer to planning drawing for further details)

3.7 Quays Pumping Station

All flows from the agglomerations will arrive, via the existing gravity sewer network, to a proposed manhole on Main Street, at the intersection of the R571 and R572, and will be conveyed via a proposed gravity sewer to the proposed Quays pump station, a terminal pumping station to be located in the grounds of the former St Peters church. (Refer to **Figure 6**). St Peters church is a protected structure.

The main components of the Quays pumping station will include a diversion of an existing gravity sewer, an underground wastewater pumping station, the reuse of the existing outfall as an overflow facility and rising main to convey pumped wastewater (flows) to a proposed discharge manhole on Tallon Heights and a gravity sewer from the discharge point to the proposed WWTP. In addition, there will also be a control kiosk.



Figure 6: Location of proposed Quays pumping station (red boundary) (not to scale – refer to planning drawing for further details)

3.8 Waste Water Treatment Plant and Effluent Outfall

The proposed Wastewater Treatment Plant (WWTP) at Drom South would be located in a low-lying area to the south of Tallon Road (L4195) adjacent to the coastline, see **Figure 7**. The proposed site is currently in the ownership of Cork Co. Council and an existing small package wastewater treatment plant operated by

Irish Water is already located on the site. Access to the proposed site would be through an existing access road owned by Cork Co. Council.

The closest dwelling would be approximately 105m from the boundary of the proposed WWTP site. The site area is approximately 0.83ha. The small package wastewater treatment plant will be decommissioned and removed as part of the current proposal. The proposed WWTP will provide primary treatment, appropriate to bring the agglomeration into Urban Wastewater Treatment Directive compliance. Effluent will be discharged into Bearhaven Harbour via a proposed effluent pipe across land to the launch point and an effluent outfall into the harbour.



Figure 7: Location of proposed WWTP and outfall (red boundary) (not to scale – refer to planning drawing for further details)

3.9 Construction

It is expected that construction will commence in Q3 2020, 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.

The main elements to be constructed as part of the proposed development include 4 no. separate pumping stations, rising mains connections, gravity sewer connections, the WWTP and the effluent outfall pipeline. In addition to the information provided previously, an overview of the construction works required for these elements is presented below.

3.10 Pumping Stations

Each pumping station will be located entirely below ground except for their control kiosks, access gates, odour control units and low-level timber fencing.

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.

Dewatering and over pumping are likely to be required at the pumping station works areas close to Castletownbere 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.

Septic tanks are currently located at each of the proposed pumping station locations. Partial demolition of these tanks will take place prior to the commencement of construction works. The partial demolition methodology will involve the removal of the roof sections of each septic tank. The remaining contents of the septic tanks will then be extracted before the tanks are cleaned down and subsequently filled with granular material to complete the decommissioning process. The roof sections removed for demolition, the contents of the tanks that are removed and any other material arising from the demolition works will be transported offsite to a suitable licenced waste facility for disposal. This type of demolition work utilises normal routine construction methodologies, which can be implemented successfully and significant impacts on the surrounding environment are not envisaged.

Some trees will require removal to facilitate the construction of the Came Woods pumping station. Refer to the EcIA report included in the planning application.

3.11 Rising Main Connections

Rising main connections of various lengths will be laid between each of the 4 no. pumping stations and the existing gravity network. 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.

3.12 Gravity Sewer Connections

Gravity sewer connections of various lengths will be required to divert flows to the new pumping stations. Excavated material generated during the construction of these connections will be returned to the trenches.

3.13 WWTP

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* – required earthworks, formwork and concrete, incoming and outgoing pipework and associated chambers, pyramidal prefabricated primary settlement tanks, desludging valves and pipework and associated control, testing and commissioning equipment.
- *Sea outfall* – required earthworks, formwork and concrete, 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, watermain to site, watermain within site and water supply break tank.

3.14 Effluent Outfall Pipeline

The outfall pipeline to Berehaven Harbour will discharge treated effluent from the WWTP site. The outfall will consist of a terrestrial section and a marine section. The terrestrial section will be laid in agricultural fields. The length of the marine section will be 120 metres. The outfall will extend approximately 75m beyond the low water mark discharging in a water depth of approximately 2.5m. The outfall area is calculated to be 0.417 Hectares. Refer to **Figure 8**.

There are several methods by which the sea 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 in the following sections, based on current practice and site constraints/characteristics. These are:

- Horizontal directional drilling method;
- Flood and float 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.

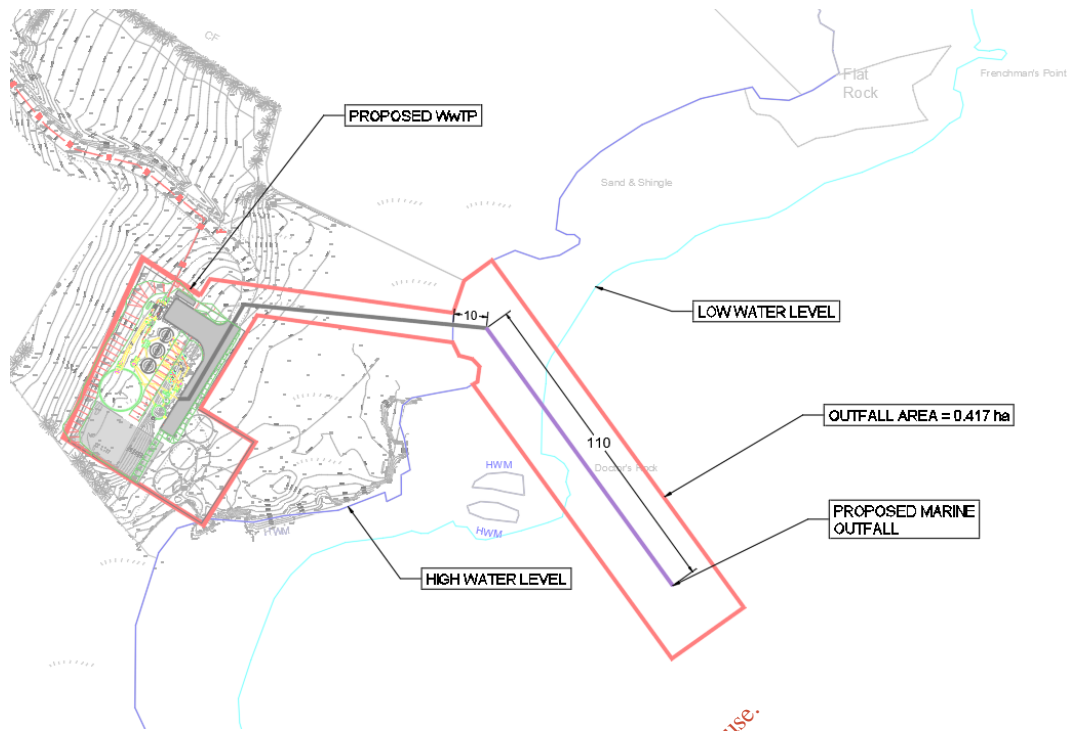


Figure 8: Proposed Marine Outfall (not to scale)

Horizontal Directional Drilling (HDD) 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 9**.

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.

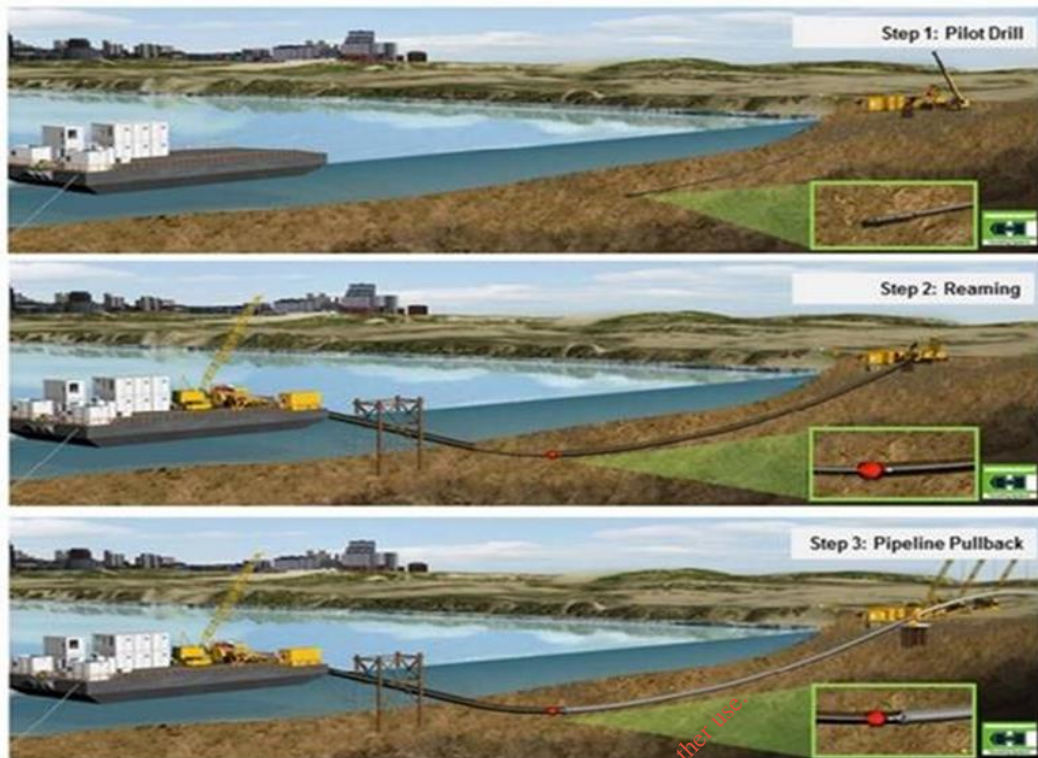


Figure 9: Typical HDD process for a sea outfall (Source: Stevens⁶)

Flood and Float Method

The use of the float and flood method would require the formation of trenches and the placement of suitable material to support and protect the sea outfall once it is in position. Refer to **Figure 10** for an overview of the food and float method.

Bottom Pull Method

The use of the bottom-pull method would, in a similar manner to the flood and float 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 11**.

⁶ 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]

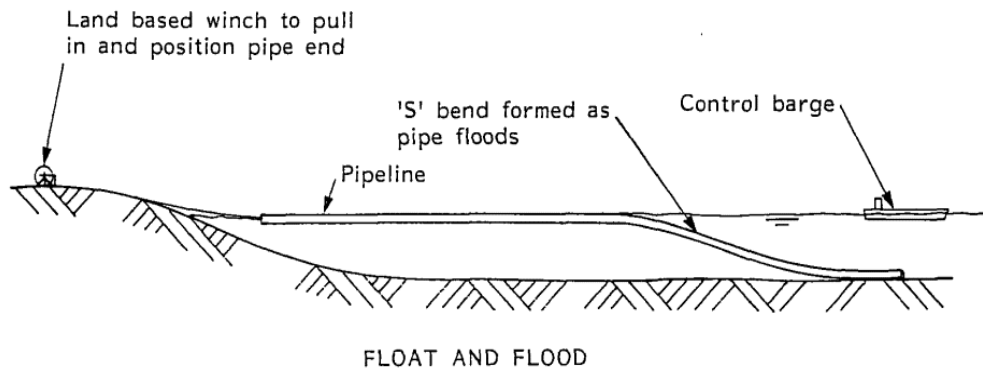


Figure 10: Flood and float method of installing the outfalls (Source: WRC⁷)

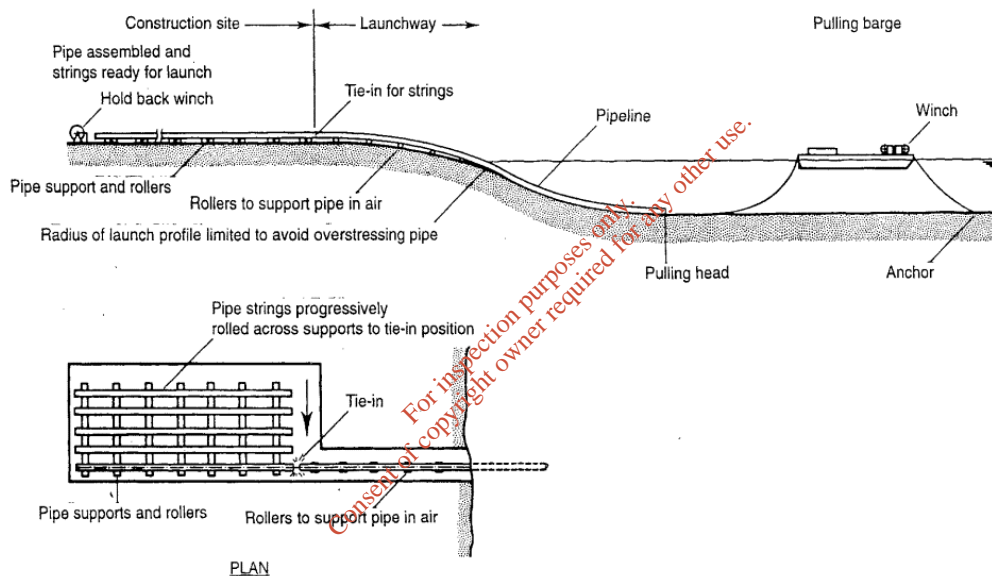


Figure 11: Bottom pull method of installing the outfalls (Source: CIRIA⁸)

Temporary Causeway method

This method would entail the temporary construction of a stone causeway into the intertidal area (where depths are too shallow for barge) to facilitate the construction of the outfall. Construction beyond the intertidal area would be via a barge. From the temporary causeway, the Contractor would use excavation machinery to excavate a trench for the outfall pipe. The pipe is then sunk into the trench and covered over. The temporary causeway would be removed once construction is complete.

⁷ WRC (1990) Design guide for marine treatment schemes: Volumes I - IV

⁸ 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.

(i) an examination, analysis and evaluation, carried out by the planning authority or the Board, as the case may be, in accordance with this Part and regulations made thereunder, that identifies, describes and assesses, in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of the proposed development on the following:

(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). Regard has also been given to the Guidance for Consent Authorities regarding Sub-threshold Development (DoEHLG, 2003) in the compilation of this report.

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

Pollution, Nuisance Control, Accidents and Risks to Human Health

Much of the proposed development will take place within the urban confines of Castletownbere town. The distance from the proposed development to sensitive (human) receptors (such as residential properties and St. Josephs hospital) is provided in Section 3 above.

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.

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 4.4 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 preliminary CEMP has been included in the planning application (Refer to **Appendix A** of this report). The Contractor will be required to update and develop this preliminary CEMP into a detailed 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 4.3.5 below regarding odours).

The proposed development will have a positive impact on the population of Castletownbere, and visitors to the town, in that it will upgrade the existing wastewater treatment services for the town. This will ensure that the practice of discharging untreated sewage into Berehaven Harbour is ceased, thereby positively impacting water quality in the Harbour area. It will also provide a sufficient wastewater treatment capacity to cater for the expected future population growth in Castletownbere. It is therefore considered unlikely that there will be any risks to human health.

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.

It is envisaged that the risk of major accidents/disasters, having regard to substances or technologies used is very low and therefore will not result in significant effect. The construction works are standard in nature and well understood.

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

Traffic Management

To ensure that 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 in the quays area. 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, Air and Climate

This is a small-scale project that will require a limited amount of natural resources associated with the construction phase. It is submitted that the natural environment has the capacity to absorb this proposed development.

4.4 Land Use

Much of the proposed development will take place within the urban confines of Castletownbere town. The proposed WWTP will be located within the site of the existing package wastewater treatment plant which is to be decommissioned and removed. Some of the pumping stations will be located in green areas however these will be located below ground, the areas will be landscaped and reinstated once construction is completed.

There will be no impacts on land use outside of the proposed development areas. Land across the proposed development area is owned by a combination of Irish

Water/Cork County Council and third parties. Acquisition of some of the land owned by third parties will be required for the proposed development to proceed.

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.

It is not anticipated that significant negative effects will arise on land use. See Section 4.5 below for details on Landscape.

4.5 Soils and Geology

The bedrock in the different works areas is classified as ‘cross-bedded sandstone & minor mudstone’, ‘purple & green sandstone & siltstone’ and ‘green-grey sandstone & purple siltstone’ 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 require 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 below regarding waste management.

Refer to Section 4.3.4 below for details on vibration.

A pre-construction condition survey shall be undertaken by the contractor 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 locations 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 land 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 anticipated that significant negative effects will arise in relation to soils and geology.

4.6 Water

Water Quality

Treated effluent will be discharged to Berehaven Harbour from the proposed marine treated outfall linked to the WWTP. An assessment of water quality in the receiving environment was undertaken using separate near-field and far-field dispersion modelling studies. Discharges of BOD and Dissolved Oxygen from the proposed treated effluent outfall at Castletownbere were found to be in full compliance with all the relevant legislation in the near-field. For the water quality parameters that exceeded thresholds in the near-field, additional far-field dispersion modelling was carried out.

It concluded that the proposed scheme does not exceed any of the Environmental Quality Standards in Castletownbere harbour and therefore the discharges from the proposed WwTP for Castletownbere are in full compliance with the relevant EU water quality regulations. The practice of discharging untreated sewage into Berehaven Harbour will cease, thereby positively impacting water quality in the Harbour area.

For more information please refer to the Interim Water Quality Dispersion Modelling Report and the Castletownbere Far-Field Modelling Report included in the planning application.

The pumping stations will be designed to hold a recommended quantity of storm flows and all pumping station will have emergency overflow pipelines to receiving waters. Occasional discharges to receiving waters may also occur from some of the proposed pumping stations. 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.

Derrymihin West stream flows into Castletownbere Harbour at Brandyhall Bridge. This is a small fast flowing stream which arises in the uplands to the north east of the town. The stream is of sufficient size to support salmonids but is not of sufficient size to be included in the standard EPA biological monitoring programme. The proximity of the Derrymihin West stream been taken into account in the design, construction and operation of the Brandyhall Bridge pumping station and especially with regard to the potential for emissions during construction and operational phases.

During construction, it is not possible to entirely dismiss the risk of minor accidental spillage and potential contamination of watercourses/Berehaven 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 Preliminary CEMP.

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 either a 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones' or a 'Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones.' Dewatering and over pumping are likely to be required at the pumping station works areas close to Castletownbere 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

There is a small risk of pluvial flood risk at the Quays pumping station and at the Brandyhall pumping station however the design and construction of has taken this risk into account. Refer also to the Flood Risk Assessment included in the planning application package. All remaining areas proposed for development are located outside of predicted flood risk areas.

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

4.7 Noise

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 08:00-16:30 on Saturdays), ensuring no noise impacts outside of these times.

Noise emissions will be managed by the implementation of control measures. The employment of control measures the proposed development will serve to minimise the risk of noise emissions. Refer to the Preliminary CEMP (**Appendix A**) which forms part of the 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 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 Preliminary CEMP. (See also Section 4.5 below reference to vibration monitoring for the protected structures)

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.

4.8 Odours, Air and Climate

During the construction phase, the potential for significant 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 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 Preliminary CEMP (**Appendix A**) which forms part of the 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.

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.

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

4.9 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 and parks or Natura 2000 sites within the proposed development boundary. Refer to the Ecological Impact Assessment Report (EcIA) included in the planning application for further details on Biodiversity. The primary water feature located nearby the proposed development is Castletownbere Harbour.

The report concluded the following:

- The habitats on the site are not rare, threatened nor do they require any special protection under existing or pending legislation and are considered relatively

common in the local landscape. The development will impact primarily on low value habitats; a net loss of common terrestrial habitats and moderate value intertidal habitats will occur.

- There are no substantial freshwater habitats which would be affected by construction works. Marine and tidal habitats are robust with high levels of dilution. The impact on water quality and aquatic ecology during construction will be short-term and negligible. The proposed development will result in a better quality effluent discharge into the harbour and thus the long term marine impact is predicted to be positive.
- The loss of habitat will result in the loss of some feeding habitats for some mammals and terrestrial bird species, however these habitats do not provide critical resources for these species. It is also considered probable that these species will be displaced to the surrounding area or to alternative roosting sites.
- Harbour seal and a number of cetacean species are likely to occur in close proximity to the marine works area. There will be short-term disturbance during construction however there is no shortage of similar habitat in the surrounding area. Any species in the area will already be habituated to a level of disturbance due to the presence of marine traffic in the harbour. Marine
- With the exception of localised impacts and short-term impacts during construction, no significant impacts on fauna are envisaged.
- No impact from the spread of invasive species will occur.

The conclusions of a screening report for Appropriate Assessment prepared for the proposed development by Arup were that it is possible to rule out likely significant impacts on Natura 2000 sites. It is the opinion of Arup that a Stage 2 Appropriate Assessment is not considered necessary, but the competent authority, Cork County Council, will make the final determination in this regard.

4.10 Material Assets, Cultural Heritage and the Landscape

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 are not required for use as fill on site.

There is not expected to be significant potential for land 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.

Utilities and Services

A number of utility and service diversions are likely to be required as part of the proposed development, particularly along the main street. However, as 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.

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 West Cork Municipal District Local Area Plan 2017 – 2020 and the Draft Landscape Strategy for Cork County 2007.

Scenic route S113 passes through the proposed development area, covering the road between Glengariff, Trafresk, Ardrigole and Castletownbere, while scenic route S115 and S118 pass nearby the proposed development area. Some of the rising mains proposed as part of the development will be located along scenic route S113. However, visual impacts when travelling along scenic route S113 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 (control kiosks) 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 timber fencing will be constructed above ground.

The WWTP building will be located in an agricultural, sparsely populated area to the southwest of Castletownbere town. It will not be visible from any of the nearby scenic routes.

The pumping station (to be located close to the existing Brandyhall Bridge protected structure) and the Quays pumping station (to be located within the curtilage of St Peters church protected structure) will not result in significant visual or architectural heritage impacts.

Some trees will require removal (refer to the Ecological Impact Assessment Report (EcIA) included in the planning application). The only visible features in these areas will primarily be the control kiosks.

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

Heritage

Given the location of the proposed development within the town of Castletownbere, 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

All works will be supervised and monitored by a suitably qualified archaeologist, under license to the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. If archaeological material is exposed then redesign may be required in order to preserve in situ any structural remains exposed. If preservation in situ is not possible then, preservation by record (excavation) may be required. The works will be carried out by a licensed archaeologist following consultation with the National Monuments Service.

Brandyhall Hall bridge is a protected structure (01189) and all proposed works here will be designed so as to avoid any impact on the bridge structure. If the bridge is to be impacted upon by the proposed works, then a full architectural survey including measured drawings will be carried out in advance and a detailed impact assessment report prepared together with appropriate mitigating actions required.

The former site of the Mac Carthy castle is thought to have been located outside the north-east end of the site proposed for the WWTP. No surface trace of the castle remains today and any proposed works near this location should not have any impact on any remains associated with the castle.

Towards the south end of the site proposed for the WWTP, the proposed pipeline route runs below an existing road close to the site of a souterrain CO115-051. The full extent of the souterrain is not known but the construction of the roadway here was archaeologically monitored. During construction of the pipeline, archaeological monitoring will be carried out in this area. These works will be carried out by a licensed archaeologist following consultation with the National Monuments Service.

The proposed pumping station and kiosk in the grounds of St Peter's Church of Ireland have the potential to impact on burials if such exist at this location. The present church dates from the mid nineteenth century but an earlier church is shown on the first edition OS 6 inch map and there is a potential therefore for earlier remains to be present. Archaeological monitoring of any groundworks in this area will be carried out under licence to the Department. If archaeological material is exposed then redesign may be required here in order to preserve in situ any structural or human remains exposed. If preservation in situ is not possible then preservation by record (excavation) may be required. These works will be carried out by a licensed archaeologist following consultation with the National Monuments Service.

These recommendations are subject to the approval of the National Monuments Section of the Department.

In particular, the proximity of the existing Brandyhall Bridge (a protected structure) and the former St Peters church (protected structure) has been taken into account in the design, construction and operation of the pumping stations. For example, the works in these areas will be monitored for vibration during construction to ensure structural integrity of the protected structure is maintained.

The probability of significant impacts arising upon heritage is considered low due to the operational design and the proposed construction methodology.

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

4.11 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 both in terms of impacts on people, biodiversity and protected structures.

The Cork County Council online planning records for the area were consulted in November 2019. 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.

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5 Conclusions

Arup has prepared an Environmental Impact Assessment (EIA) Screening report on behalf of Irish Water for the proposed Castletownbere 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 to 2019. 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 to 2019.

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.

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Appendix A

Preliminary Construction Environmental Management Plan

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Irish Water

**Castletownbere Sewerage Scheme
- UTAS Cork**

**Preliminary Construction
Environmental Management Plan
(CEMP)**

Issue | 9 December 2019

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

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Job number 257589-00

Arup
50 Ringsend Road
Dublin 4
D04 T6X0
Ireland
www.arup.com

ARUP BYRNE LOOBY

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		Name					
		Signature					
		Filename					
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1 Introduction

1.1 Objective

The objective of this report is to outline the preliminary Construction Environmental Management Plan for the proposed Castletownbere Sewerage Scheme.

The purpose of the preliminary CEMP document is to provide a framework that outlines how Irish Water and any contractor(s) appointed will manage and where practicable minimise negative environmental effects during the construction of the proposed development. Construction is considered to include all site preparation, enabling works, demolition, materials delivery, waste removal, construction activities and associated engineering works.

The Contractor will be required to update and develop this CEMP into a detailed CEMP following appointment and prior to commencing works on site. Implementation of the CEMP will ensure disruption and nuisance are kept to a minimum. This CEMP identifies the minimum requirements with regard to the appropriate mitigation, monitoring, inspection and reporting mechanisms that need to be implemented throughout construction. Compliance with this CEMP does not absolve the contractor or its sub-contractors from compliance with all legislation and bylaws relating to their construction activities.

This preliminary CEMP has been produced as part of the application for consent to ensure compliance with legislative requirements and the environmental reports that have been prepared for the proposed development. It is noted that this preliminary CEMP must be read in conjunction with the following reports for specific details and requirements in relation to certain construction aspects and specific environmental controls (where appropriate):

- Castletownbere Archaeological Assessment Report;
- Castletownbere Ecological Impact Assessment Report and associated appendices including Invasive Alien Species Survey Report;
- Castletownbere EIA Screening Report;
- Castletownbere Appropriate Assessment Screening Report.

2 Environmental Management

2.1 Environmental Policy

The environmental policy of this project is to carry out the works in full compliance with all applicable environmental regulations, Irish Water regulations and any other requirements that are specified in this document.

Prevention of pollution from activities through a system of operational controls that include written instructions and staff training appropriate to the environmental requirements of their work.

Implementing this environmental policy shall be undertaken through the successful operation of the CEMP.

2.2 Training Awareness and Competence

Site staff shall be competent to perform tasks that have the potential to cause a significant environmental impact. Competence is defined in terms of appropriate education, training and experience. Environmental awareness and training will be achieved by:

- Site induction, including relevant environmental issues.
- Environmental posters and site notices.
- Method statements and risk assessment briefings.
- Toolbox talks, including instruction on incident response procedures.
- Key project specific environmental issues briefings.

All managers and supervisors will be briefed on the CEMP.

Method statements shall be prepared for specific activities prior to the works commencing and shall include environmental protection and mitigation measures and emergency preparedness appropriate to the activity covered. The contractor's environmental ecologist shall review key method statements prior to their issue.

Method Statement briefings will be given before personnel carry out key activities for the first time.

2.3 Communication

The CEMP will be distributed to the project team, including sub-contractors, to ensure that the environmental requirements are communicated effectively. Key activities and environmentally sensitive operations shall also be briefed to staff and Contractors. Project, client and company environmental policies, where available, will be displayed on site.

The Contractor will define procedures for internal and external communication. The client may require that any communication with external parties such as environmental regulators or the public is undertaken through a nominated representative.

The agreed CEMP may be published on the project website.

During the construction phase, internal communication will include regular progress meetings, which shall cover:

- Training undertaken
- Progress report
- Inspections, audits and non-conformance
- Complaints received
- Visits by external bodies and the outcome or feedback from such visits
- Objective / target achievement, including reporting on environmental performance.

External communication, including letter drops or meetings, and liaison with statutory authorities shall be overseen by the Client Project Manager.

2.4 Monitoring, Audit and Inspections

Periodic inspections by the Contractor shall address environmental issues including dust, litter, noise, traffic, surface water, waste management and general housekeeping.

An inspection audit of the construction site shall be carried out. Environmental aspects of this audit shall be documented. The frequency of these audits (weekly / monthly / other) will be based on the nature of Contractor activity.

2.5 Keeping of Records

The Construction Manager shall ensure that fully detailed records are maintained of any 'incident / event' likely to cause non-compliance and / or harm to the environment. Environmental Incidents/Near Miss Reports will be reported and recorded.

Complaints and follow up actions on the construction site will be managed by the construction management team and the Contractor shall ensure that all complaints are recorded according to requirements.

The Contractor shall be responsible for ensuring that a full record and copy of all Safety Data Sheets (SDS) pertaining to their works is kept on file and up to date in their site offices.

The Contractor's construction management team shall be responsible for monitoring the movement and treatment of all waste during the construction phase of the project. Monitoring will be carried out to record the nature, quantities and off-site destination of wastes.

2.6 Non-conformance and Corrective and Preventative Action

Procedures for addressing non-conformance and corrective actions are to be provided. These may include, for example:

- A Non-Conformance Report (NCR) that will be raised to record any environmental incident and work that has not been carried out in accordance with the CEMP or Method Statement.
- A Corrective Action Report (CAR) that will be raised where a deficiency is identified as a result of monitoring, inspection, surveillance and valid complaints.
- Any actions identified shall nominate an owner to follow through the action to be taken, along with a specified timescale for it to be closed out.

2.7 Incident Preparedness and Response

The likelihood of an incident can be minimised by effective planning through development of a site pollution incident response plan. This plan will identify the on-site risks and appropriate responses. Suitable equipment, such as spill kits, oil booms and absorbent material, shall be held at appropriate locations on site. An effective pollution incident response plan relies on the following elements:

- Identification of all possible emergency scenarios;
- Effective planning, e.g. availability of booms, spills kits at appropriate locations;
- Identification of receptors/pathways (e.g. surface water drains);
- Identification and dissemination of contact numbers;
- Definition of site-based staff responsibilities;
- Appropriate site-based staff training;
- Exercise of incident scenarios – spill drills;
- Availability of suitable spill kits at appropriate locations on the site; and
- Implement lessons learnt from previous incidents.

Ensure that all appropriate site staff are aware of the company's site emergency procedure(s) (e.g. spillage, leakage, fire, explosion and flooding), that drain covers and spill kits are available, and they know how to use them.

3 Operational Control Requirements and Procedures

3.1 Site Establishment

3.1.1 Access

The Contractor will define the method of delivery / removal of material and plant from the sites, including the identification of access routes for deliveries and personnel. These routes are to be clearly signed.

No machinery is to enter lands not within the site and no unauthorised personnel are to be allowed access the construction site.

3.1.2 House Keeping

A 'good housekeeping' policy shall be adopted across the site. This will include the following requirements:

- No fires on site;
- Considerate behaviour of all site staff, including on the local roads;
- Removal of food waste and other rubbish at frequent intervals;
- Site access roads shall be regularly cleaned and maintained as appropriate. Hard surface road shall be swept to remove mud and aggregate material from their surface as a result of the development. Any un-surfaced roads shall be restricted to essential site traffic only. Furthermore, any road in the vicinity of the development that has the potential to give rise to dust must be regularly watered, as appropriate, during extended dry and/or windy conditions;
- Temporary portable toilet facilities shall be provided for staff during the construction period. These units will be maintained regularly, and the waste disposed of by an appropriate contractor;
- Any fuel stored on site shall be stored in double skinned, banded containers and shall be located in a designated work compound;
- Temporary site offices shall be provided for staff during the construction period. These units are to be maintained regularly.

3.2 Waste Management

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.

A Construction and Demolition Waste Management Plan (CDWMP) plan will be required to be developed by the Contractor following appointment and prior to commencing works on site. The CDWMP shall address waste generation and the

arrangements made for prevention, reuse, recycling disposal and collection of recyclables and wastes.

3.3 Invasive Plant Species

An Invasive Alien Species (IAS) survey and report with management plan was undertaken for Castletownbere Sewerage Scheme. The report identified no high-risk invasive species were recorded within the development boundary.

Japanese Knotweed (*Fallopia Japonica*) was recorded in the general locality but will not be directly nor indirectly affected by the proposed development.

The Castletownbere IAS report and management plan will be consulted prior to the commencement of any site works and adhered to for the duration of the works.

3.4 Noise and Vibration

Noise and vibration monitoring will be undertaken at the start of each new activity to determine the compliance with limit values. This may involve monitoring on a daily basis during the first weeks of the construction works, but subject to satisfactory results, this could be relaxed to once a week/ twice-weekly depending upon the site activities. The frequency will be increased again if particularly noisy activities (such as pile driving) are undertaken.

Continuous noise and vibration monitoring will take place at the nearest sensitive receptor to the works. Environmental noise and vibration monitoring is to be undertaken only by suitably-trained and experienced staff.

Specific mitigation measures, which will be adopted where appropriate to demonstrate best practicable means (BPM), including;

- Careful selection of equipment, construction methods and programming with the objective of reducing noise and vibration where possible. Only equipment, including road vehicles, conforming to relevant national or international standards, directives and recommendations on noise and vibration emissions, will be used;
- Using noise-control equipment such as jackets, shrouds, hoods, and doors, and ensuring they are closed;
- Locating plant, as far as is reasonably practicable, away from receptors or as close as possible to noise barriers or hoardings where these are located between the source and receptor;
- Ensuring that all plant is maintained regularly to comply with relevant national or international standards;
- Ensuring that air lines are maintained and checked regularly to prevent leaks;
- Operating plant in the mode of operation that minimises noise emissions;
- Ensuring that plant is shut down when not in use;
- Prohibiting works vehicles waiting or queuing on the public highway;

- Constructing temporary infrastructure (e.g. haul roads) of materials that minimise noise and vibration;
- Avoiding percussive piling, except where there is an overriding justification;
- Rotary drills and bursters actuated by hydraulic or electrical power will be used for excavating hard material. In some instances, chemical bursting can be used where nearby sensitive structures are particularly vulnerable to vibration from pneumatic breakers, etc.;
- Handling all materials, particularly steelwork, in a manner that minimises noise. For example, storing materials as far as possible away from sensitive receptors and using resilient mats around steel handling areas;
- Designing all audible warning systems and alarms to minimise noise. Non-audible warning systems can be used in preference, i.e. Cab-mounted CCTV or the use of banksmen. If required, ensure that audible warning systems are switched to the minimum setting required by the health and safety authority (HSA), and where practicable use 'white noise' reversing alarms in place of the usual 'siren' style reversing alert;
- Designing haul routes to minimise the amount of reversing required;
- Selecting electrically powered plant that is quieter than diesel or petrol- driven plant, if interchangeable; and
- Fitting suitable anti-vibration mountings where practicable, to rotating and/or impacting equipment;
- Unnecessary revving of engines will be avoided and equipment will be switched off when not required;
- Rubber linings shall be used in chutes and dumpers etc. to reduce impact noise;
- Drop heights of materials shall be minimised;
- Construction plant and activities to be employed on site shall be reviewed to ensure that they are the quietest available for the required purpose;
- Regular and effective maintenance by trained personnel shall be carried out to reduce noise and/or vibration from plant and machinery;
- Site activities shall be limited to 7am - 7pm, Monday to Friday; and 8am - 2pm, Saturday. It may be necessary in exceptional circumstances to undertake some certain types of activities outside of normal construction core working hours. Any such working hours outside the normal construction core working hours will be agreed with the Employer's Representative. The planning of such works will have regard to nearby sensitive receptors.

3.5 Archaeological Monitoring

A land based archaeological survey and an underwater archaeological survey were undertaken as part of Castletownbere Sewerage Scheme. All mitigation measures specified within the archaeology report will be incorporated into the overall Construction and Environmental Management Plan (CEMP) for the site so that all

personnel are aware of the Cultural Heritage Constraints that exist on the site. For example, all works will be supervised and monitored by a suitably qualified archaeologist, under license to the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. If archaeological material is exposed, then redesign may be required in order to preserve in situ any structural remains exposed. If preservation in situ is not possible then, preservation by record (excavation) may be required. The works will be carried out by a licensed archaeologist following consultation with the National Monuments Service.

3.6 Air Quality

3.6.1 Emissions and Odours

Any works that risk creating odours shall be planned appropriately so as to minimise any effect. Any processes that emit fumes, odours or smoke is to comply with manufacturer's and, if appropriate, regulatory limits to prevent nuisance or a regulatory breach. All plant and vehicles shall comply with European Union (EU) emission limits for their vehicle class as a minimum and are to be regularly maintained. A programme of maintenance checks shall be developed for plant on site and adhered to.

Any plant and equipment emitting black smoke will be taken out of service immediately and the defect rectified. Plant shall be located a maximum distance from sensitive receptors. Where possible use mains or battery powered equipment over diesel powered.

3.6.2 Dust

Fine spraying of water (e.g. using a bowser) is the most effective way to suppress dust. Repeat spraying shall be provided regularly, especially during warm, sunny and dry weather when water will evaporate quickly. It will be ensured that the works do not create excessive mud or a flow of dirty water that can run off into watercourses. Areas that would need to be considered for spraying include;

- Unpaved work areas subject to traffic or wind;
- Site haul roads;
- Sand, spoil and aggregate stockpiles; and
- During the loading and unloading of dust generating materials.

Non-potable water will be used for damping down where possible, e.g. rainwater captured on site. Other effective measures to reduce the dust impact on nearby receptors include, control of vehicle speeds and speed restrictions and sweeping of hard surface roads.

- Vehicle speed restrictions will be followed to reduce dust impact on nearby receptors.
- Sweeping of hard surface roads will be carried out to reduce dust impact on nearby receptors.

3.7 Nature Conservation

Specific mitigation measures are detailed in the Ecological Impact Assessment Report (EcIA) included in the planning application. Refer directly to this report for further details.

3.8 Surface Water Runoff

The following is a list of the best practice construction measures for managing surface water run-off that will be implemented for the duration of the construction phase:

- All fuels/chemicals or other materials classified as hazardous will be kept stored within a bunded enclosed spillage tray or cabinet. A folder with an inventory of the chemicals along with their applicable SDS sheets and shall be kept within the designated fuel storage area.
- Spill kits will be deployed on site during project construction phase. A spill kit must be maintained within the chemical storage area at all times and must be suitable to deal with the volume of liquids held within the area. Each construction vehicle shall carry a mini spill kit in its cab.
- Fuelling and lubrication of machinery is not to be carried out within 50m of the shoreline.
- Machinery must not be leaking oil when carrying out the work.
- Any spillage of fuels, lubricants or hydraulic oils is to be immediately contained and the contaminated soil removed for proper disposal.
- No vehicles shall be left unattended when refuelling and a spill kit including an oil containment boom and absorbent pads shall be on site at all time;
- All vehicles shall be regularly maintained, washed and checked for fuel and oil leaks;
- Concreting works shall be carried out in dry conditions where possible and concrete works shall be strictly controlled and monitored;
- Dewatering will be treated prior to discharge to a watercourse. Prior to discharge into Bear Haven Harbour, a number of measures will be implemented to intercept and treat silt laden surface water run-off. These measures will include, as a minimum, a boundary swale complete with “Sedimats” or equivalent and check dams, settlement ponds including a forebay and a siltbuster to be used by the contractor to promote settlement and filtration. A boundary silt fence as a redundancy measure to retain any remaining silt and sediment.
- There shall be no direct pumping of contaminated water from the works to a watercourse at any time;

The following standard practices shall be implemented to reduce the generation of silt-laden run-off:

- All stockpiles of excavated material shall be covered to prevent run off of silt;
- Silt fences shall be provided at all locations where the works (including temporary works and haul roads) are within 10m of the shore;
- Silt fences/swales shall be provided at all locations where surface water run-off may enter/leave the working areas, and adjacent to the haul roads;
- The short-term storage and removal / recovery or disposal of excavated material shall be considered and planned such that risk of pollution from these activities is minimised.

The following measures will be implemented to reduce the impact on existing drainage:

- Stockpiles of topsoil and/or materials shall not obstruct existing drainage routes. Existing drains outside the development area will not be interfered with or blocked during the construction phase.

The following measures will be implemented to reduce the impact on the existing hydrological regime of the study area:

- Temporary works, such as material storage will be located to not significantly change flood flow paths anywhere within the study area.
- Fuels, lubricants and hydraulic fluids for equipment used on the construction site, as well as any solvents and oils, shall be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment.

4 Emergency Response Requirements and Procedures

A description of an Emergency Response Plan (ERP) is presented in this section of the CEMP. It provides details of procedures to be adopted in the event of an emergency in terms of site health and safety and environmental protection.

4.1 Environmental Emergency Procedure

The site-specific Emergency Response Plan (ERP) includes details on the response required and the responsibilities of all personnel in the event of an emergency. The ERP in terms of health and safety will require updating and submissions from the various contractors and suppliers as the proposed project progresses.

4.2 Environmental Emergency Response Procedure

The ERP in terms of an environmental emergency are presented in the following sections.

4.3 Spill Control Measures

Every effort will be made to prevent an environmental incident during the construction and operational phase of the proposed project.

Oil/Fuel spillages are one of the main environmental risks that will exist on the proposed site which will require an emergency response procedure. The importance of a swift and effective response in the event of such an incident occurring cannot be over emphasised.

The following steps provide the procedure to be followed in the event of such an incident.

- Stop the source of the spill and raise the alarm to alert people working in the vicinity of any potential dangers;
- If applicable, eliminate any sources of ignition in the immediate vicinity of the incident;
- Contain the spill using the spill control materials, track mats or other material as required. Do not spread or flush away the spill;
- If possible, cover or bund off any vulnerable areas where appropriate such as drains, watercourses or sensitive habitats;
- If possible, clean up as much as possible using the spill control materials;
- Contain any used spill control material and dispose of used materials appropriately using a fully licensed waste contractor with the appropriate permits so that further contamination is limited;

- Notify the Environmental Manager immediately giving information on the location, type and extent of the spill so that they can take appropriate action;
- The Environmental Manager will inspect the site and ensure the necessary measures are in place to contain and clean up the spill and prevent further spillage from occurring; and
- The Environmental Manager will notify the appropriate regulatory body such as Cork County Council, National Parks & Wildlife Service, Environmental Protection Agency (EPA) and Inland Fisheries Ireland (IFI), if deemed necessary.

Environmental incidents are not limited to just fuel spillages. Therefore, any environmental incident must be investigated in accordance with the following steps.

- The Environmental Manager must be immediately notified;
- If necessary, the Environmental Manager will inform the appropriate regulatory authority. The appropriate regulatory authority will depend on the nature of the incident;
- The details of the incident will be recorded on an Environmental Incident Form which will provide information such as the cause, extent, actions and remedial measures used following the incident. The form will also include any recommendations made to avoid reoccurrence of the incident;
- If the incident has impacted on a sensitive receptor such as an archaeological feature the Environmental Manager will liaise with the Project Archaeologist;
- A record of all environmental incidents will be kept on file by the Environmental Manager and the Main Contractor. These records will be made available to the relevant authorities such as Cork County Council, DCCAE and DHPLG if required;
- In the event of any incident occurring which may impact significantly on the environment during the carrying out of the works, or during operations following the completion of these works, that incident will be reported to the relevant authority (e.g. Irish Coast Guard, NPWS, etc.) immediately by telephone.

The Contractor is responsible for any corrective actions required as a result of the incident e.g. an investigative report, formulation of alternative construction methods or environmental sampling, and will advise the Main Contractor as appropriate.

By carrying out the above steps, a proper system will be in place to investigate, record and report any potential accidents or incidents.

4.4 Fire Control Measures

Every effort shall be made to prevent the outbreak of a fire during the construction and operational phase of the proposed project. Fire extinguishers and first aid

supplies will be available in the work area. In the event of such an incident, the health and safety of all personnel will be a priority.

The Contractor must ensure that there are:

- adequate fire escape routes;
- adequate measures for the prevention of internal and external spread of fire;
and
- access and facilities for the fire safety services.

4.5 Emergency Flood Measure

The Contractor is required to prepare a comprehensive plan for managing the works that are being undertaken in an active floodplain.

The plan is required to outline proposed work methods, risk assessments and the emergency response measures and protocols that will be established to ensure the works can be carried out in a safe manner.

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5 Site Demobilisation

In clearing the site, it is vital that wastes are managed in accordance with legislation, including avoiding burning of any clearance materials. Before a project is considered to be complete, the contractor is required to clear away, and remove from the site, all equipment and materials. Any materials removed during the site demobilisation are still subject to transport management plans, loading procedures, waste management etc. This includes unused materials stored or taken to another site

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SECTION D – EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

Attachment D2: AA SCREENING

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Irish Water

**Castletownbere Sewerage Scheme -
UTAS Cork Bundle**

**Report for Screening for Appropriate
Assessment**

257589-00

Issue | 9 December 2019

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Ove Arup & Partners Ireland Ltd

Arup
One Albert Quay
Cork
T12 X8N6
Ireland
www.arup.com

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Document Verification

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		Name	Aoife Mullally	Kevin O'Sullivan	Evelyn McAuliffe		
		Signature					
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Finding of No Significant Effects Report

Appendix A

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1 Introduction

1.1 Introduction

Arup has prepared this Appropriate Assessment (AA) screening report on behalf of Irish Water for the proposed Castletownbere Sewerage Scheme, County Cork. This report is included in the planning application for the proposed scheme. The main elements to be constructed as part of the proposed development include 4 no. separate pumping stations, rising main connections, gravity sewer connections, Waste Water Treatment Plant (WWTP) and an effluent outfall pipeline.

This report contains the information required for the competent authority, Cork County Council to undertake screening for Appropriate Assessment (AA) for the proposed development.

The aims of this report are to:

- Provide information on, and assess the potential for the proposed development to significantly impact on Natura 2000 Sites (also known as European sites);
- Determine whether the project is directly connected with, or necessary to, the conservation management of any Natura 2000 sites; and
- Determine whether the project, alone or in combination with other projects, is likely to have significant effects on Natura 2000 sites in view of their conservation objectives.

The screening information presented in this report is as follows:

- Methodology and Legislative Background;
- Ecological Overview
- Overview of the proposed development
- Identification of relevant Natura 2000 sites (European sites) within the zone of influence and assessment of likely significant effects on Natura 2000 Sites,
- Assessment of Significance, and
- Conclusions

An Ecological Impact Assessment report (EcIA) also accompanies the planning application. It is noted that no reliance has been placed on any of the protection measures identified in the EcIA in this AA Screening assessment.

This report has been prepared by Fiona Patterson of Arup. Fiona has over 18 years' experience as an Environmental Consultant. She holds a BSc in Earth Science, a MSc in Environmental Engineering, a Diploma in Field Ecology and a Diploma in Planning and Environmental Law.

Fiona primarily manages the environmental aspects of major projects through the planning process including EIA scoping and EIA screening, environmental constraints and route/site options analysis, Environmental Impact Assessment Reports (EIAR) and Appropriate Assessment (AA).

Fiona has carried out many ecological surveys and prepared NISs for projects and has presented expert witness evidence at the An Bord Pleanála oral hearings.

The proposed site location is presented in **Figure 1**.



**Figure 1: Approximate Location of Proposed Development (indicated by star)
(Background mapping Bing Maps – not to scale)**

1.2 Methodology

This section provides details on the methodology and the information gathered to inform the overall assessment process. The ecological baseline of the site and surrounding area is described in **Section 3**. The proposed development is described in **Section 2**.

This report has been prepared with regard to the following guidance documents, where relevant:

- *Managing Natura 2000 Sites: The Provision of Article 6 of the Habitats Directive 92/43/EEC* (EC Environment Directorate-General, 2018); [hereafter referred to as MN 2018];
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodical Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission Environment Directorate-General, 2001);
- *Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC*. (European Commission, 2007);
- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities* (Department of Environment, Heritage and Local Government, 2010 revision);

- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10; and*
- *Guidelines for Good Practice Appropriate Assessment of Plans under Article 6(3) Habitats Directive* (International Workshop on Assessment of Plans under the Habitats Directive, 2011).
- Communication from the Commission on the precautionary principle. European Commission (2000).

A desk study and ecological surveys were carried out. Sources of information utilised for this report and accessed during December 2019 include the following:

- Ordnance Survey of Ireland mapping and aerial photography (www.osi.ie);
- Bing and Google aerial photography;
- Cunningham et al, (2008) Harbour seal movements and haul-out patterns: implications for monitoring and management
- National Parks and Wildlife Service online data on European Sites including Conservation Objectives, Site Synopses etc (www.npws.ie);
- National Parks and Wildlife Service online data on protected flora and fauna;
- National Parks and Wildlife Service (2019)– Species Conservation Assessments 2019 Volume 3
- National Parks and Wildlife Service (2019)– Habitats Conservation Assessments 2019 Volume 2
- National Parks and Wildlife Service (2010 & 2011)– Harbour Seal Population Monitoring 2009-2012: Reports No. 1 and 2 – Report on a Pilot Monitoring Study carried out in southern and western Ireland 2009.
- Information on environmental quality data available from www.epa.ie (EPA Online Environmental Map Viewer);
- National Biodiversity Data Centre – www.biodiversityireland.ie
- BirdWatch Ireland – www.birdwatchireland.ie
- Fossit (2000) A guide to Habitats in Ireland. The Heritage Council
- Cork County Council *Cork County Development Plan 2014*;
- Cork County Council *West Cork Municipal District Local Area Plan 2017*;
- Cork County Council *County Cork Biodiversity Action Plan 2009-2014*; and
- Cork County Council *North and West Cork Strategic Plan 2002 to 2020*.
- Cunningham et al (2008) *Harbour seal movements and haul-out patterns: implications for monitoring and management*.
- *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: terrestrial, freshwater, coastal and marine* (Institute of Ecology and Environmental Assessment, 2018);

1.3 Legislative Background

According to the EU Habitats Directive (92/43/EEC) and the EU Birds Directive (79/409/EEC), Member States are required to establish a Natura 2000 network of sites of highest biodiversity importance for rare and threatened habitats and species across the EU.

In Ireland, the Natura 2000 network of European sites includes Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and all migratory birds and their habitats. The Annex habitats and species, for which each site is selected, are the *qualifying interests* of the site. *Conservation objectives* for the site are defined for these qualifying interests.

A key requirement of the Directives is that the effects of any plan or project, alone, or in combination with, other plans or projects, on the Natura 2000 site network, should be assessed before any decision is made to allow that plan or project to proceed. This process is known as Appropriate Assessment (AA). The obligation to undertake an Appropriate Assessment derives from Article 6(3) and 6(4) of the Habitats Directive (92/43/EEC), and both involve a number of steps and tests that need to be applied in sequential order.

Article 6(3) is concerned with the strict protection of sites, while Article 6(4) is the procedure for allowing derogation from this strict protection in certain restricted circumstances.

Article 6(3) of the Habitats Directive states:

“Any plan or project not directly connected with, or necessary to, the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public”.

Article 6(4) states:

“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or

public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

The competent authority, in this case Cork County Council, is required to carry out Appropriate Assessment, as required by Article 6(3) and 6(4) of the Habitats Directive, as follows:

- **Stage 1 - Screening for Appropriate Assessment** – to assess, in view of best scientific knowledge, if the development, individually or in combination with another plan or project is likely to have a significant effect on the Natura 2000 site.
- **Stage 2 - Appropriate Assessment** – This is required if it cannot be excluded, on the basis of objective information, that the development, individually or in combination with other plans or projects, will have a significant effect on a Natura 2000 site. The appropriate assessment must include a final determination by the competent authority as to whether or not a proposed development would adversely affect the integrity of a Natura 2000 site. In order to reach a final determination, the competent authority must undertake examination, analysis and evaluation, followed by findings, conclusions and a final determination. The appropriate assessment must contain complete, precise and definitive findings and conclusions, and may not have lacunae or gaps.
- **Stage 3 – Assessment of alternative solutions**- the process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.
- **Stage 4 - Assessment where no alternative solutions exist and where adverse impacts remain** - an assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

2 The Proposed Development

2.1 Existing Scenario

Castletownbere is a coastal town in West Cork. It is approximately 33km south-west of the town of Glengarriff along the R572. As of the 2016 census, Castletownbere has a population of 860.

Currently, wastewater is collected in ten separate drainage sub-catchments and released back into the environment with little or no treatment. The majority of the Castletownbere agglomeration, including the town centre, is served by a collection network which discharges untreated wastewater into Berehaven Harbour. There are a number of septic tanks and package plants within the agglomeration that provide some level of treatment to the wastewater prior to being discharged to the Harbour including:

- 5 no. public septic tanks (3 of which discharge into Berehaven Harbour and 2 of which discharge to a percolation fields);
- 1 no. privately-owned septic tank; and
- 3 no. wastewater treatment package plants (2 private and one public).

The practice of discharging untreated wastewater into the local environment is unsustainable and no longer acceptable. The objective of this Irish Water project is to deliver wastewater treatment to ensure that the water quality standards set down by regulatory bodies will be achieved, as per both European and National legislation.

Delivering a solution for Castletownbere within a complex statutory and regulatory process involves defining the project scope, site selection, planning permission, site purchase and construction, while optimising value for money.

In order to ensure compliance with the Urban Wastewater Treatment Directive (91/271/EEC), the provision of a number of new wastewater treatment services have 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 Castletownbere. The West Cork Municipal District Local Area Plan (LAP) 2017 gives the following as an objective for Castletownbere:

“The existing sewer network in the town is limited. It is a combined system which discharges directly to the sea at a number of locations. There is no wastewater treatment plant in Castletownbere. The provision of sewer collection network and Wastewater Treatment Plant is required to accommodate proposed growth in the town. The Castletownbere Sewerage Scheme Network Upgrade and Wastewater Treatment Plant are under review by Irish Water.”

Hence, the proposed scheme is in line with the above objective and is critical to facilitate future development in the area.

2.2 Proposed Development

2.2.1 Operational Phase

The overall proposed Castletownbere sewerage scheme will consist of 4 no. separate underground wastewater pumping stations, rising main connections, gravity sewer connections, a Waste Water Treatment Plant (WWTP) capable of primary treatment and the effluent outfall pipeline¹. The four new pumping stations will be required to transfer wastewater to the WWTP, each of which will incorporate stormwater storage facilities as presented in **Figure 2** below.

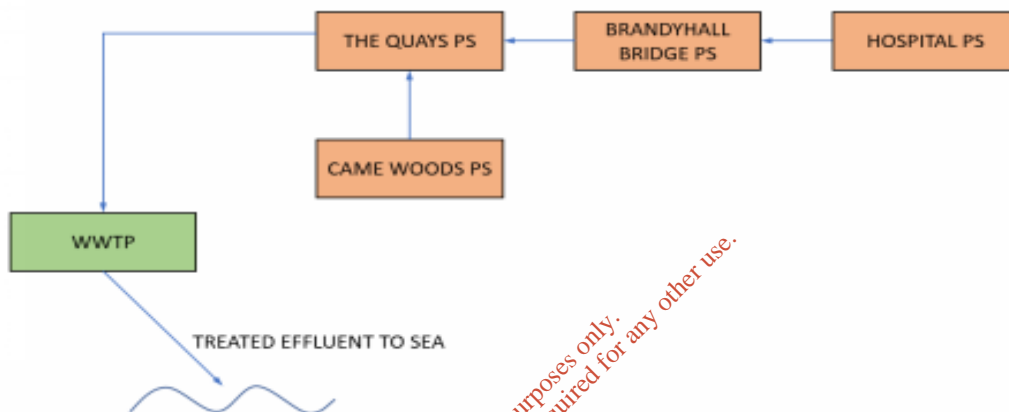


Figure 2: Flow diagram of the Castletownbere Sewerage Scheme

2.2.2 Hospital Pumping Station

The proposed Hospital wastewater pumping station will be located within the grounds of St. Joseph's Hospital (also known as Castletownbere Community Hospital) to the south of the R572 in the townland of Derrymihin West. Refer to **Figure 3**. The pump station would be set back approximately 40m from the nearest hospital building, on the eastern corner of the hospital site. The closest residential property is c. 70m to its north. An existing septic tank which services the Hospital, St. Martin's Avenue and St. Joseph's Village, is located adjacent to the site of the proposed pump station.

The main components of the Hospital pumping station will include a diversion of an existing gravity sewer, an underground wastewater pumping station, the reuse of the existing outfall as an overflow facility, valve and flowmeter chambers and rising main to convey pumped wastewater (flows) to a proposed discharge manhole on the R572. It will then flow by gravity to the existing foul sewer network and onwards to the proposed Brandyhall Bridge wastewater pump station. The existing hospital septic tank will also be decommissioned.

¹ It is intended to submit the Hospital Pumping Station as a separate planning application (refer to cover letter of planning application for details), the remainder of the sewerage scheme is included in another planning application. This EIA Screening report has assessed the sewerage scheme in its entirety including the overall site development area for the two planning applications.

In addition, there will also be a new access road, new access gate, a 1.2m high post and rail perimeter fencing and a control kiosk.

Access to the proposed site would be through a private road owned by the HSE. The proposed site itself is currently in the ownership of the HSE.

The proposed site is low lying and its immediate surrounding area has a good covering of trees. Refer to the Ecological Impact Assessment Report (EcIA) included in the planning application.



Figure 3: Location of proposed Hospital pumping station (red boundary) (not to scale – refer to planning drawing for further details)

2.2.3 Brandyhall Pumping Station

The proposed wastewater pumping station at Brandyhall Bridge will be located immediately to the south of the R572, approximately 50m south of Brandyhall Bridge (Refer to **Figure 4**). The Brandyhall Bridge crosses over the Derrymihin West stream. Brandyhall Bridge itself is a protected structure.

The main components of the Brandyhall Bridge pumping station will include a diversion of an existing gravity sewer, an underground wastewater pumping station, the reuse of the existing outfall as an overflow facility, valve and flowmeter chamber, a rising main to convey pumped wastewater (flows) to a proposed discharge manhole on the R572 and another rising main to transfer flows from this manhole on the R572 via the existing gravity network to the Quays wastewater pump station on Main street. The existing septic tank will also be decommissioned. In addition, there will also be a new access road, new access gate, a 1.2m high post and rail perimeter fencing and a control kiosk. The proposed Brandyhall pumping station will also be designed to accommodate flows from the Mariner's View drainage area to the north, although no connecting sewers will be laid under the current scheme.

The closest residential property is c. 25m to its east.



Figure 4: Location (red boundary) of proposed Brandyhall Bridge pumping station (not to scale – refer to planning drawing for further details)

2.2.4 Foildarrig

Wastewater (flows) emerging from the Foildarrig drainage area to the north of the town are currently discharged to a percolation area to the rear of a row of council-owned dwellings. Under this scheme, these flows will be conveyed via a proposed gravity sewer to the main gravity network within the town, and onwards to the WWTP via the Quays pump station. At Foildarrig, it is proposed to install a gravity sewer to transfer flows from the council owned properties to the existing sewer network at Chapel Lane.

2.2.5 Came Woods Pumping Station

The proposed wastewater pump station at Came Woods will be located adjacent to the existing public road which leads to the Beara Coast Hotel. The site is part of a wide grass verge adjacent to the public road in public space controlled by Cork Co. Council (Refer to **Figure 5**). The main components of the Came Woods pumping station will include a diversion of an existing gravity sewer, an underground wastewater pumping station, the reuse of the existing outfall as an overflow facility and rising main to convey pumped wastewater (flows) to a proposed discharge manhole on the R572. In addition, there will also be a control kiosk. The kiosk would be located approximately 6m back from the kerb-line and would be approximately 40m from the nearest dwelling house.



Figure 5: Location of proposed Came Woods pumping station (red boundary) (not to scale – refer to planning drawing for further details)

2.2.6 Quays Pumping Station

All flows from the agglomerations will arrive, via the existing gravity sewer network, to a proposed manhole on Main Street, at the intersection of the R571 and R572, and will be conveyed via a proposed gravity sewer to the proposed Quays pump station, a terminal pumping station to be located in the grounds of the former St Peters church. (Refer to **Figure 6**). St Peters church is a protected structure.

The main components of the Quays pumping station will include a diversion of an existing gravity sewer, an underground wastewater pumping station, the reuse of the existing outfall as an overflow facility and rising main to convey pumped wastewater (flows) to a proposed discharge manhole on Tallon Heights and a gravity sewer from the discharge point to the proposed WWTP. In addition, there will also be a control kiosk.

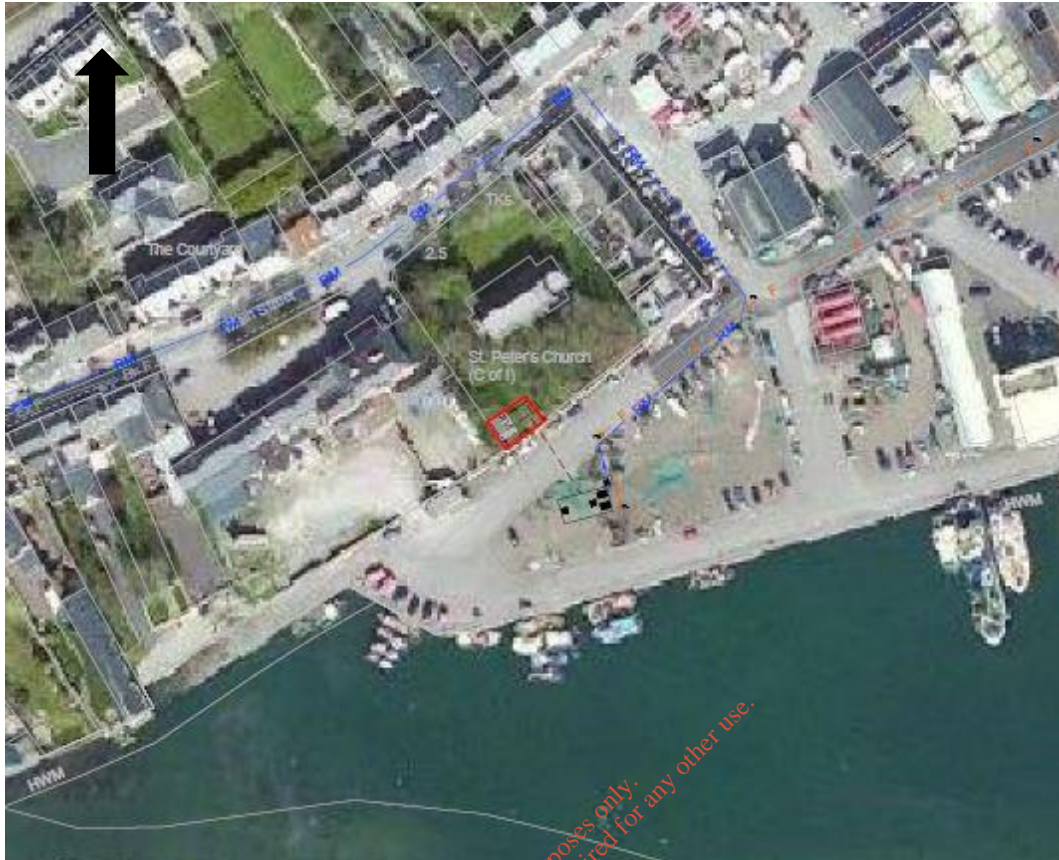


Figure 6: Location of proposed Quays pumping station (red boundary) (not to scale – refer to planning drawing for further details)

2.2.7 Wastewater Treatment Plant and Effluent Outfall

The proposed Wastewater Treatment Plant (WWTP) at Drom South would be located in a low-lying area to the south of Tallon Road (L4195) adjacent to the coastline, see **Figure 7**. The proposed site is currently in the ownership of Cork Co. Council and an existing small package wastewater treatment plant operated by Irish Water is already located on the site. Access to the proposed site would be through an existing access road owned by Cork Co. Council.

The closest dwelling would be approximately 105m from the boundary of the proposed WWTP site. The site area is approximately 0.83ha. The small package wastewater treatment plant will be decommissioned and removed as part of the current proposal. The proposed WWTP will provide primary treatment, appropriate to bring the agglomeration into Urban Wastewater Treatment Directive compliance. Effluent will be discharged into Bearhaven Harbour via a proposed effluent pipe across land to the launch point and an effluent outfall into the harbour.



Figure 7: Location of proposed WWTP and outfall (red boundary) (not to scale – refer to planning drawing for further details)

2.2.8 Potential Emissions during Operational Phase

Potential emissions to environmental media from the operation of the proposed development are identified below:

Emissions to Water

Treated effluent will be discharged to Berehaven Harbour from the proposed marine treated outfall linked to the WWTP. An assessment of water quality in the receiving environment was undertaken using separate near-field and far-field dispersion modelling studies. Discharges of BOD and Dissolved Oxygen from the proposed treated effluent outfall at Castletownbere were found to be in full compliance with all the relevant legislation in the near-field. For the water quality parameters that exceeded thresholds in the near-field, additional far-field dispersion modelling was carried out. It concluded that the proposed scheme does not exceed any of the Environmental Quality Standards in Castletownbere harbour and therefore the discharges from the proposed WwTP for Castletownbere are in full compliance with the relevant EU water quality regulations. The practice of discharging untreated sewage into Berehaven Harbour will cease, thereby positively impacting water quality in the Harbour area.

For more information please refer to the Interim Water Quality Dispersion Modelling Report and the Castletownbere Far-Field Modelling Report included in the planning application.

The pumping stations will be designed to hold a recommended quantity of storm flows and all pumping station will have emergency overflow pipelines to receiving waters.

Occasional discharges to receiving waters may also occur from some of the proposed pumping stations. 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.

Emissions to Ground

There will be no direct emissions to ground from the proposed development during operation. The proposed WWTP and pumping stations will be placed on concrete foundations. All surface water drainage during operation at these facilities will be routed to surface water management systems. Effluent streams will be routed to the proposed WWTP.

Emissions to Air

There will be no continuous emissions to air from the proposed development during operation. 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.

Noise Emissions

Minor noise emissions will be generated from the operation of the proposed development, in particular from the proposed WWTP and pumping stations. However, noise levels generated will be minimal and in keeping with the current baseline noise environment in Castletownbere town.

2.2.9 Construction Phase

It is expected that construction will commence in Q3 2020, 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.

The main elements to be constructed as part of the proposed development include 4 no. separate pumping stations, rising mains connections, gravity sewer connections, the WWTP and the effluent outfall pipeline. In addition to the information provided previously, an overview of the construction works required for these elements is presented below.

2.2.10 Pumping Stations

Each pumping station will be located entirely below ground except for their control kiosks, access gates, odour control units and low-level timber fencing. 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.

Dewatering and over pumping are likely to be required at the pumping station works areas close to Castletownbere 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.

Septic tanks are currently located at each of the proposed pumping station locations. Partial demolition of these tanks will take place prior to the commencement of construction works. The partial demolition methodology will involve the removal of the roof sections of each septic tank. The remaining contents of the septic tanks will then be extracted before the tanks are cleaned down and subsequently filled with granular material to complete the decommissioning process. The roof sections removed for demolition, the contents of the tanks that are removed and any other material arising from the demolition works will be transported offsite to a suitable licenced waste facility for disposal. This type of demolition work utilises normal routine construction methodologies, which can be implemented successfully and significant impacts on the surrounding environment are not envisaged.

Some trees will require removal to facilitate the construction of the Came Woods pumping station. Refer to the EcIA report included in the planning application.

2.2.11 Rising Main and Gravity Sewer Connections

Rising main connections of various lengths will be laid between each of the 4 no. pumping stations and the existing gravity network. 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.

Gravity sewer connections of various lengths will be required to divert flows to the new pumping stations. Excavated material generated during the construction of these connections will be returned to the trenches.

2.2.12 WWTP

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* – required earthworks, formwork and concrete, incoming and outgoing pipework and associated chambers, pyramidal prefabricated primary settlement tanks, desludging valves and pipework and associated control, testing and commissioning equipment.
- *Sea outfall* – required earthworks, formwork and concrete, 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, watermain to site, watermain within site and water supply break tank.

2.2.13 Effluent Outfall

The outfall pipeline to Berehaven Harbour will discharge treated effluent from the WWTP site. The outfall will consist of a terrestrial section and a marine section. The terrestrial section will be laid in agricultural fields. The length of the marine section will be 120 metres. The outfall will extend approximately 75m beyond the low water mark discharging in a water depth of approximately 2.5m. The outfall area is calculated to be 0.417 Hectares. Refer to **Figure 8**.

There are several methods by which the sea 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 in the following sections, based on current practice and site constraints/characteristics. These are:

- Horizontal directional drilling method;
- Flood and float 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.

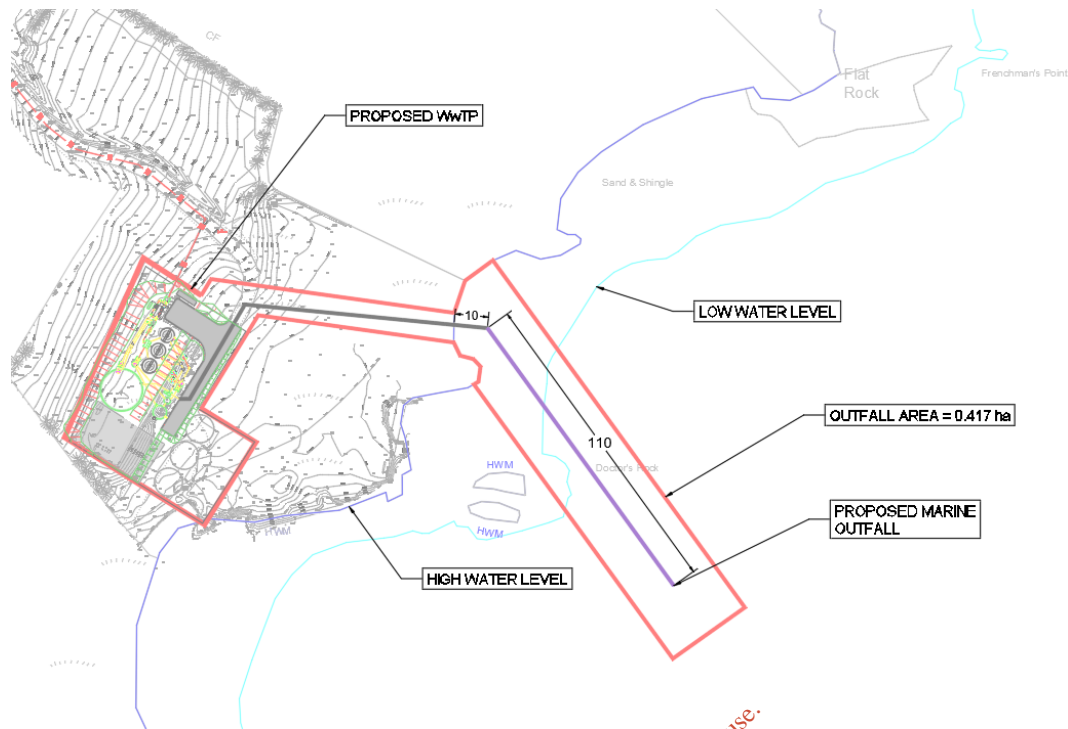


Figure 8: Proposed Marine Outfall (not to scale)

Horizontal Directional Drilling (HDD) 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 9**.

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.

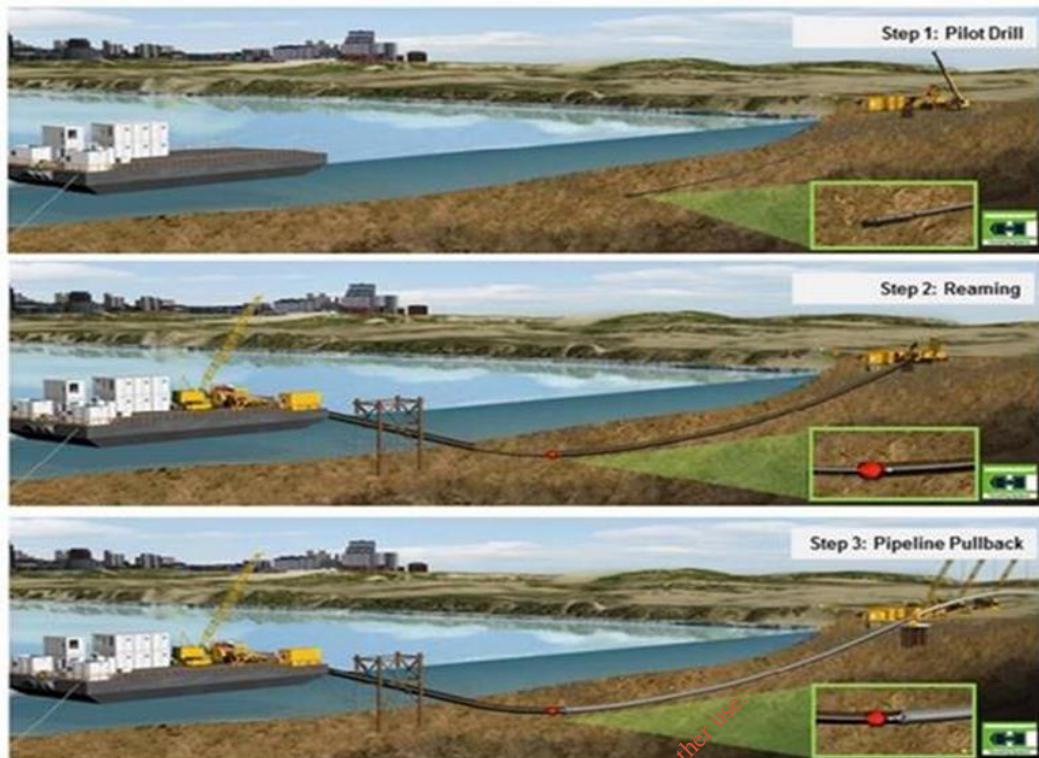


Figure 9: Typical HDD process for a sea outfall (Source: Stevens²)

Flood and Float Method

The use of the float and flood method would require the formation of trenches and the placement of suitable material to support and protect the sea outfall once it is in position. Refer to **Figure 10** for an overview of the food and float method.

Bottom Pull Method

The use of the bottom-pull method would, in a similar manner to the flood and float 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 11**.

² 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]

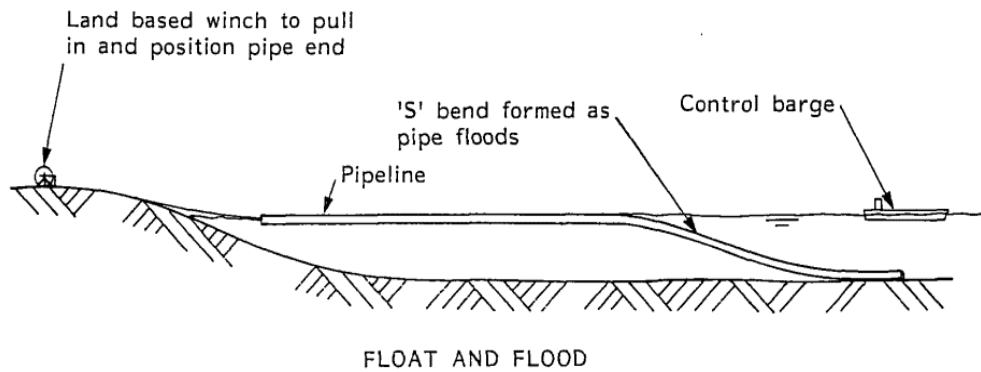


Figure 10: Flood and float method of installing the outfalls (Source: WRC³)

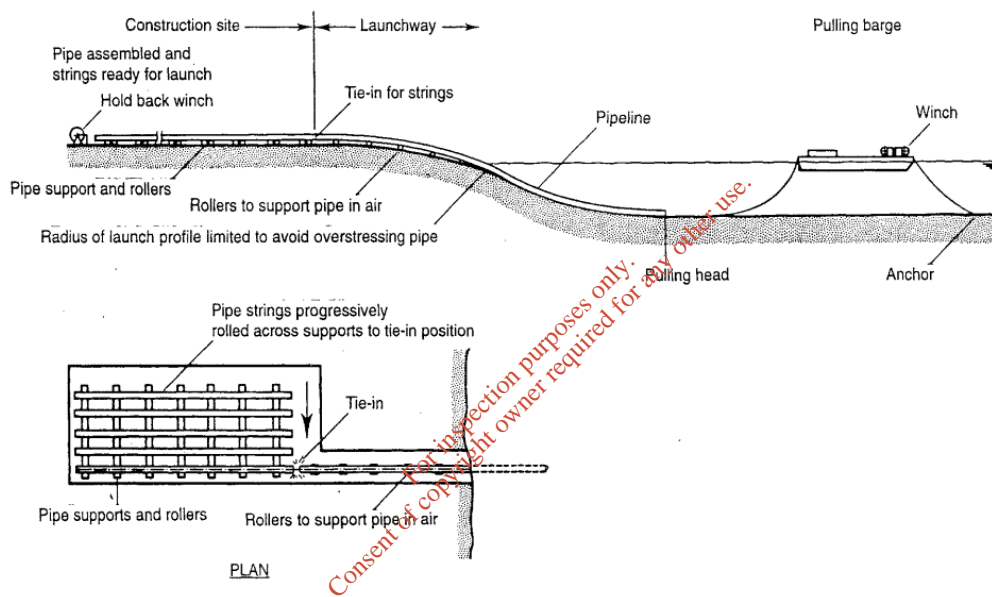


Figure 11: Bottom pull method of installing the outfalls (Source: CIRIA⁴)

Temporary Causeway method

This method would entail the temporary construction of a stone causeway into the intertidal area (where depths are too shallow for barge) to facilitate the construction of the outfall. Construction beyond the intertidal area would be via a barge. From the temporary causeway, the Contractor would use excavation machinery to excavate a trench for the outfall pipe. The pipe is then sunk into the trench and covered over. The temporary causeway would be removed once construction is complete.

2.2.14 Potential Emissions during Construction Phase

Potential emissions to environmental media from the construction of the proposed development are identified below:

³ WRC (1990) Design guide for marine treatment schemes: Volumes I - IV

⁴ CIRIA (1996) Sea outfalls - construction, inspection and repair: Report 159.

Emissions to Water

The main emissions to water would be during the construction of the marine outfall. The emissions will consist of a temporary sediment plume which will be generated as a result of the trench excavations. This plume would be centered around the immediate area for the duration of the excavation works. Disturbed sediment would disperse and drop to the seabed on the ebb and flow of the tide. The methodologies for these types of construction works are well understood and the risk for accidental releases or spillages is very low.

Emissions to Ground

There is potential for minor pollution of soils during construction from polluting substances such as hydrocarbons but the construction footprint is quite small and constrained (e.g. along road width) and any pollution would be confined to the immediate area of the works.

Emissions to Air

Noise generated during the construction would be mainly from construction traffic and excavation activities and would be temporary and short-term. Dust will also be generated during excavations but again would be temporary and short-term.

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3 Ecological Overview

3.1 Site Baseline

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 and parks or Natura 2000 sites within the proposed development boundary. Refer to the Ecological Impact Assessment Report (EcIA) included in the planning application for further details on Biodiversity. The primary water feature located nearby the proposed development is Castletownbere Harbour.

The report concluded the following:

- The habitats on the site are not rare, threatened nor do they require any special protection under existing or pending legislation and are considered relatively common in the local landscape. The development will impact primarily on low value habitats; a net loss of common terrestrial habitats and moderate value intertidal habitats will occur.
- There are no substantial freshwater habitats which would be affected by construction works. Marine and tidal habitats are robust with high levels of dilution. The impact on water quality and aquatic ecology during construction will be short-term and negligible. The proposed development will result in a better quality effluent discharge into the harbour and thus the long term marine impact is predicted to be positive.
- The loss of habitat will result in the loss of some feeding habitats for some mammals and terrestrial bird species, however these habitats do not provide critical resources for these species. It is also considered probable that these species will be displaced to the surrounding area or to alternative roosting sites.
- Harbour seal and a number of cetacean species are likely to occur in close proximity to the marine works area. There will be short-term disturbance during construction however there is no shortage of similar habitat in the surrounding area. Any species in the area will already be habituated to a level of disturbance due to the presence of marine traffic in the harbour. Marine
- With the exception of localised impacts and short-term impacts during construction, no significant impacts on fauna are envisaged.
- No impact from the spread of invasive species will occur.

3.2 Zone of Influence

The zone of influence comprises the area within which the proposed development may potentially affect the conservation objectives or qualifying interests (QI) of a Natura 2000 site. There is no recommended zone of influence, and guidance from the National Parks and Wildlife Service (NPWS) recommends that the distance should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in-combination effects (cumulative).

In ecological and environmental impact assessment, for an impact to occur there must be a risk enabled by having a source (e.g. construction works at a proposed development site), a 'receptor' (e.g. a Special Area of Conservation (SAC) or other ecologically sensitive feature), a pathway between the source and the receptor (e.g. a watercourse which connects the proposed development site to the SAC).

Consideration is therefore given to the source-pathway-receptor linkage and associated risks between the proposed development and Natura 2000 sites. For a significant effect to occur there needs to be a risk associated with pollutant linkages whereby a source (i.e. contaminant or pollutant arising from construction activities) affects a particular receptor (i.e. Natura 2000 site) through a particular pathway (e.g. a watercourse which connects the proposed development with the Natura 2000 site).

The identification of risk does not automatically mean that an effect will occur, nor that it will be significant. The identification of these risks means that there is a possibility of environmental or ecological damage occurring. The level and significance of the effect depends upon the nature of the consequence, likelihood of the risk and characteristics of the receptor.

The precautionary principle is applied for the purposes of screening to ensure that consideration and pre-emptive action is undertaken where there is a lack of scientific evidence.

During the construction phase, the zone of influence of the proposed development will be restricted to the construction footprint and immediate surrounding area of the proposed works and construction emissions. Once operational, the zone of influence of the proposed development will largely be restricted to the effluent plume in the harbour.

3.3 Natura 2000 sites

Natura 2000 sites (European sites) are only at risk from significant effects where a source-pathway-receptor link exists between a proposed development and a Natura 2000 site(s). This can take the form of a direct impact (e.g. where the proposed development and/or associated construction works are located within the boundary of the Natura 2000 site(s)) or an indirect impact where impacts outside of the Natura 2000 site(s) affect ecological receptors within (e.g. impacts to water quality which can affect riparian habitats at a distance from the impact source).

As a general rule of thumb, it is often considered appropriate to examine all European sites within 15km as a starting point. In some instances, where there are hydrological connections, a whole river catchment or a marine area or a groundwater aquifer may need to be included.

Each of these Natura 2000 sites were then examined against the potential zone of influence of the proposed development in terms of source-pathway-receptor linkage and associated risks order to determine which sites may experience potential impacts.

As a starting point, all European sites within 15km of the proposed development were examined. (Refer to **Figure 12**) Given the low level of emissions predicted from the proposed development it was considered that the zone of influence of the works would not extend beyond 15km. However, given that a marine outfall is proposed as part of the development (and is therefore located in a marine environment), there is potential for mobile marine qualifying interest (QI) species from European sites beyond the 15km zone to use the harbour for feeding. Therefore, European sites (Natura 2000 sites) with relevant mobile marine QI species beyond 15km were also considered in the assessment.

Section 3.3.1 and 3.3.2 discusses the direct and indirect impacts of the proposed development on SPA and SAC sites respectively within the Zone of Influence. Section 3.4 discusses the cumulative impacts of the proposed development.

3.3.1 Special Protection Area within the Zone of Influence or located within 15km of the proposed development

Table 1: SPA sites within Zone of Influence and the features of interest /15km

Natura 2000 Site	Distance from closest section of proposed development (km)	Qualifying Interests (Bird Species)
Beara Peninsula SPA (Site Code 004155)	2.3 km	Fulmar (<i>Fulmarus glacialis</i>) [A009] Chough (<i>Pyrrhonorax pyrrhonorax</i>) [A346]
Sheeps Head to Toe Head SPA (Site Code 004156)	11.4km	Chough (<i>Pyrrhonorax pyrrhonorax</i>) [A346] Peregrine (<i>Falco peregrinus</i>) [A103]

Beara Peninsula SPA and Sheeps Head to Toe Head SPA are some of the most important sites in the country for Chough, with a breeding population of international importance occurring. Beara Peninsula SPA also supports a nationally important population of Fulmar, while Sheeps Head to Toe Head SPA supports a nationally important population of Peregrine.

Direct Impacts

None of the Qualifying Interest (QI) bird species, which form part of the SPA listed in **Table 1** will be directly impacted by the proposed development. No SPA sites are within or near to the proposed development. The nearest SPA site (Beara Peninsula SPA) is 2.3km (over land) from the proposed development.

Indirect Impacts

The conservation management objectives for both SPAs are to maintain the favourable conservation condition of its qualifying habitats and species.

None of the above species were observed during the ecological surveys.

The diet of Chough (*Pyrrhocorax pyrrhocorax*) is mainly insects and their larvae, worms and other subterranean invertebrates. They will also eat berries, grain, small mammals and birds. Chough has a scattered distribution, resulting from specific ecological requirements (suitable nesting sites; shallow caves in cliffs) and foraging areas (short grassland with low cover). No areas of suitable grassland which could potentially be of high value as feeding habitat for this species occurs within the proposed development area. No potential breeding sites will be affected. They are not dependant on water quality in the harbour.

The diet of Fulmar (*Fulmarus glacialis*) includes fish, crustaceans and whale flesh. Fulmar generally use sea cliffs for roosting and nesting. No areas of suitable feeding/breeding habitat for this species occurs within the proposed development area. Theoretically, fulmar may occasionally forage for fish in the harbour though they tend to forage further offshore. Water quality impacts in the harbour during construction are predicted to be temporary, short term and restricted to the footprint of the works. Significant negative water quality impacts will not arise. There will be a positive impact on water quality in the harbour during the operational phase (Refer to the Castletownbere Far Field Modelling report which accompanies the planning application for full details).

The diet of Peregrine (*Falco peregrinus*) is mainly birds, including pigeons, feral birds, thrushes, waders and wildfowl, gulls and seabirds. Again, no areas of suitable/breeding habitat for this species occurs within the proposed development area and they are not dependant on water quality in the harbour.

In conclusion, indirect impacts will not arise on any SPAs due to the nature of the proposed development and the lack of suitable habitat for these species.

3.3.2 Special Areas of Conservation within the Zone of Influence or located within 15km of the proposed development

Table 2: Special Area of Conservation sites within the Zone of Influence/ 15km

SAC Sites	Site Code	Distance from site boundary over land (km)
Kenmare River SAC	002158	5.7 (22) ⁵
Glanmore Bog SAC	001879	6.9
Sheeps Head SAC	000102	11.4
Caha Mountains SAC	000093	13.2

⁵ Approximate distance of the hydrological pathway between proposed development and Kenmare River SAC for mobile marine species e.g. harbour seals.

SAC Sites	Site Code	Distance from site boundary over land (km)
Glengarriff Harbour and Woodland SAC	000090	21.9 (30) ⁶

Table 3: SAC sites within Zone of Influence/15km and the Qualifying Interests | Source NPWS.

Natura 2000 Site	Qualifying Interests
Kenmare River SAC (Site Code 002158)	<p>Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] European dry heaths [4030] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Calaminarian grasslands of the <i>Violetalia calaminariae</i> [6130] Submerged or partially submerged sea caves [8330] <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail) [1014] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303] <i>Lutra</i> (Otter) [1355] <i>Phoca vitulina</i> (Harbour Seal) [1365]</p>
Glanmore Bog SAC	<p>Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] Water courses of plain to montane levels with the <i>Ranunculon fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Blanket bogs (* if active bog) [7130] <i>Margaritifera</i> (Freshwater Pearl Mussel) [1029] <i>Trichomanes speciosum</i> (Killarney Fern) [1421]</p>
Sheeps Head SAC	<p>Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] <i>Geomalacus maculosus</i> (Kerry Slug) [1024]</p>
Caha Mountains SAC	<p>Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] Natural dystrophic lakes and ponds [3160] Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230] Blanket bogs (* if active bog) [7130] Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) [8110] Calcareous rocky slopes with chasmophytic vegetation [8210]</p>

⁶ Approximate distance of the hydrological pathway between proposed development and Glengarriff SAC for mobile marine species e.g. harbour seals.

Natura 2000 Site	Qualifying Interests
	Siliceous rocky slopes with chasmophytic vegetation [8220] <i>Geomalacus maculosus</i> (Kerry Slug) [1024] <i>Trichomanes speciosum</i> (Killarney Fern) [1421]
Glengarriff Harbour and Woodland SAC (Site Code 000090)	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0] <i>Geomalacus maculosus</i> (Kerry Slug) [1024] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303] <i>Lutra</i> (Otter) [1355] <i>Phoca vitulina</i> (Harbour Seal) [1365]

Glengarriff Harbour and Woodland SAC is not located within the 15km buffer zone but has been included in this analysis as it is hydrologically linked to the proposed development via the Berehaven Harbour.

Direct Impacts

None of the QI habitats or species, which form part of the SACs listed in **Table 3**, will be directly impacted by the proposed development. None of the SAC sites are located within or near to the proposed development; the nearest SAC site (Kenmare Bay SAC) is approximately 5.7km over land and 22km by water.

Indirect Impacts

Indirect impacts on QI species/habitats for Glanmore Bog, Sheeps Head or Caha Mountains SACs will not arise due to the following reasons:

- The distance between the proposed development and these SACs.
- Lack of hydrological/hydrogeological pathways.
- The foraging range of the mobile QI species (Kerry slug and Freshwater pearl mussel) for these SACs does not extend to Berehaven Harbour/Castletownbere.

Therefore, the QI habitats and species of these SACs are not considered further.

Indirect impacts on QI habitats for the Kenmare River SAC and the Glengarriff Harbour and Woodland SAC will also not arise due to the following reasons:

- The distance between the proposed development and these SACs.
- No hydrological/hydrogeological pathways (over land).
- There is a hydrological pathway via the marine environment but it is too distant (22km) to affect any marine QI habitats of Kenmare SAC (there are no marine QI habitats for Glengarriff Harbour and Woodland SAC).

Therefore, the QI habitats of these SACs are not considered further.

The Kenmare River SAC and Glengarriff Harbour and Woodland SAC have four mobile QI species:

- Narrow-mouthed Whorl Snail (*Vertigo angustior*)
- Lesser Horseshoe Bat (*Rhinolophus hipposideros*)
- Otter (*Lutra lutra*)
- Common/Harbour Seal (*Phoca vitulina*)

The Harbour Seal (*Phoca vitulina*) is the only species that has a wide foraging range which could theoretically extend as far as Berehaven Harbour. Therefore, the other three QI species (otter, lesser horseshoe bat and narrow-mouthed whorl snail) are not considered further.

Harbour Seal

The Kenmare SAC is approximately 22km by sea and the Glengarriff Harbour and Woodland SAC is approximately 30km by sea respectively to Berehaven Harbour. The main habitat for this species occurs within the boundaries of Kenmare SAC and Glengarriff SAC and includes known moult haul-out sites, resting haul-out sites and breeding sites, none of which will be directly impacted by the proposed development. Harbour seals come to shore during June to give birth and mate again around this time but usually in the water. Pups are capable of swimming within a few hours of being born but stay with their mother until weaned. Harbour Seals also come to shore to moult (shed their fur) during July and August often forming large groups on sheltered shores that have ready access to the sea. They are usually extremely wary and shy on land and therefore it is almost impossible to approach them when they are hauled out without stampeding them into the water. However, habituation to human activities in their vicinity can occur. Most haul-out sites are used daily, based on tidal cycles and other environmental variables, although foraging trips can last for several days (Lowry et al. 2001). Patterns of movement seal have been observed at two geographic scales; while some seals travelled over 100km, 50% of trips were within 25km of a haul-out site (Cunningham 2008). The overall conservation value status for harbour seal is Favourable.

Harbour seals are generalist feeders that take a wide variety of fish, cephalopods and crustaceans obtained from surface, mid-water and benthic habitats. The key environmental conditions supporting site integrity for Harbour seals are marine water dependent and sensitive to changes in food supply. The current threats to harbour seals include continued by-catch in fishing gear; occasional illegal culling; competition for prey resources with fisheries and disturbance at key breeding and molting haul-out sites, geotechnical surveying, marine fish and shellfish harvesting causing reduction of species/prey populations and disturbance of species. None of these threats will arise from the proposed development.

Theoretically Harbour Seals may travel from the SACs to Berehaven Harbour to forage. (They have been known to follow fishing trawlers and they are known to occur and feed within Berehaven Harbour).

Harbour Seals could potentially feed in proximity to the site of the marine outfall and although they were not recorded during the ecological surveys, they could potentially use the rocky outcrop which forms an island at high tide a haul out site. Any seals in this area will be accustomed to a certain level of disturbance due to marine traffic and human presence in the harbour. They will also be accustomed to the water quality in the existing scenario (untreated effluent discharge). Construction of the marine outfall will be temporary and short term and will not significantly affect seals and their prey in the harbour in terms of disturbance or water quality. There is no shortage of similar habitat in the surrounding area. The water quality of the effluent (during the operational phase) will be a significant improvement on the existing scenario. Therefore, it is concluded that significant effects on Harbour seal and thus the above SACs will not arise.

3.4 Cumulative Impacts with other Projects

The Cork County Council Development Plan and Cork County Council online planning records for the area were consulted in December 2019. 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 cumulative impacts upon any Natura 2000 site.

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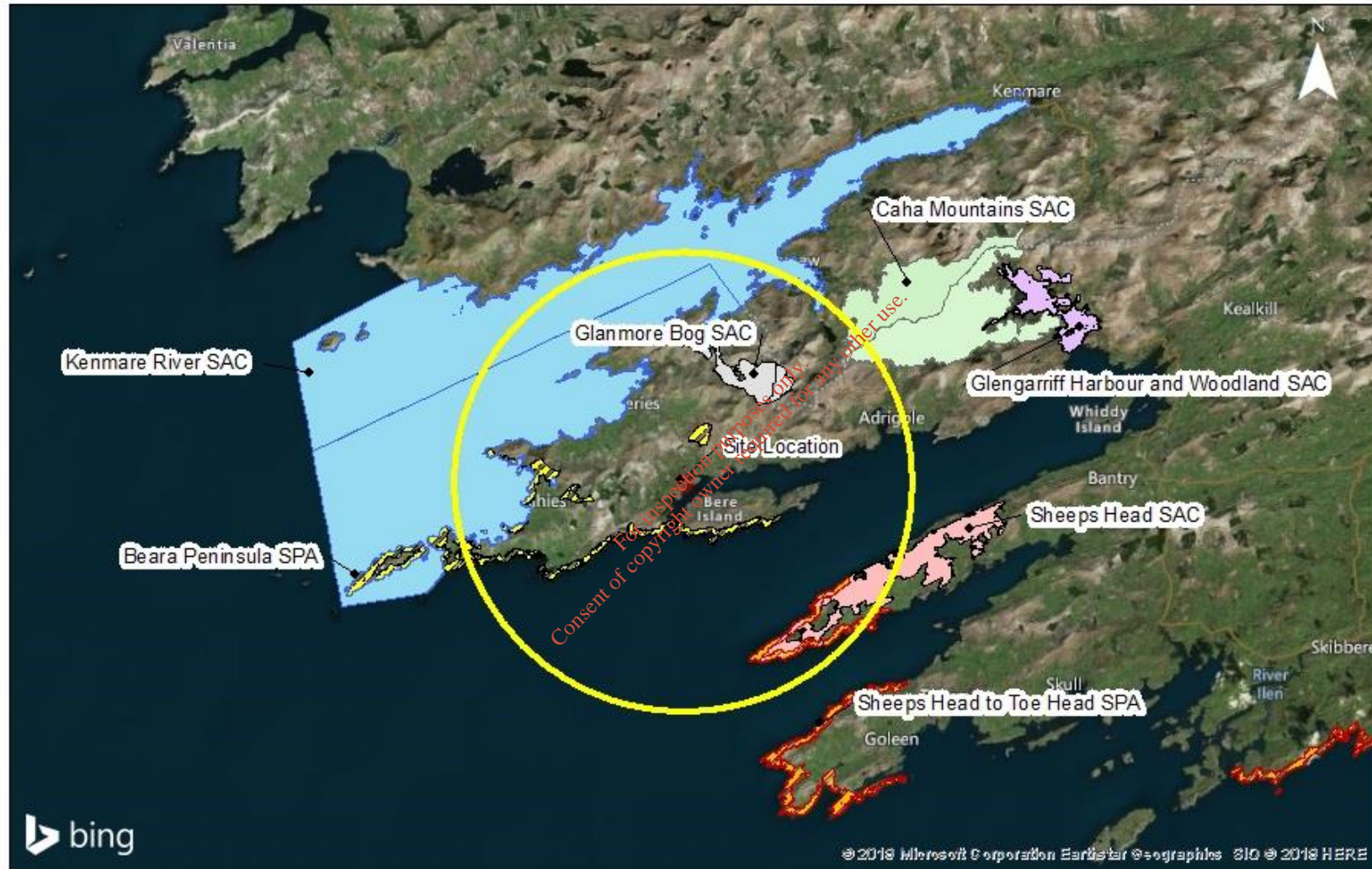


Figure 12: SACs and SPAs within 15km of the proposed development |Not to Scale | Source: ArcMap

4 Assessment of Significance

The proposed development will not result in any significant direct, indirect or cumulative impacts on Natura 2000 sites. The following points explain why the proposed development will have no significant impact on Natura 2000 sites and their Qualifying Interest species.

- There are no Natura 2000 sites located within or near the proposed development. The nearest designated sites are Beara Peninsula SPA (2.3km) and Kenmare River SAC (5.7km/hydrological distance of 22km). There will be no loss of foraging or breeding habitats for any QI species from nearby Natura 2000 sites. Fulmar, Chough and Peregrine Falcon are QIs of the nearby Beara Peninsula SPA. No areas of suitable habitat which could potentially be of high value as feeding or foraging habitat for these species occurs within the proposed development area. No potential breeding sites will be affected.
- Kenmare River SAC is 22km by sea. The proposed development site has potential for a haul out site for the Harbour Seal which is a QI of the Kenmare River SAC. However, this habitat will only be affected for the duration of the construction phase of the development and there is plenty of alternative suitable habitat in the harbour plus the seals are already accustomed to a certain level of disturbance in this busy harbour. The development will ultimately have a positive impact on the water quality of the Berehaven Harbour. There is no shortage of suitable habitat for Harbour Seal closer to the SAC and works in the proposed development will not have a negative impact on population of Harbour Seal.
- A new marine treated outfall will discharge to Castletownbere Harbour during the operation of the proposed development. Effluent plumes will be quickly dispersed into the Harbour and levels will quickly return to background concentrations such that there will be no impact on the water quality of the Harbour. There will be no significant impacts on water quality during construction. The existing environment is currently impacted by the discharge of untreated waste water into the sea. The operational development will have a positive impact on water quality in the harbour during the operational phase.
- Construction activities for the proposed development will be confined to the site boundary areas. No works will take place in the vicinity of the protected sites, the closest of which are 2.3km (Beara Peninsula SPA) and 5.7km away (Kenmare River SAC), and no construction machinery or materials will be stored in the vicinity of these sites.
- Given the type and location of the proposed development and given the nature of emissions from the proposed development, it is predicted that no significant negative impacts on the qualifying interests or habitats of nearby protected sites will arise as a result of the construction and operation of the proposed development.

5 Conclusions

The aims of this report were as follows:

- Provide information on and assess the potential for the proposed development to significantly impact on Natura 2000 Sites (also known as European sites).
- Determine whether the proposed development is directly connected with, or necessary to the conservation management of any Natura 2000 sites.
- Determine whether the proposed development, alone or in combination with other projects, is likely to have significant effects on Natura 2000 sites in view of their conservation objectives.

It has been objectively concluded by Arup that:

- There is no potential for the proposed development to significantly impact on Natura 2000 Sites.
- The proposed development is not directly connected with, or necessary to the conservation management of any Natura 2000 sites.
- The proposed development, alone or in combination with other projects, is not likely to have significant effects on Natura 2000 sites in view of their conservation objectives.

Based on the information provided above, and by applying the precautionary principle, it is the opinion of Arup that it is possible to rule out likely significant impacts on any Natura 2000 sites.

It is the opinion of Arup that a Stage 2 Appropriate Assessment is not considered necessary, but the competent authority, Cork County Council, will make the final determination in this regard.

Refer to **Appendix A** *Finding of No Significant Effects Report*.

Appendix A

Finding of No Significant Effects Report

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A1 Finding of No Significant Effects Report

Name of Project:

Castletownbere Sewerage Scheme - UTAS Cork Bundle

Names of Natura 2000 Sites of relevance to the proposed scheme:

Beara Peninsula SPA - Site Code 004155. The Beara Peninsula SPA is considered to be of relevance in this report due to its proximity to the proposed development and indirect connection for potential QI species in the harbour.

Sheeps Head to Toe Head SPA – Site Code 004156. The Sheeps Head to Toe Head SPA is considered to be of relevance in this report due to its proximity to the proposed development and indirect connection for potential QI species in the harbour.

Is the project or plan directly connected with or necessary to the management of the site?

No

Are there other projects or plans that together with the project or plan being assessed could affect the site?

No

THE ASSESSMENT OF SIGNIFICANCE OF EFFECTS

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

It has been determined by Arup that it is possible to rule out likely significant impacts on any Natura 2000 sites.

Explain why these effects are not considered significant.

- There are no Natura 2000 sites located within or near the proposed development. The nearest designated sites are Beara Peninsula SPA (2.3km) and Kenmare River SAC (5.7km/hydrological distance of 22km).
- There will be no loss of foraging or breeding habitats for any QI species from nearby Natura 2000 sites.
- Fulmar, Chough and Peregrine Falcon are QIs of the nearby Beara Peninsula SPA. No areas of suitable habitat which could potentially be of high value as feeding or foraging habitat for these species occurs within the proposed development area. No potential breeding sites will be affected.
- Kenmare River SAC is 22km by sea. The proposed development site has potential for a haul out site for the Harbour Seal which is a QI of the Kenmare River SAC. However, this habitat will only be affected for the duration of the construction phase of the development and there is plenty of alternative suitable habitat in the harbour plus the seals are already accustomed to a certain level of disturbance in this busy harbour. The development will ultimately have a positive impact on the water quality of the

Berehaven Harbour. There is no shortage of suitable habitat for Harbour Seal closer to the SAC and works in the proposed development will not have a negative impact on population of Harbour Seal.

- A new marine treated outfall will discharge to Castletownbere Harbour during the operation of the proposed development. Effluent plumes will be quickly dispersed into the Harbour and levels will quickly return to background concentrations such that there will be no impact on the water quality of the Harbour.
- There will be no significant impacts on water quality during construction. The existing environment is currently impacted by the discharge of untreated waste water into the sea. The operational development will have a positive impact on water quality in the harbour during the operational phase.
- Construction activities for the proposed development will be confined to the site boundary areas. No works will take place in the vicinity of the protected sites, the closest of which are 2.3km (Beara Peninsula SPA) and 5.7km away (Kenmare River SAC), and no construction machinery or materials will be stored in the vicinity of these sites.
- Given the type and location of the proposed development and given the nature of emissions from the proposed development, it is predicted that no significant negative impacts on the qualifying interests or habitats of nearby protected sites will arise as a result of the construction and operation of the proposed development.

List of Agencies consulted

It is anticipated that the National Parks and Wildlife Service will be consulted by Cork County Council as part of the planning application process.

DATA COLLECTED TO CARRY OUT THE ASSESSMENT

Who carried out the assessment?

The assessment was carried out by the Arup in house ecologist.

Sources of Data -

Sources of data included:

- Ordnance Survey of Ireland mapping and aerial photography (www.osi.ie);
- Bing and Google aerial photography;
- Cunningham et al, (2008) Harbour seal movements and haul-out patterns: implications for monitoring and management
- National Parks and Wildlife Service online data on European Sites including Conservation Objectives, Site Synopses etc (www.npws.ie);
- National Parks and Wildlife Service online data on protected flora and fauna;
- National Parks and Wildlife Service (2019)– Species Conservation Assessments 2019 Volume 3
- National Parks and Wildlife Service (2019)– Habitats Conservation Assessments 2019 Volume 2

- National Parks and Wildlife Service (2010 & 2011)– Harbour Seal Population Monitoring 2009-2012: Reports No. 1 and 2 – Report on a Pilot Monitoring Study carried out in southern and western Ireland 2009.
- Information on environmental quality data available from www.epa.ie (EPA Online Environmental Map Viewer);
- National Biodiversity Data Centre – www.biodiversityireland.ie
- BirdWatch Ireland – www.birdwatchireland.ie
- Fossit (2000) A guide to Habitats in Ireland. The Heritage Council
- Cork County Council *Cork County Development Plan 2014*;
- Cork County Council *West Cork Municipal District Local Area Plan 2017*;
- Cork County Council *County Cork Biodiversity Action Plan 2009-2014*; and
- Cork County Council *North and West Cork Strategic Plan 2002 to 2020*.
- Cunningham et al (2008) *Harbour seal movements and haul-out patterns: implications for monitoring and management*.
- *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: terrestrial, freshwater, coastal and marine* (Institute of Ecology and Environmental Assessment, 2018);

OVERALL CONCLUSIONS

Based on the information provided above, and by applying the precautionary principle, it is the opinion of Arup that it is possible to rule out likely significant impacts on any Natura 2000 sites.

It is the opinion of Arup that a Stage 2 Appropriate Assessment is not considered necessary, but the competent authority, Cork County Council, will make the final determination in this regard.