



**MERC Consultants**  
environmental and conservation services

# Screening for Environmental Impact Assessment

Boherbue WwTP Upgrade, Co. Cork

MERC Consultants Ltd, Loughaunbeg, Inverin, Co. Galway.  
[www.mercenvironmental.ie](http://www.mercenvironmental.ie)



|             |  |
|-------------|--|
| Client name | Glan Aqua  |
| Address     | Railway House, Station Rd, Loughrea, Co. Galway. |

| Document Control |           |           |               |
|------------------|-----------|-----------|---------------|
| Rev              | Date      | Issue     | Approved by   |
| 0.7              | 11/2/2021 | Final_0.3 | Louise Scally |



|   |    |
|---|----|
| 1 Introduction .....  | 3  |
| 1.1 Purpose of this report .....  | 3  |
| 1.2. Statement of authority .....   | 3  |
| 2. EIA legislation and guidelines .....   | 4  |
| 2.1 Project type .....  | 4  |
| 3. Description of the project .....   | 5  |
| 3.1 Background .....  | 5  |
| 3.2 Individual Components of Project .....  | 7  |
| 4. EIA Screening .....  | 10 |
| 4.1 Characteristics of proposed development.....  | 11 |
| 4.1.1 Size of the proposed development.....   | 11 |
| 4.1.2 Cumulation with other proposed development .....  | 11 |
| 4.1.3 The use of natural resources (in particular land, soil and biodiversity).....                                   | 11 |
| 4.1.4 Production of waste .....   | 12 |
| 4.1.5 Pollution and nuisances .....   | 13 |
| 4.1.6 Risk of accidents, having regard to substances or technologies used.....  | 13 |
| 4.2 Location of proposed development.....   | 13 |
| 4.2.1 Existing land use.....  | 13 |
| 4.2.2 The relative abundance, quality and regenerative capacity of natural resources in the area.<br>.....            | 14 |
| 4.2.3 The absorption capacity of the natural environment, paying particular attention to the<br>following areas:..... | 14 |
| 4.3 Characteristics of potential impacts .....  | 15 |
| 4.3.1 Extent of the impact.....   | 15 |
| 4.3.2 The transfrontier nature of the impact.....   | 15 |
| 4.3.3 The magnitude and complexity of the impact .....  | 15 |
| 4.3.4 The probability of the impact. ....   | 15 |
| 4.3.5 The duration, frequency and reversibility of the impact.....  | 16 |
| 4.4 EIA Screening summary .....   | 16 |
| 4.5 EIA Screening Conclusion .....  | 17 |
| 5. References .....   | 18 |

## 1 Introduction

### 1.1 Purpose of this report

Irish Water has identified a need to carry out upgrade works to an existing Wastewater Treatment Plant (WwTP) at Boherbue, Co. Cork. The existing WwTP is located in north County Cork, 0.4km north of the village of Boherbue.

The purpose of this report is to determine if EIA is required for the proposed project as set out in the mandatory and discretionary provisions of the Planning and Development Act, 2000, as amended (the Act), and Schedule 5 of the Planning and Development Regulations, 2001, as amended (the Regulations).

### 1.2. Statement of authority

This report was prepared by MERC Consultants Ltd. MERC are a specialist ecological survey and consultancy firm. Core staff have more than 60 years of combined experience and specialist knowledge in relation to Irish aquatic and terrestrial habitats and species as well as assessment and management of conservation interests.

Most recently MERC have completed [NPWS national monitoring of marine Annex I habitats](#) for compliance under Article 17 of the EU Habitats Directive. In this context MERC were responsible for the assessment and reporting of marine Annex I habitats in Ireland and were the authors of all Article 17 reports and overarching site monitoring reports.

In addition to their scientific expertise MERC have an in-depth knowledge of Irish and European Environmental legislation and policy. In 2011 MERC prepared the text describing Activities Requiring Consent (ARCs) for inclusion in a handbook detailing the regulatory framework for all developments within designated sites in Ireland on behalf of the National Parks and Wildlife Service. They have also produced numerous Conservation Management Plans for the same department. To-date MERC have conducted in excess of 200 ecological reports in support of Appropriate Assessment under Article 6(3) of the EU Habitats Directive. MERC have also contributed specialist ecological advice for the preparation of a number of Environmental Impact Statements related to a variety of proposed developments in Ireland.

## 2. EIA legislation and guidelines

The need to conduct Environmental Impact Assessment (EIA) derives from Directive 2011/92/EU as amended by 2014/52/EU on the assessment of the effects of certain public and private projects on the environment. The 2014 EIA Directive has been transposed into national planning law by the *European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018* (S.I. No. 296 of 2018).

An EIA is required for all projects detailed in Annex I of the EIA Directive and for all projects detailed in Annex II where the proposed project is likely to have significant effects on the environment.

Guidelines for the implementation of the Directive and on the preparation of Environmental Impact assessment reports is provided for in the following guidelines:

- *DoHPLG (2018). Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018*
- *EPA (2017). Guidelines on the Information to be contained in Environmental Impact Assessment Reports and Draft Advice Notes for Preparing Environmental Impact Statements.*
- *EPA (2015). Advice notes for preparing Environmental Impact Statements (Draft).*
- *European Commission (2017). Environmental Impact Assessment of Projects, Guidance on Screening (Directive 2011/92/EU as amended by 2014/52/EU).*

The EIA Directive sets out a process to assess the environmental effects of proposed public and private projects, prior to a decision being made by the competent authority. The Directive requires an assessment of any projects that are likely to have significant effects upon the environment. An EIA is required for all projects detailed in Annex I of the EIA Directive and for all projects detailed in Annex II where the proposed project is likely to have significant effects on the environment.

### 2.1 Project type

The first step to determine whether an EIA is required is to determine if the project is of a type defined in Article 4 and set out in Annex I or II of the EIA Directive. The classes defined in Annex I and II of the Directive are transposed into Schedule 5 (Part 1 and 2) of the Planning and Development Regulations 2001, as amended which also includes national thresholds for many of the Annex II classes. EIA is required for all projects listed under Schedule 5 Part I, while those listed under Schedule 5 Part 2 may be subject to EIA.

*“Waste water treatment plants with a capacity exceeding 150 000 population equivalent as defined in point 6 of Article 2 of Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (4)” are listed in Schedule 5, Part 1 and as such require mandatory EIA. The proposed project will have a capacity not exceeding 1,200 population equivalent (PE) and therefore falls below the 150,000 PE threshold for this criteria*

*“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” are listed in Schedule 5, Part 2.* As the proposed works do not meet this threshold the proposed project is also exempt from the statutory obligation to prepare an EIA Report under Schedule 5, Part 2.

### 3. Description of the project

#### 3.1 Background

The EPA identified a need to carry out upgrade works to the existing Boherbue WwTP, Boherbue, Co. Cork prior to the formation of Irish Water. Due to the agglomeration growth, the WwTP is failing to meet the treatment standards specified in its current Wastewater Discharge Licence (WwDL). Irish Water are now proposing to carry out upgrade works to address this issue. The upgrade will provide for greater sludge storage capacity to bring the plant in line with Irish waters requirements due to operational issues with the current volume of sludge storage and to meet waste water discharge licence requirements. The existing WwTP is located in north County Cork, 0.4km north of the village of Boherbue. It discharges into the Brogeen River, approximately 0.2km north of the WWTP.

The existing WwTP is designed for up to 800 Population Equivalent (PE). It is comprised of three forwarding pumping stations which convey sewage to the WwTp and from there through a constructed wetland system before discharging to the Brogeen River.

The entire construction phase of this project takes place within the boundaries of an existing WwTP. This area is comprised of the waste water treatment infrastructure (Administration buildings, and plant) situated in an area of hardstand and grassed areas. Towards the north of the site an area of constructed wetland (reed beds) lies adjacent to the Brogeen River which delimits the northern perimeter of the site.

The proposed development will involve the upgrade, decommissioning and construction of a number of new structures.

In summary, the construction works will include the installation of an IFAS tank (14m x 8m x 4m deep), Sludge Reed Beds (32m x 32m x 3m deep), Settlement Tank (8m diameter x 4.5m deep), Storm Tank (11.5m diameter x 5m deep), Tertiary tank (13m x 11m x 2m deep). All associated pipework will be open trenched. All of the proposed works together with the construction compound will be located within the confines of the existing WwTp site boundary. See Section 3.2 for details of the components of the proposed project.

The location of the site is shown in figures 3.1 and 3.2.

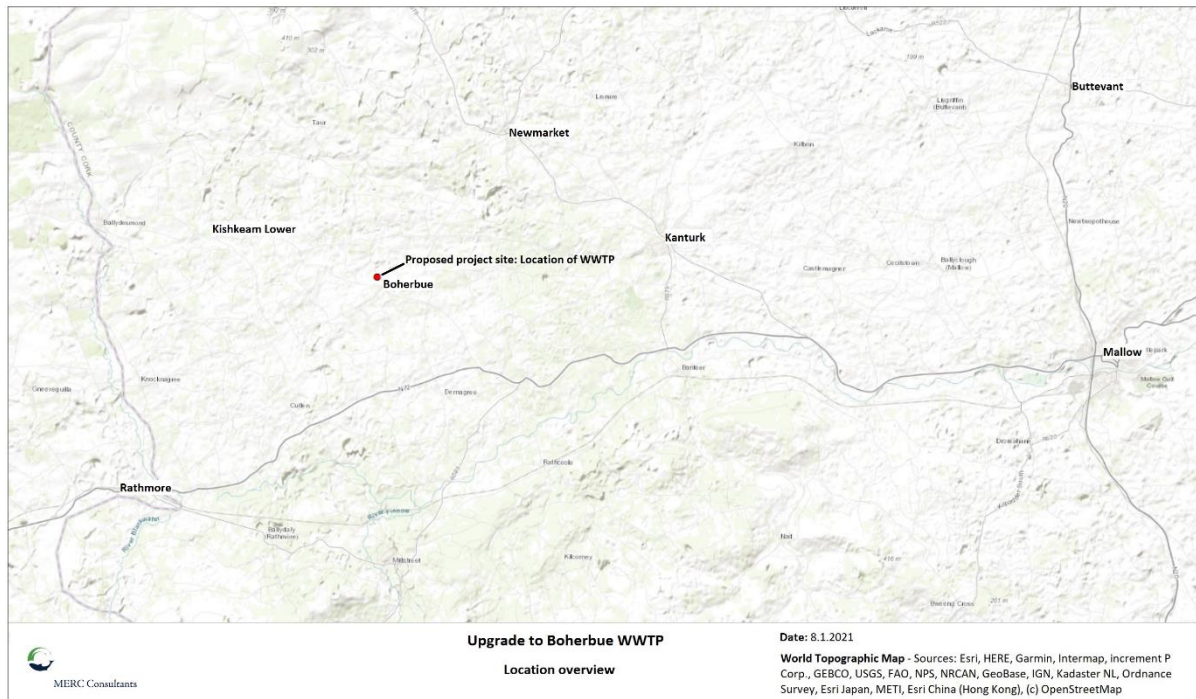


Figure 3.1. Site location overview.



Figure 3.2. Site location.



## 3.2 Individual Components of Project

The upgrade works will comprise the construction of new elements of the WwTp and decommissioning of some existing infrastructure as outlined below. Further detail is provided in the concept design for the proposed project (appendix 1).

- Preliminary Treatment Works
- Control Overflow Chamber
- Storm Tank
- Aeration Tanks
- Settlement Tanks
- Cloth Filter (Tertiary Treatment)
- Sludge Drying Reed BedsRAS / WAS Pumping Station
- Return Liquor Pumping Station
- Ferric Dosing
- Decommissioning of the primary Imhoff tanks, trickling filters, humus tanks and stormwater overflow pipework.
- Installation of a 150KW ground mounted system for the generation of solar energy which will generate 144,391 KWh/year.

### Component 1: Preliminary Treatment

#### *Inlet works*

Prior to storm separation, flows will pass through the inlet works in order to be screened. Fine screening to 6mm in 2D and a manual bypass screen to 19mm with a stone trap upstream of the screens will be provided. The screens will ensure that all flow will be screened to 6 mm before passing through to the main plant or to the storm water tank. As per **IW-TEC-700-99-02**, screens will be designed to cope with a minimum of 150% of the design capacity for works under 2,500 PE

#### *Stormwater separation*

Stormwater storage is required on site to handle excess flows. Sewage currently flows by gravity to an overflow chamber at the entrance of the Boherbue WwTP and through the existing constructed wetlands. Stormwater from the new holding tank will continue to be diverted through the existing constructed wetlands.

### Component 2: New treatment

#### *Secondary treatment - Biological treatment stage*

Following storm separation, flows to full treatment will pass to a biological treatment stage, where carbonaceous oxidation, nitrification and suspended solids separation will be carried out in order to achieve the required treated effluent quality. Coagulant dosing will be carried out at the outlet of the biological treatment stage (but upstream of the secondary settlement stage) to promote chemical phosphorus removal.

#### *Secondary treatment – Settlement tanks*

Following biological treatment, mixed liquor will be forwarded to a secondary settlement stage consisting of 2no. secondary settlement tanks. Both biological and chemical sludge generated by the chemical phosphorus removal process will separate from secondary treated effluent by gravity, and



will be collected in a central hopper for sludge return and wasting, whilst treated effluent will flow over a weir before undergoing tertiary treatment.

In order to avoid overdosing and because iron does not form part of the ELV's for the site, a correlation dosing curve will be developed based on flows and incoming proposed COD probe, estimating the dilution factor. That information in conjunction with the pH will prevent the possibility of iron discharge associated to the lack of alkalinity.

#### *Tertiary treatment*

Following settlement, secondary treated effluent will be passed onto a tertiary treatment stage for final effluent polishing prior to discharge to the Brogeen River. Tertiary treatment will consist of the installation of cloth filters for final treatment. Cloth filters are efficient in the removal of TSS, associated BOD, phosphorus and other pollutants. See figure 4.1 for location of new overflow pipe which will discharge to the same location as the existing outfall pipe.

#### **Component 4: Stormwater management**

Sludge settled within the final settlement tanks will flow continuously by gravity to the centre of the sloped tank and from there to the RAS/WAS Pumping Station (PS) by hydrostatic pressure. The amount of sludge removed from the sedimentation tanks is controlled by the pumping station. All produced sludge will be conveyed to a new sludge reed bed where the sludge will dry and liquor will be pumped back to the treatment by the Mixed Liquor Return PS to the Control Stormwater Overflow chamber. The drying sludge bed has been designed for sludge production of 85kg/day.

As described above, the correlation dosing curve will prevent any overdosing into the system. It is recommended that sludge sampling for heavy metals, in particular iron in the WAS is employed to monitor any risk of sludge contamination.

#### **Component 4: Stormwater management**

Flows in excess of the plant peak design flow will overflow by gravity (weir discharging) to the storm water holding tank. The stormwater holding tank will be built with two submersible pumps working in duty/standby mode which will direct stormwater back to the CSO chamber to be treated on the treatment process once inlet flows drop to a set level before discharging through the existing constructed wetlands. In the remote case of overflow on the stormwater tank, an outfall pipe will convey the stormwater to the outfall chamber while retaining most of the stormwater on the tank.

#### **Component 5: Decommissioning works**

The existing primary Imhoff tanks and trickling filters and humus tanks and associated infrastructure will be decommissioned and removed from the site. The existing stormwater overflow pipework to the constructed wetland system will be replaced with new pipework. The constructed wetland system will remain in place as is.

#### **Component 6: Solar system**

A 150KW ground mounted system for the generation of solar energy will be installed in the southeast corner of the site. This system will generate 144,391 KWh/year. The system comprises 348 no. PV modules with a surface area of 745.6m<sup>2</sup>. The area occupied by the panels is approx. 2200m<sup>2</sup> when

spacing between the modules is accounted for. A storage container which will house the associated inverters and batteries for reuse of energy generated on-site will also be installed.

### Further information

The existing constructed wetlands are considered to be not fit for purpose in relation to the control of BOD, ammonia and phosphorous discharge levels from the existing treatment plant. Therefore, the proposed project will implement tertiary treatment to ensure compliance for the control of these parameters. Following tertiary treatment, the discharge will be diverted, through new pipework to the same location as the existing discharge point. The existing constructed wetlands will be left *in situ* and continue to receive any excess flow from the stormwater holding tanks.

The works will be in compliance with:

- Environmental Protection Agency (EPA) Wastewater Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).
- Urban Wastewater Treatment Regulations, 2001 (S.I. No. 254/2001).
- Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009).
- The works are in compliance with the ELV's documented in the waste water discharge licence (Licence register No. D0437-01) for this agglomeration.

Both of these options have been considered in this report. All elements of the project components described above are shown in Appendix 1.

The maximum outflow parameters following treatment will provide for 75% of the assimilative capacity of the receiving watercourse (the Brogeen River) and are given in table 4.1.

**Table 4.1** Maximum outflow parameters after treatment

| Parameter                    | WwTP<br>Values<br>after<br>treatment | Emission<br>(ELV's) | Limit<br>after | As per existing<br>EPA<br>discharge licence |
|------------------------------|--------------------------------------|---------------------|----------------|---|
| cBOD (mg/l)                  | 10                                   |                     |                | 15  |
| COD (mg/l)                   | 125                                  |                     |                | 125   |
| Suspended solids (mg/l)      | 25                                   |                     |                | 25  |
| Ammonia- Total (as N) (mg/l) | 0.5                                  |                     |                | 0.6   |
| Orthophosphate (as P) (mg/l) | 0.2                                  |                     |                | 0.3   |

The proposed project will implement tertiary treatment to ensure compliance for the control of these parameters. Discharge will be diverted, following tertiary treatment, through new pipework to the discharge point. It should be noted that the discharge point is 22.5 meters from the final exit into the Brogeen River. From this point, discharge flows through a channel into the Brogeen River. The nearest construction point for pipework is at the existing (surface point into the channel) which is 22.5 meters from the river bank.

The existing constructed wetlands will be left *in situ* and continue to receive discharge, should it occur, from the storm water tank.



## 4. EIA Screening

As the proposed project does not meet the required threshold set out in either Schedule 1 or 2 of the Regulations but fall under a type of development to which these schedules relate, EIA Screening has been carried out as per schedule 7 of the regulations. Schedule 7 of the regulations sets out the criteria for determining whether a development would or would not be likely to have significant effects on the environment (Box 1). These criteria are addressed in section 4.1 to 4.3 below.

**Box 1:** criteria for determining project related significant effects on the environment

### **1. Characteristics of proposed development**

*The characteristics of the proposed development, in particular:*

- The size of the proposed development
- The cumulation with other proposed development
- The use of natural resources
- The production of waste
- Pollution and nuisances
- The risk of accidents, having regard to substances or technologies used
- 

### **2. Location of proposed development**

*The environmental sensitivity of geographical areas likely to be affected by proposed development, having regard in particular to :*

- The existing land use,
- The relative abundance, quality and regenerative capacity of natural resources in the area
- The absorption capacity of the natural environment, paying particular attention to the following areas:
  - (a) wetlands,
  - (b) coastal zones
  - (c) Mountain and forest areas
  - (d) nature reserves and parks
  - (e) areas classified or protected under legislation, including special protection areas designated pursuant to Directives 79/409/EEC and 92/43/EEC .
  - (f) areas in which the environmental quality standards laid down in legislation of the EU have already been exceeded
  - (g) densely populated areas
  - (h) Landscapes of historical, cultural or archaeological significance

### **3. Characteristics of potential impacts**

*The potential significant effects of proposed development in relation to criteria set out under paragraphs 1 and 2 above, and having regard in particular to:*

- The extent of the impact (geographical area and size of the affected population),
- The transfrontier nature of the impact
- The magnitude and complexity of the impact,
- The probability of the impact,
- The duration, frequency and reversibility of the impact.

## 4.1 Characteristics of proposed development

### 4.1.1 Size of the proposed development

The project comprises an upgrade to an existing WwTP. The upgrade is required to meet waste water discharge licence requirements. The upgrade will increase the capacity of the WwTP from 800 to 1,200PE.

The entire project site is confined within an area that encompasses the existing WwTP. No additional land-take is required. The site layout will remain largely unaltered with the exception of the installation of new plant and equipment and a new reed bed. In this context the scale of the project is not considered to be significant.

### 4.1.2 Cumulation with other proposed development

The project was assessed for in-combination impacts as part of the NIS for the proposed project and no cumulative impacts were identified. The project only seeks to install upgraded plant, equipment and reed beds to ensure the water quality objectives of the receiving water body can be met. A review of Cork County Council planning applications does not indicate any additional projects, which in-combination with the proposed project, could lead to a cumulative impact. Therefore, no cumulative impacts are considered possible.

### 4.1.3 The use of natural resources (in particular land, soil and biodiversity)

The project only relies on the public water supply. There is no significant requirement for the use of additional natural resources. The majority of the upgrade work will take place in an area of hard stand with some components requiring the use of grassed areas, all within the confines of the existing WwTP site compound.

No potential impacts on biodiversity are considered likely. The NIS for the proposed project did not identify the potential for any effects on the biodiversity, by reference to the conservation objectives, including the site-specific attributes and targets to meet the stated conservation objectives of any European sites. No additional sites of conservation importance (e.g., pNHAs, NHAs or Ramsar sites) are located within the zone of influence of the proposed project.

While an area of shrub with a number of mature trees will need to be removed to facilitate the installation of solar panels this work will be carried out outside of the breeding bird season in line with Section 40 of the Wildlife Act 1976. While the area along the Brogeen river and the existing reed beds does provide suitable habitat for otter, no evidence of otter (spraint, holts or couches) was recorded during the site surveys. No disturbance or works will take place in these areas and any disturbance to otter, should they be present in the area of the site compound during construction, will be temporary.

#### 4.1.4 Production of waste

Discharge from the WwTP will be subject to tertiary treatment. This will provide an improvement to the existing effluent discharge from the WwTP which is currently failing to meet the treatment standards specified in its Wastewater Discharge Licence (WwDL).

Waste generated on-site during the construction and operational phases of the project will be disposed of appropriately by a suitably licensed contractor for disposal or recovery at a licenced facility.

A correlation dosing curve, based on flows and data from a COD probe, will be developed for the proposed project to ensure overdosing with iron does not form part of the ELV's for the project. This information in conjunction with pH will prevent any iron discharge associated with lack of alkalinity entering the receiving waterbody during operation of the WwTp.

A modelling exercise to assess the Water Assimilative Capacity (WAC) of the receiving waterbody (the Brogeen River) based on the WwTP operating at 75% of assimilative capacity was conducted (table 4.2). The results of this modelling indicate that high ecological status will be achieved based on the proposed ELV's. Notionally clean river status is based on background concentrations of 0.26mg/L<sup>-1</sup> BOD, 0.005mg/L<sup>-1</sup> orthophosphate and 0.008mg/L<sup>-1</sup> ammonia) to determine if the proposed discharge on its own is likely to cause a significant deterioration in the status of the water body into which it enters.

**Table 4.2** Boherbue WwTP WAC modelling of Water Assimilative Capacity.

| Boherbue WwTP WAC   |            |                        |                |  |
|---|------------|------------------------|----------------|--|
| PE  | 1,200      |                        |                |  |
| DWF (m3/d)  | 345        |                        |                | Note: Rev02 Flow and Load Survey update value              |
| DWF (m3/sec)  | 0.0040     |                        |                |  |
| Q <sub>95</sub> (m <sup>3</sup> /sec)                             | 0.028      |                        |                | Note: Rev02 EPA Hydrotool 2021                             |
| Parameter   | <b>BOD</b> | <b>Ortho Phosphate</b> | <b>Ammonia</b> |  |
| C <sub>max</sub> (mg/l)   | 2.6        | 0.075                  | 0.14           | Surface Water Regulations - Good Status 95% flow           |
| C <sub>max</sub> (mg/l)   | 2.2        | 0.045                  | 0.09           | Surface Water Regulations - High Status 95% flow           |
| Using Notional Clean River parameters, Suggested ELV to meet Cmax |            |                        |                |  |
| Parameter   | <b>BOD</b> | <b>Ortho Phosphate</b> | <b>Ammonia</b> |  |
| C <sub>max</sub> (mg/l) using 75% of Cmax-Cclean                  | 1.72       | 0.035                  | 0.070          |  |
| C <sub>clean</sub> (mg/l)   | 0.26       | 0.005                  | 0.008          | Notional Clean River parameters                            |
| ELV   | 12         | 0.25                   | 0.5            | Proposed adjustment to ELVs for OrthoP to meet Cmax        |
| Predicted River Concentration (mg/l)                              | 1.71       | 0.035                  | 0.069          |  |
| Less than Cmax - High Status at 75%                               | Yes        | Yes                    | Yes            | Reduced ELV's for OrthoP meets standards required for Cmax |

The potential for significant impacts as a result of the stormwater discharge is considered highly unlikely as any storm water that exceeds the capacity of the stormwater holding tanks will drain to the existing constructed wetlands considerably reducing the potential of any residual stormwater to reach the receiving waterbody.

#### 4.1.5 Pollution and nuisances

No potential for pollution and nuisances has been identified. The NIS for the project has proposed mitigation measures to ensure no pollution impacts arise during the construction phase. While limited construction related noise may arise during the construction phase of the project this is considered insignificant relative to the location of the project and temporary nature of the construction works.

A small increase in traffic will result during the construction phase of the project. However, an Outline Construction Environment Management Plan (OCEMP) (MERC, 2021) has been developed for the project. The implantation of this CEMP will ensure appropriate measures for traffic management and other factors (e.g., working hours) limit the potential for any disturbance.

No additional staffing or disturbance issues are associated with the operation of the WwTP following upgrade works.

During the operational phase discharged waste water to the receiving waterbody (The Brogeen River) will be improved. Thereby improving the current ecological status of this waterbody.

The upgrade works include for the provision of odour control and no air pollution risks have been identified. Therefore, no risks to human health are considered likely.

#### 4.1.6 Risk of accidents, having regard to substances or technologies used.

No risks have been identified that could contribute to a major accident. The technologies being employed are well tested and no new or novel technologies are being employed. It is considered that the industry standard mitigation associated with the technology proposed for the WwTP is sufficient to prevent any major accidents.

Upgrade works to the existing WwTP do not have the potential to lead to or contribute to natural disasters including those caused by climate change.

Risks associated with the operation of the WwTP which could lead to natural disasters are likely to include major flood events. However, the proposed project is not within a flood risk zone (<https://www.floodinfo.ie/map/floodmaps>)

## 4.2 Location of proposed development

### 4.2.1 Existing land use

The entire project site is confined within an area that encompasses the existing WwTP. No additional land-take is required. Due to its location within an existing WwTP, the project does not have the



potential to impact directly or indirectly on the existing land use, listed or scenic views or protected landscapes as outlined in the County Development Plan.

The site layout will remain largely unaltered. The project site is confined to an area of characterised by improved agricultural grassland (GA1) with areas of wet grassland (GS4) and scattered trees and parkland (WD5). It is delimited by hedgerows (WL1), treelines (WL2), drainage ditches (FW4). The agricultural grassland is currently used for both grazing and tillage. The land in the immediate vicinity of the WwTP slopes downward towards the Brogeen River, the location of the WwTP discharge point. While some trees may need to be felled to facilitate the installation of solar panels this is not considered significant relative to the scale (2,200m<sup>2</sup>) and location of trees within the southeast corner of the site compound.

#### 4.2.2 The relative abundance, quality and regenerative capacity of natural resources in the area.

An assessment of impacts on natural resources has been made through the preparation of an NIS for the proposed project. The proposed project is confined to the area of an existing WwTP which is an already disturbed environment. The NIS has shown that no significant direct or indirect impacts on habitats outside of the confines of the WwTP, through a source-path-receptor model are likely and concluded that with mitigation no impacts on the integrity of any European site would occur.

#### 4.2.3 The absorption capacity of the natural environment, paying particular attention to the following areas:

**Wetlands:** The existing constructed wetlands will remain *in-situ* and unaltered.

**Coastal zones:** Coastal zones, downstream of the proposed project have been assessed in the NIS for the proposed project and no potential for impact has been identified.

**Mountain and forest areas:** N/A. No Mountain and forest areas are present within the zone of influence of the proposed project

**Nature reserves and parks:** N/A. No Nature reserves and parks are present within the zone of influence of the proposed project.

**Areas classified or protected under legislation, including special protection areas designated pursuant to Directives 79/409/EEC and 92/43/EEC:** *Areas classified or protected under legislation, including special protection areas designated pursuant to Directives 79/409/EEC and 92/43/EEC:*

A NIS has been prepared for the proposed project. The NIS considered the potential for impact, as a result of the proposed project on the conservation objectives of European sites within the zone of influence (ZOI) of the proposed project. In this context the Blackwater River (Cork/Waterford) SAC was the only European site considered to be within the ZOI of the proposed project. The NIS concluded that “*provided the mitigation measures described in this document are fully implemented, no adverse impact on the features of interest or Conservation objectives of Blackwater River (Cork/Waterford) or any European site is expected, i.e., the integrity of the site/s will not be adversely affected*”.

There are no SPA's within the ZOI of the proposed project. It is considered that, due to the scale and scope of the project and its location within the confines of an existing WwTP, that no bird species listed on Annex I of the EU Birds directive associated with any SPA could be impacted directly or indirectly.

No NHAs, pNHAs or Ramsar have been identified within the ZOI of the proposed project.

Therefore, the proposed development does not have potential to impact directly or indirectly on any site designated for conservation interest.

**Areas in which the environmental quality standards laid down in legislation of the EU have already been exceeded:** The proposed project aims to address water quality standards laid down in legislation of the EU which have already been exceeded. Discharge from the WwTP will be subject to tertiary treatment.

**Densely populated areas:** The development is not located in a densely populated area. The largest town (Boherbue) is 0.4km south of the project site. The project is located in a rural area.

**Landscapes of historical, cultural or archaeological significance:** The proposed development is not located within an area of historical, cultural or archaeological significance. The National Monuments of Ireland map data shows the nearest recorded archaeological features lies adjacent to the access road approximately 250 meters south of the project site. This area will not be entered into or impacted in any way by the proposed project.

## 4.3 Characteristics of potential impacts

### 4.3.1 Extent of the impact

The potential impacts will be limited to the footprint of the existing WwTP.

### 4.3.2 The transfrontier nature of the impact

There is no transfrontier impact, the development is entirely within Co. Cork.

### 4.3.3 The magnitude and complexity of the impact

No significant impacts have been identified. The project relates to an upgrade of an existing WwTP which is considered a small-scale development. Minor construction related impacts can be mitigated with standard construction measures to protect biodiversity, water, noise and air quality that will be specified in the CEMP.

### 4.3.4 The probability of the impact.

There may be slightly increased level of traffic and construction related noise at and within the vicinity of the WwTP during upgrade works but these will be controlled by the project construction



environmental management plan and will be of a temporary nature. No operational impact is foreseen as the WwTP is already operational at this site and the plant is being designed to meet ELV's.

#### 4.3.5 The duration, frequency and reversibility of the impact.

The construction phase will be less than 1 year.

#### 4.4 EIA Screening summary

A screening summary is provided in table 4.1

**Table 4.1.** Screening assessment

| Topic                       | Screening for EIA   |
|-----------------------------|---|
| Population and Human health | The proposed project is likely to provide a positive benefit to Human health as it will improve the efficiency of the existing WwTP. Effluent from the WwTP currently only receives secondary treatment and is receiving effluent from a higher PE than its operational capacity. The proposed works will upgrade the WwTp to provide tertiary treatment and with the required capacity to meet the current effluent load. It will also result in improved water quality of the receiving waterbody and contribute to achieving High status of this waterbody.  |
| Biodiversity                | <p>A NIS has been prepared for the proposed project. The NIS considered the potential for impact, as a result of the proposed project, on the conservation objectives of European sites within the zone of influence (ZOI) of the proposed project. In this context the Blackwater River (Cork/Waterford) SAC was the only European site considered to be within the ZOI of the proposed project. The NIS concluded that <i>“provided the mitigation measures described in this document are fully implemented, no adverse impact on the features of interest or Conservation objectives of Blackwater River (Cork/Waterford) or any European site is expected, i.e., the integrity of the site/s will not be adversely affected”</i>.</p> <p>No NHAs, pNHAs or Ramsar sites are located within the zone of influence of the proposed project. No additional habitats or species of conservation interest are present within the vicinity of the proposed project, or are linked to it via any pathways. Therefore, no impacts on biodiversity are considered likely.</p> |
| Land and soil               | There will be no land take outside of the confines of the existing WwTP. Excavated material will be reused as far as possible. Excavated material will be used to back fill trenching. Top soils will be used for finishing where vegetation cover is to be reinstated as detailed in Irish Water 'General Civil Engineering Specification'(IW-TEC-300-01). The reuse of excavated material will depend on its' suitability. Unsuitable material will be removed from site for disposal in licensed facilities. Therefore, no impacts on land or soil are considered likely.  |
| Water                       | The NIS for the proposed project examined the potential for impact on the receiving water body during both the construction and operational phases of the project. The NIS proposed mitigation to avoid possible construction related impacts. No operation impacts were considered possible as the proposed project will improve the water quality of the receiving waterbody and subsequently any habitat and species which are connected to or dependent on it. Therefore, no impacts on water are considered likely.  |

|                        |   |
|------------------------|---|
| Air                    | Minor impacts as a result of dust generation may occur during the construction phase. However, any such impacts would be temporary and localised to the immediate vicinity of the existing WwTP which is in a very low-density rural area. The WwTP is not located near any residential properties and the works will be of a temporary nature. The risk of odour at this location during construction is considered low. The storm water holding tank will be covered and provided with odour control. No air issues during operation are considered likely.   |
| Climate                | Upgrade works to the existing WwTP do not have the potential to lead to or contribute to natural disasters including those caused by climate change.<br><br>Risks associated with the operation of the WwTP which could lead to natural disasters are likely to include major flood events. The proposed project is not within a flood risk zone  |
| Material assets        | There will be no impacts on material assets. As the proposed project is confined to upgrade works at an already existing WwTP. Minor increases in traffic may occur during the construction phase but this will be of a temporary nature in a rural environment and is not deemed as a significant impact.  |
| Cultural Heritage      | The proposed project is within the confines of an existing WwTP. Therefore, impacts on archaeological heritage would be highly unlikely. However, mapping of the proposed project against known archaeological features from the National Monuments of Ireland map data has been conducted. This review indicated that the nearest feature to the proposed project site is a rectangular mound of burnt material approximately 250 meters south of the project site to the side of the access road. However, there is no requirement for any plant to access this area. Therefore, no impacts on archaeological heritage will result. |
| Landscape              | The proposed project is located within the confines of the existing WwTP where similar building and infrastructure are already in place. The scale of the proposed project is minor relative to the existing on-site infrastructure. Therefore, no significant impacts on the existing landscape will result.   |
| Cumulative Interaction | Based on the assessment of above criteria, no impacts that could arise from the cumulative interaction of these elements have been identified.  |

#### 4.5 EIA Screening Conclusion

This screening for EIA has been carried out with due regard to the scale, scope and location of the proposed project and with due consideration of additional information contained within the project NIS and outline construction environment management plan.

It is concluded that the proposed project will not have significant effects on the environment alone or in combination with other projects or plans and that an Environmental Impact Statement (EIS) is not required under the Planning and Development Act 2000, as amended and incorporating the Planning and Development Regulations 2001, as amended.

## 5. References

EPA (2017). Guidelines on the Information to be contained in Environmental Impact Assessment Reports and Draft Advice Notes for Preparing Environmental Impact Statements.

EPA (2015). Advice notes for preparing Environmental Impact Statements (Draft).

European Commission (2017). Environmental Impact Assessment of Projects, Guidance on Screening (Directive 2011/92/EU as amended by 2014/52/EU).

Irish Water (2018) General Civil Engineering Specification - IW-TEC-300-01.

MERC (2021). Appropriate Assessment Screening and Natura Impact Statement. Boherbue WwTP Upgrade, Co. Cork.

MERC (2021). Outline Construction Environment Management Plan (OCEMP). Boherbue WwTP Upgrade, Co. Cork.