



## Glan Agua

# Macroom Wastewater Treatment Plant (WwTP) Upgrade Environmental Impact Assessment (EIA) Screening Report



# Macroom WwTP

## EIA Screening Report

<b>Document Reference</b>	<b>11218-GAL-MM-XX-DC-Z-0005-EIA Screening Report</b>
<b>Report Status</b>	S0
<b>Report Date</b>	February 2023
<b>Current Revision</b>	P06
<b>Client:</b>	Glan Agua Ltd
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<b>Project Number</b>	10981

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Revision	Description	Author:	Date	Reviewed By:	Date	Authorised by:	Date
P01	First Issue	CK	25/02/2021	NG	04/03/2021	SK	04/03/2021
P02	Second Issue	CK	09/03/2021	NG	09/03/2021	SK	09/03/2021
P03	Third Issue	CK	25/08/2021	NG	25/08/2021	SK	25/08/2021
P04	Forth Issue	KG	24/01/2022	NG	25/01/2022	SK	25/01/2022
P05	Fifth Issue	KG	11/03/2022	NG	16/03/2022	SK	16/03/2022
P06	RFI Response	KG	31/01/2023	NG	08/02/2023	SK	08/02/2023

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## 1.0 PROPOSED DEVELOPMENT AND EXISTING SITE

### 1.1 Background

TOBIN Consulting Engineers (TOBIN) have been requested by Glan Agua Ltd. to prepare an Environmental Impact Assessment (EIA) Screening Report for the proposed upgrade of the Macroom Wastewater Treatment Plant (WwTP), Co. Cork.

Glan Agua propose to upgrade the existing WwTP (hereafter referred to as Proposed Upgrade works) to cater for the future agglomeration load and to remediate to the existing flooding issues at the Macroom WwTP site.

The Proposed Upgrade works to the WwTP are required to ensure compliance with the existing Wastewater Discharge Licence (WWDL) no. D0126-01 granted by the Environmental Protection Agency (EPA) to Irish Water (IW) in December 2012, which include for additional Ammonia and Phosphorous Emission Limit Values (ELVs). The existing WwTP is significantly overloaded and not fit-for purpose, resulting in failure to meet the requirements in recent years. Consequently, an upgrade of the treatment process is required.

Additionally, the site floods approximately twice per year. The construction of flood protection measures consequently form part of the Proposed Upgrade works.

### 1.2 Site Location

The proposed upgrade works will be located at the existing WwTP in Macroom, which is located approximately 30km west of Cork City as shown in Figure 1-1

Macroom WwTP is situated on the north-east edge of the town of Macroom. The WwTP is situated approximately 20m from the south-west bank of the River Sullane (IE\_SW\_19S020480), which flows through the centre of the town and which is a tributary of the River Lee. This section of the river is part of the WFD Subcatchment Sullane\_SC\_010.

The River Sullane, which provides drinking water (and occasionally floods), joins the River Launa 1km east of the town, before joining the River Lee a further 1km east. It is also located 1.7km north of the Gearagh SAC (000108) and the Gearagh SPA (004109). The River Lee forms part of the Gearagh SAC (000108) and the Gearagh SPA (004109).

The WwTP is accessed directly off the Saint Colman's Park residential development public road. The WwTP site comprises areas of amenity grassland, planted trees and a concrete access road. The area towards the back of the site, which is utilised by the Roads Dept. of Cork County Council, comprises a stoned surface (Clause 804 or similar material). The Roads Dept also utilise an area immediately inside the entrance gate consisting of 3 No. sheds & a container and following completion of the works, it is proposed that a portion of this area will be retained for use by the Roads Dept following completion of the works. .



Figure 1-1 Site Location Map



### 1.3 Need for the Development

The existing Macroom WwTP has a design capacity believed to be in the region of 5,230 Population Equivalent (PE). The existing Macroom Sewerage Scheme consists mainly of a combined collection network. Flows from the east of the catchment gravitate directly to the existing Macroom WwTP while flows from the west gravitate to Masseytown where they are pumped east to a high point, from which they gravitate to the WwTP. Four pumping stations in the network also service residential development. There are no emergency or storm overflow at the pumping stations.

The WwTP is accessed directly off the Saint Colman’s Park residential development public road. The existing WwTP includes the following treatment stages:

- Storm flow separation chamber using high level weir, with storm flows flowing directing to the Sullane River outfall;
- Preliminary treatment, consisting in a single 6mm automatic screen with a high-level bypass and 30mm manually raked screen downstream of the fine screen;
- Secondary treatment, consisting in the following:
  - Biological treatment: 1,240m<sup>3</sup>, 1.5m deep, single oxidation ditch fitted with 3no. vortex aerators and 1no. original surface aerator;
  - Secondary settlement: single 15.2m diameter settlement tank with half bridge scraper;
- Ferric sulphate IBC dosing chemical at the outlet of the inlet works, currently not operational;
- Sludge treatment
  - 26.5m<sup>3</sup> sludge holding/thickening tank;
  - Sludge dewatering provided by a single screw press with a capacity of 650kg/d and ancillary polymer make-up unit.

Following treatment, secondary treated effluent from the WwTP is discharged by gravity to the Sullane river (which borders the WwTP site) through a 20m long outfall.

The layout of the existing Macroom WwTP can be seen in Figure 1-2

The ELVs which are set out in WWDL D0126-01 are as follows:

Parameter	Unit	ELV
pH	pH units	6 - 9
Biological Oxygen Demand (cBOD)	mg/l	15
Chemical Oxygen Demand (COD)	mg/l	125
Ammonia (as N)	mg/l	2
Orthophosphate (as P)	mg/l	1
Suspended Solids	mg/l	25

In its current design capacity, the WwTP is unable to achieve the above ELVs. The existing WwTP is significantly overloaded and not fit-for purpose, resulting in failure to meet the discharge limit requirements in recent years. Consequently, an upgrade of the treatment process is required.

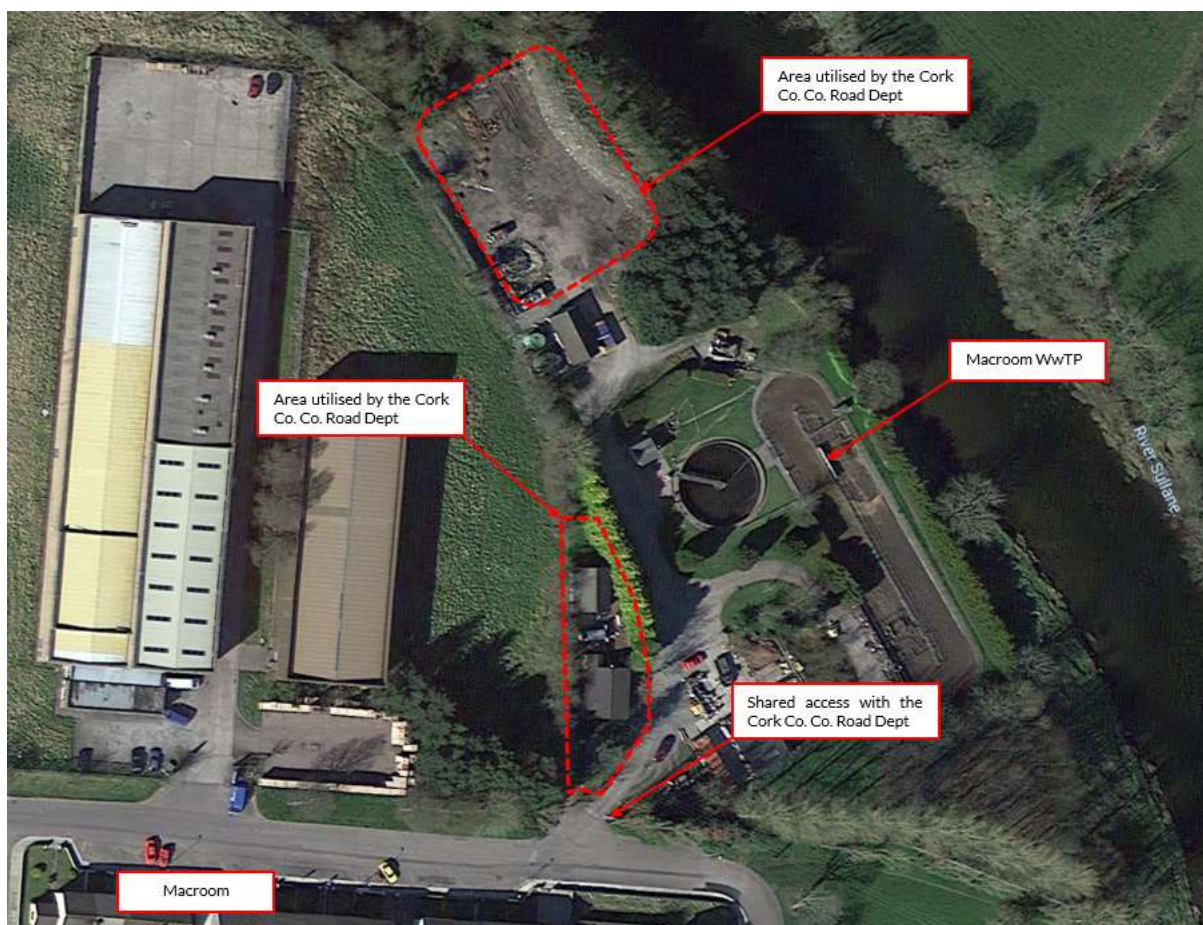


Additionally, the site suffers from flooding issues. At present, the site of the WwTP experiences localised flooding from the River Sullane at least twice a year. In order mitigate the risk of flooding of the proposed development, it is proposed to construct a flood wall around the perimeter of the site.

As such, the purpose of the proposed upgrade works are therefore to upgrade the existing WwTP to cater for the future agglomeration load, to ensure compliance with WWDL D0126-01 and to remediate to the existing flooding issues.

The primary legislative and regulatory drivers for the delivery of this project are as follows:

- Urban Waste Water Treatment Regulations, 2001.
- Wastewater Discharge Regulations, 2007.
- Environmental Objectives (Surface Waters) Regulations, 2009.



*Figure 1-2 Existing Site Layout*

## 1.4 Upgrade Works

The Proposed Upgrade works at the existing Macroom WwTP are necessary to achieve the required treatment capacity and target ELV's. As referenced previously, it is believed that the existing WwTP has a design capacity of 5,230 PE. As part of the upgrade works, it is proposed to increase the capacity of the WwTP to cater for the 10 & 25 year design projections as follows:

- Phase 1 (10-year Design Projection): 7,700 PE
- Phase 2 (25-year Design Projection): 8,300 PE

A Waste Assimilative Capacity (WAC) Assessment Report was carried out which, based on the above referenced design projections, determined that the River Sullane has sufficient assimilative capacity to accommodate the discharge from the upgraded WwTP.

The proposed site layout and design of the WwTP is shown in the proposed site layout can be seen in Figure 1-3. The proposed upgrade works will comprise of the following:

- Preliminary treatment:
  - Upgrade and replacement of the existing storm water overflow (SWO) immediately upstream of the inlet works with new screened SWO;
  - Decommissioning of the existing preliminary treatment works including the screen;
  - Construction of a new inlet works and screening system;
  - Construction of a new grit removal system;
  - Construction of a new full flow to treatment (FFT) pumping station; and
  - Construction of a new stormwater storage tank equipped with storm water pumps.
- Secondary treatment:
  - Decommissioning of the existing oxidation ditch;
  - Construction of a new flow splitting chamber;
  - Construction of 2 No new integrated fixed-film activated sludge (IFAS) reactor tanks (Aeration Tanks);
  - Decommissioning of the existing final settlement tank;
  - Construction of 2 No. new final settlement tanks;
  - Construction of both return & waste activated sludge (RAS/WAS) pumping stations,
  - Installation of a lime batching & dosing facility, and;
  - Installation of ferric sulphate dosing system including bunded chemical storage tank.
- Sludge management system:
  - Decommission existing sludge holding tank;
  - Construction of a new sludge picket fence thickener (PFT);
  - Construction of an odour control system;
  - Installation of a new polymer make-up system, to be located within the existing building which is to be retained;
  - Decommissioning of the existing dewatering equipment within the existing building; and
  - Installation of a new sludge dewatering equipment/system (to be installed within the existing building, which is to be retained).
- Outfall:
  - Construction of a new final water sampling manhole on the existing outfall pipeline, within the WwTP site;
  - Discharge of final effluent through the existing outfall to the River Sullane.





- Ancillary works:
  - Construction of a solar PV panel installation capable of a maximum power generation of 42.32kWp
  - Construction of a new sheetpile flood protection wall. This wall is to be constructed within the site boundary to a level of 300mm above the 0.1% Annual Exceedance Probability (AEP) (1-in-1000 year) flood level.
  - New standby energy generator & bunded fuel tank.
  - Relocation of the existing shed from the southern side of the WwTP site to the northern side of the WwTP site;
  - Demolition of existing sheds adjacent to the site entrance to create a designated area with a separate site entrance to be used by Cork County Council Roads Department;
  - Construction of a new control and administration building, and;
  - Construction of new surface water drainage system with oil interceptor and attenuation system, in accordance with Sustainable Drainage Systems (SuDS)
  - Site landscaping and finishes.

### ***1.4.1 Construction Activities***

The proposed construction works are to commence in Q2 2023 and are expected to have a duration of 18 months. Works will mainly consist of the following:

- Site clearance;
- Establishment of site offices, welfare facilities & compound area;
  - It is proposed that the temporary contractors compound area shall be provided within an area under the ownership of Cork County Council adjacent to the WwTP site. A letter of consent has been provided from Cork County Council in relation to this area, and this letter is included with the supporting documentation as part of this application.
- Construction of flood protection wall to the site to mitigate flooding risks.
  - It is proposed that construction of the flood wall shall be one of the first construction tasks undertaken, to mitigate the potential for flooding events during the construction period.
- Decommissioning & demolition of existing tanks & structures (Note, decommissioning & demolition of existing tanks & structures will be carried out in sequence during the construction stage following the commissioning of the new infrastructure);
  - The existing WwTP shall remain operational during construction works and until such time as the Proposed Upgrade is operational.
- Excavations for tanks;
- Pouring of concrete bases;
- Installation of precast tanks;
- Laying of process pipework, ducting and services;
- Reinstatement to the site including internal access driveways and landscaping;
- Surface water drainage (including oil interceptor, attenuation tank); and
- New security fence and gate, 2.4m high;
- Monitoring of noise levels using standard noise meters

The Works extents within which the Contractor shall construct the WwTP upgrade include the existing WwTP site access road off St Colman's Park Road as well as the pipeline route between the WwTP and outfall to River Sullane. The proposed site layout can be seen in Figure 1-3 of this report.



The maximum depth of excavations shall be circa 7.5m below the existing ground level (the proposed storm water holding tank shall be installed with a finished floor level circa 7m below ground level).

Concrete will be poured on site as there are some reinforced concrete (RC) bases required, such as for the IFAS, final settlement tanks & storm water holding tank.

There are no bankside/instream works required on the site.

It is envisaged that removal of vegetation and trees within the site will be required in order to facilitate the works. A landscape management plan has been prepared which includes details of the reinstatement of vegetation, removed as part of the works. The landscape management plan has been included as part of the Planning Drawing submission.

The proposed works will generate construction waste. Construction waste will include a range of materials such as: hardcore, stone, gravel and concrete, plastics and lubricating oils. Operational waste will also include materials such as normal domestic waste and lubrication and cooling oils from the servicing equipment. Although every effort will be made to recycle and re-use of materials on site, some waste will require to be disposed of off site. The Contractor will be required to prepare a detailed Construction & Demolition Waste Management Plan and any waste produced as part of the development will be dealt with in accordance with the relevant waste management legislation & guidance. Any waste removed from the site will be collected by a Contractor with a valid Waste Collection Permit & will be disposed of to a suitable licenced facility. An Outline Construction & Demolition Waste Management Plan has been prepared and appended to this Planning Application.

The Contractor shall be required to prepare a detailed Construction Environmental Management Plan, in line with ISO 14001 to address all construction activities to be carried out as part of the development prior to construction works commencing. An Outline Construction Environmental Management Plan has been prepared and appended to this Planning Application.

### ***1.4.2 Proposed Operational Phase***

Once the construction works are complete, the WwTP will continue to be regulated by the EPA under WWDL D0126-01 but on the basis the completion of the upgrade works set out in this report, any non compliance issues previously experienced at the WwTP will be remediated.

Following the completion works, operational phase activities will be minimal and will include occasional maintenance works within the Proposed Upgrade site. These include maintenance and calibration of equipment, delivery of necessary chemicals, removal of sludge from site, replacement of faulty or damaged structures and related hardware as required.

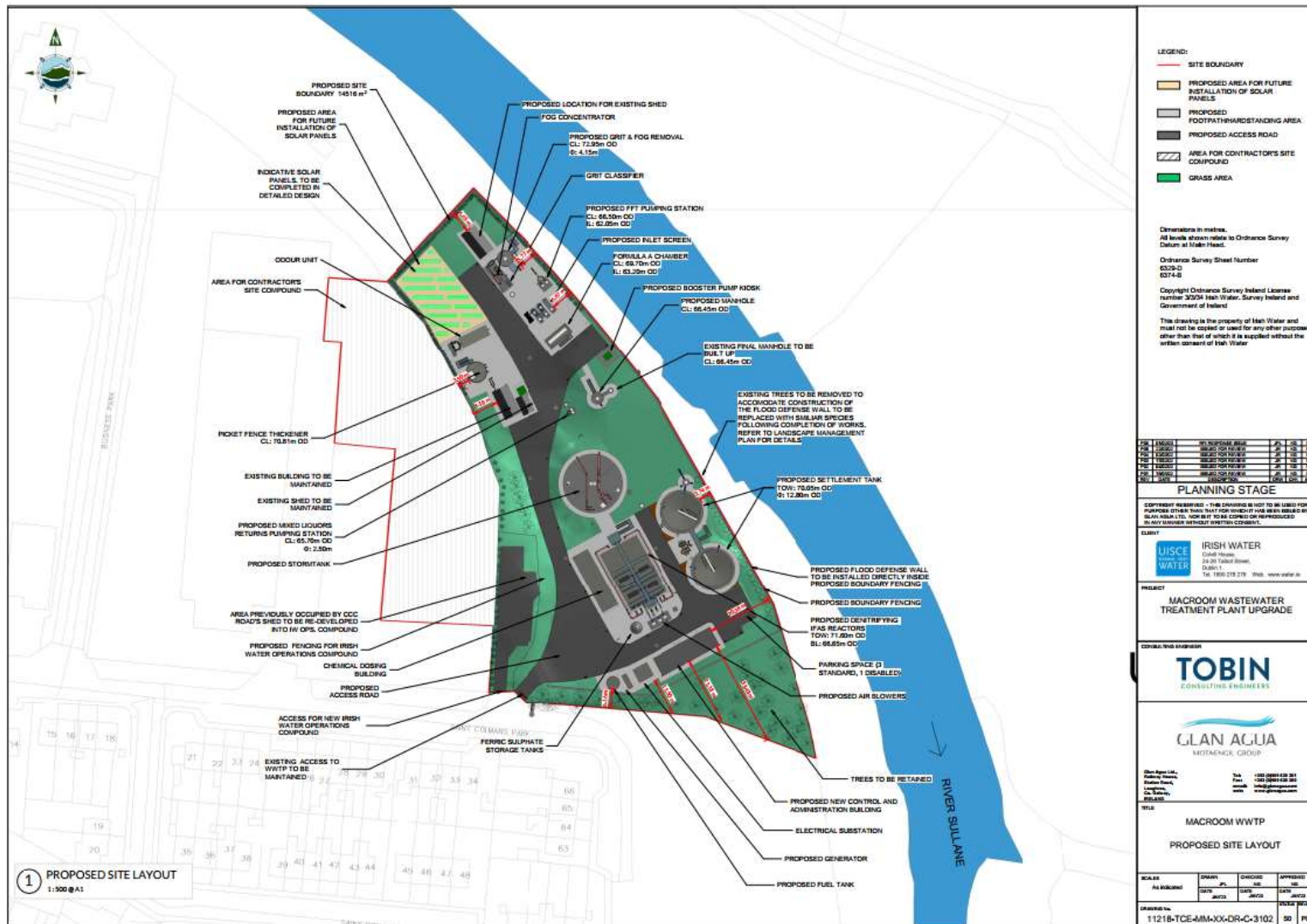


Figure 1-3: Proposed Site Layout

## 2.0 EIA SCREENING

### 2.1 Purpose of EIA Screening.

The purpose of this Environmental Impact Assessment (EIA) Screening Report is to inform the competent authority, in this case Cork County Council, as to whether the proposed development, is likely to have significant effects on the environment such that an Environmental Impact Assessment Report (EIAR) should be prepared and an Environmental Impact Assessment (EIA) be conducted.

This EIA Screening Report contains the necessary information to enable the Local Authority to undertake an EIA Screening Assessment and determine whether an EIAR is required for the proposed development. This EIA Screening report is presented in accordance with the information required as per the following: Schedule 7A of the Planning and Development Regulations 2001-2018.

### 2.2 Legislative Background

The Environmental Impact Assessment Directive is based on the precautionary principle and on the principle that preventative action should be taken, that environmental damage should, as a priority, be rectified at source and that the polluter should pay. Effects on the environment should be taken into account at the earliest possible stage in all the technical planning and decision-making processes.

The original Environmental Impact Assessment (EIA) Directive 85/337/EEC has been amended three times (Directives 97/11/EC, 2003/35/EC and 2009/31/EC) and subsequently organised in an informal consolidated version by EIA Directive 2011/92/EU. The EIA Directive 2014/52/EU (the 'EIA Directive'), amending Directive 2011/92/EC on the assessment of the effects of certain public and private projects on the environment, came into force on the 15th of May 2014 and Member States had three years to transpose the Directive (i.e., by 16th May 2017). The legislation necessary to transpose the amended EIA Directive into Irish Law was adopted in July 2018.

The EIA Directive is implemented in Ireland by the Planning and Development Act, 2000 (as amended), the Planning and Development Regulations 2001 to 2019 and the European Communities (Environmental Impact Assessment) Regulations 1989 to 2006.

### 2.3 Transposition of the EIA Directive into National Regulations

The EIA Directive specifies the classes of project for which an EIA is required and the information which must be furnished within an Environmental Impact Assessment Report (EIAR). The obligations as set out in the EIA Directive have been implemented into Irish law by the provisions of Part 10 of the Planning and Development Act, 2000 (as amended), and the Planning and Development Regulations 2001 to 2019. Schedule 5 of the Regulations outlines the classes of development to which Part 10 applies.

## 2.4 Methodology

The EIA screening process ascertains whether a development requires EIA. The initial consideration in determining whether a development should be subject to EIA is whether or not it is a class of development specified under Schedule 5 of the Planning and Development Regulations, 2001 (as amended), and if it is of a threshold specified. Thereafter, in the case of sub-threshold development, consideration must be given to the likelihood that the proposed development would result in significant environmental effects. Significant effects may arise by virtue of the nature of the proposed development, its scale or extent and its location in relation to the characteristics of the receiving area, in particular sensitive environments.

EIA Screening for the proposed development was undertaken with consideration of the following legislation and guidance:

- Planning and Development Act, 2000 (as amended).
- Planning and Development Regulations, 2001 to 2019.
- Guidance on EIA Screening, European Commission, 2017.
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment.

## 2.5 Requirement for EIA

The Planning and Development Act (Section 172(1)) states that EIA must be carried out by the planning authority and / or An Bord Pleanála as appropriate in the case of either of the following scenarios:

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

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

(I) Such development would be equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part, or

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

or

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

(I) Such development would equal or exceed, as the case may be, any relevant quantity, area or other limit specified in that Part, or

(II) No quantity, area or other limit 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 2 of Part 2 of Schedule 5 of the Planning and Development Regulations 2001 but does not exceed, as the case may be, the relevant quantity, area or other limit specified in that Part, and



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

In support of this requirement, an EIAR must be submitted by an applicant with an application for consent for same. In the case of sub-section 172(1)(b), the Planning Authority, or An Bord Pleanála as appropriate, is required to undertake EIA for sub-threshold development which would likely have significant impacts on the environment.

The various elements of the proposed development have been considered to determine if they fall within a class of development specified in Schedule 5 of the Regulations and for which mandatory or a discretionary EIA may be required. The works and development as noted above comprise:

- Upgrade to Wastewater Treatment Plant.
- Construction of Flood Protection Measures.

## 2.6 Requirement for EIA Under Annex I of the EIA Directive

In accordance with Article 4(1) of the EIA Directive, all projects listed in Annex I of the EIA Directive are considered as having significant effects on the environment and shall be subject to Environmental Assessment. The specific requirements under Annex I of the Directive have been transposed into Schedule 5, Part 1 of the Planning and Development Regulations, and are as follows:

Under Class 13 EIA is required for:

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

The proposed development shall increase the population equivalent of the Macroom WwTP to 8,300.

Class 13, therefore, does not apply to the proposed development.

The construction of a flood protection wall does not fall under any classes of development listed under Schedule 5, Part 1.

On this basis the proposed development does not require a mandatory EIA under Schedule 5, Part 1 of the Planning and Development Regulations.

## 2.7 Requirement for EIA Under Annex II of the EIA Directive

For projects listed in Annex II of the EIA Directive, the national authorities may determine whether an EIA is needed, either on the basis of thresholds/criteria or on a case-by-case examination.

The obligations in Annex II of the EIA Directive have been transposed into Schedule 5, Part 2 of the Planning and Development Regulations. The specific classes of development under Schedule 5, Part 2 that could potentially apply are set out below.



Under Class 10(f)(ii), EIA is required for the following circumstances:

- Canalisation and flood relief works, where the immediate contributing sub-catchment of the proposed works (i.e. the difference between the contributing catchments at the upper and lower extent of the works) would exceed 1,000 hectares or where more than 20 hectares of wetland would be affected or where the length of river channel on which works are proposed would be greater than 2 kilometres.

The proposed flood protection wall shall be constructed within the WwTP site, offset from the river channel by a distance of approximately 20 metres. The length of the proposed wall shall not be greater than 500 metres. Therefore, the works proposed do not fall under Class 10(f)(ii).

Wastewater treatment works are not included under Class 10 (Infrastructure Projects).

Under Class 11(c), EIA is required for the following:

- Waste water treatment plants with a capacity greater than 10,000 population equivalent.

The proposed development shall increase the population equivalent of the Macroom WwTP to 8,300.

Class 11 (c), therefore, does not apply to the proposed development.

Class 13 covers changes, extensions, development and testing.

Under Class 13(a) EIA is required for the following:

- 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 shall not result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule. Therefore, the proposed development does not fall under Class 13(a).

Under Class 13(c) EIA is required for the following:

- Any change or extension of development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, which would result in the demolition of structures, the demolition of which had not previously been authorised, and where such demolition would be likely to have significant effects on the environment, having regard to the criteria set out under Schedule 7.

Given that the development does not fall under a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of Schedule 5, this clause does not apply.

Under Class 15 EIA is required for the following:

Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development, but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

There is the potential for an impact on water quality on the River Sullane from overflows at the Macroom Wastewater Treatment Plant. However, this impact already exists with the current site use and will not be altered by way of the proposed development. It is expected that the proposed development shall reduce the risk of such overflows, as a result of the provision of stormwater storage systems.

Given that the development will see the improvement of wastewater treatment processes at the Macroom WwTP, the overall effect on the water quality in the river will be a positive one.

These works are deemed not to fall within a class of development specified under Part 1 or Part 2 of Schedule 5 of the Planning and Development Regulations, 2001 (as amended). Therefore, neither mandatory nor discretionary EIA are necessary or potentially required for either of these elements of the development.

## 2.8 Screening Sub-threshold Development

Part 10 of the Planning and Development Regulations 2001-2018 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.”

For projects that fall below a class or threshold specified in Schedule 5, it is the decision of the Competent Authority to determine if an EIA (and the associated EIAR) is required to be completed. This is determined by examining if the ‘sub threshold’ development is likely to result in significant environmental effects. Significant environmental effects may arise due to the characteristics of the potential effects based on the nature and extent of the proposed development, and/ or its location in relation to the characteristics of the receiving environment, particularly sensitive environments.

The 1997 amending Directive (97/11/EC) introduced guidance for Member States in terms of deciding whether or not a development is likely to have “significant effects on the environment”. The guidance is provided by way of criteria set out in Annex III of the consolidated Directive Schedule 7 of the Planning and Development Regulations sets out “criteria for determining whether a development would or would not be likely to have significant effects on the environment” in accordance with Annex III of the Directive. Schedule 7 effectively acts as guidance for consenting authorities in Ireland in assessing whether a ‘sub-threshold development’ should be subject to EIA.

The assessment is undertaken under three main headings:

1. Characteristics of the Proposed Development.
2. Location of the Proposed Development; and,
3. Types and Characteristics of the Potential Impacts.



These three headings, together with the associated Schedule 7 criteria, are used as the basis for the examination of likely significant effects on the environment and are discussed in the following sections of this EIA Screening Report

### 3.0 EIA SCREENING

This section provides an EIA Screening against the appropriate criteria as established by the EIA Directive Annex III and as transposed into Irish law, Schedule 7 of the 2001 Regulations, as amended.

It should be noted that under the EIA Directive, the EIA Screening process balances two objectives, in determining if a project listed in Annex II is likely to have significant effects on the environment and, therefore, be made subject to an assessment of its effects on the environment; and it should ensure that EIA is only carried out for those projects which is thought that a significant impact on the environments is possible<sup>1</sup>.

The below tables below screens the proposed development against the Schedule 7 criteria. Information pertaining to Schedule 7A of the 2001 Regulations, as amended is provided herein.

The review in the tables below and, considering the nature of the development, its size and location, it can be concluded that the proposed development does not trigger the need for an EIA as there is no real likelihood of significant effects on the environment arising from the proposed development. It should be noted that due regard has been had to appropriate mitigations and applicable studies as per the EIA Directive, but that these in themselves have been applied to further reduce non-significant effects.

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<sup>1</sup> Environmental Impact Assessment of Projects Guidance on Screening (Directive 2011/92/EU as amended by 2014/52/EU), European Union 2017

Screening against Schedule 7 Criteria	
1. Characteristics of Projects	Consideration of the proposed development
The characteristics of projects must be considered, with particular regard to:	The first of the criteria relates to the characteristics of the proposed development. Each of the issues will be briefly considered in relation to the proposed development.
<p>(a) Size and design of the whole project;</p> <p>(b) cumulation with other existing and/or approved projects;</p> <p>(c) the use of natural resources, in particular land, soil, water and biodiversity;</p> <p>(d) the production of waste;</p> <p>(e) pollution and nuisances;</p> <p>(f) the risk of major accidents and/ or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge;</p> <p>(g) the risks to human health (for example due to water contamination or air pollution).</p>	<p>Irish Water propose to upgrade the existing WwTP (hereafter referred to as the Proposed Upgrade works) to cater for the future agglomeration load and to remediate the existing flooding issues. The Proposed Upgrade works to the WwTP are required to ensure compliance with the existing Wastewater Discharge Licence (WWDL) no. D0126-01 granted by the Environmental Protection Agency (EPA) to Irish Water (IW) in December 2012, which include for additional Ammonia and Phosphorous Emission Limit Values (ELVs). The existing WwTP is significantly overloaded and not fit-for purpose, resulting in failure to meet the requirements in recent years. Consequently, an upgrade of the treatment process is required. The proposed site layout and design of the WwTP is shown in Figure 3- 3 below. The Proposed Upgrade works will include the following infrastructure and will see the capacity of the WwTP upgraded to 8300 population equivalent (PE)</p> <ul style="list-style-type: none"> <li>• Preliminary treatment:</li> <li>• Secondary treatment:</li> <li>• Sludge management system:</li> <li>• Flood protection wall</li> </ul> <p>The treated wastewater shall comply with the (ELVs). The Works extents within which the Contractor shall construct the WwTP Upgrade include the existing WwTP site access road off St Colman’s Park Road as well as the pipeline route between the WwTP and outfall into River Sullane.</p> <p>The proposed development is designed to improve the standard of wastewater treatment and therefore the quality of discharge to the River Sullane, thereby reducing the risk of water quality deterioration in the river.</p> <p>Having regard to the size of the proposed project, there are not anticipated to be any significant effects on the environment.</p> <p>Consideration of cumulative effects is considered here;</p>



	<p>A review of planning applications indicates that development locally is of mainly minor nature. The review of Cork Co. Council planning portals revealed small scale residential developments in areas close to the WwTP site at Macroom and close to the river Sullane. These are not expected to have any in- combination effects with the proposed development.</p> <p>It is proposed to reuse soil unearthed during the construction of the proposed development. Excess material will be disposed of at a suitably licenced facility.</p> <p>A waste management plan will be developed for the site to promote minimization and reuse of materials. Where possible, existing equipment at the existing WwTP shall be reused. It is anticipated that there will be limited waste produced during the construction process. No waste will be stored on site during construction. It is not expected that the level of wastewater sludge generated at the site shall be significantly greater than that which is currently produced at the WwTP. The practice of waste disposal employed at the site (disposal to licenced facility) shall be continued.</p> <p>The only increase in noise expected will be during construction of the development and this will be temporary and intermittent in nature. The works will be carried out in accordance with the requirements of BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites and the European Communities (Noise Emission by Equipment for Use Outdoors) Regulations, 2001. The construction process shall generate additional levels of traffic. A temporary traffic management plan will be developed for the works to mitigate potential impacts on the surrounding road network and users.</p> <p>The proposed works will be conducted in accordance with an agreed Health, Safety, Quality and Environment (HSQE) plan. A safety file will be kept and updated throughout the development. The risk to human health is considered to be negligible.</p>
<p>2. The location of Projects</p>	<p>Consideration of the proposed development</p>
<p>The environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to:</p> <ul style="list-style-type: none"> <li>(a) the existing and approved land use;</li> <li>(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;</li> </ul>	<p>The Proposed Upgrade works will be located at the existing WwTP in Macroom, which is located approximately 30km west of Cork City. Macroom WwTP is situated on the north-east edge of the town. The WwTP is situated approximately 20m from the south-west bank of the River Sullane (IE_SW_19S020480), which flows through the centre of the town and is a tributary of the River Lee. The WwTP is accessed directly off the Saint Colman's Park residential development public road. The WwTP site comprises areas of amenity grassland, planted trees and a concrete access road. The area towards the back of the site, which is utilised by the Roads Dept. of Cork County Council, comprises a stoned surface (Clause 804 or similar material).</p>



<p>(c) the absorption capacity of the natural environment, paying particular attention to the following areas:</p> <ul style="list-style-type: none"> <li>i. wetlands, riparian areas, river mouths;</li> <li>ii. coastal zones and the marine environment;</li> <li>iii. mountain and forest areas;</li> <li>iv. nature reserves and parks;</li> <li>v. areas classified or protected under national legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC;</li> </ul>	<p>The proposed upgrade works will mainly consist of the following:</p> <ul style="list-style-type: none"> <li>○ Site clearance.</li> <li>○ Demolition of existing structures.</li> <li>○ Excavations for tanks.</li> <li>○ Pouring of concrete bases.</li> <li>○ Installation of precast tanks.</li> <li>○ Laying of process pipework, ducting and services.</li> <li>○ Reinstatement to the site including internal access driveways and landscaping.</li> <li>○ Surface water drainage (oil interceptor, attenuation system); and</li> <li>○ Construction of flood protection wall to the site to mitigate flooding risks.</li> <li>○ New control and administration building.</li> </ul> <p>The maximum depth of excavations shall be 6.5m below existing ground level.</p> <p>The site is low lying and the eastern area of the site in particular is prone to flooding from the River Sullane, which runs along the eastern site boundary. In extreme cases flooding has overtopped the oxidation ditch and clarifier, due to a combination of backing up in the process stream as well as fluvial flooding from the river. The proposed development includes the construction of a sheet pile flood protection wall which shall protect the proposed development from future flooding, without impacting on the River Sullane.</p> <p>The site is approximately 0.5ha in area and is situated 240m off the N22. The area around the WwTP site consists mainly of residential development. The main habitats within the development area were identified and classified according to Fossitt (2000). They included Flowerbeds and borders (BC4), amenity grassland (GA2), earth banks (BL2), hedgerows (WL1), scrub (WL1), ornamental/non-native shrub (WS3), spoil and bare ground (ED2), recolonising bare ground (ED3), refuse and other waste (ED5), depositing lowland rivers (FW2) and buildings and artificial surfaces (BL3) in the form of roads and parking areas surround the site.</p> <p>The vegetation on site consists mainly of species indicative of Grassy Verges, Scrub and hedgerow habitat. Species recorded included; Bramble (<i>Rubus fruticosus</i> agg.), Hogweed (<i>Heracleum sphondylium</i>), Yorkshire fog (<i>Holcus lanatus</i>), Cow parsley (<i>Anthriscus sylvestris</i>), Silverweed (<i>Argentina anserina</i>), Vetch (<i>Vicia</i> spp), Meadow buttercup (<i>Ranunculus acris</i>), Dock (<i>Rumex</i> spp), Nettle (<i>Urtica dioica</i>), White Clover (<i>Triflioum repens</i>), Soft rush (<i>Juncus effuses</i>), Daisy (<i>Bellis perennis</i>), Common Chickweed (<i>Stellaria media</i>), Herb Robert (<i>Geranium robertianum</i>), Hart's Tongue (<i>Asplenium scolopendrium</i>), Gorse (<i>Ulex</i></p>
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europaeus), Ribwort Plantain (*Plantago lanceolata*), *Brachythecium* species, Lady-fern (*Athyrium filix-femina*), Meadowsweet (*Filipendula ulmaria*),

The hedgerows surrounding the perimeter were dominated by Hawthorn (*Crataegus monogyna*), Ash (*Fraxinus excelsior*) and Cherry Laurel (*Prunus laurocerasus*) which is an Invasive non-native species (INNS). The ground layer of the hedgerows along the site boundary fence is dominated by Bramble, Ivy (*Hedera helix*), Great Willowherb (*Epilobium hirsutum*), Male fern (*Dryopteris filix-mas*), Meadowsweet, Hedge bindweed (*Calystegia sepium*), Meadow buttercup and Tufted Vetch (*Vicia cracca*).

To the north-east of the site was a small plantation of mature conifer trees approximately 15m foot in height. The ground layer of this plantation was predominantly Ivy and Bramble. Along the entrance to the site is a line of mature poplar trees (*Populus*) which were approximately 6m in height. These were also mixed with eight to ten mature Ash trees. The proposed development at the WwTP site IS to be undertaken within the confines of the existing site.

The nearest European sites are the Gearagh SAC (000108) and the Gearagh SPA (004109) located 1.8km and 2.5km southwest of the development site. These European sites are within part of the Lee catchment. The River Sullane is a tributary of the River Lee, however, the River Sullane does not form part of these European sites or any other candidate site (SAC, SPA) at the point of discharge; therefore, there is no direct hydrological connection, as shown in Figure 3-5.

The River Sullane, upstream and downstream of the proposed upgrade site, has a recent assigned ecological status “Good” under the Water Framework Directive (WFD) reaching a Q4 value in 2020. The status changes to “High” at the next EPA station which is located 675m downstream; however, this is a pre WFD status which was recorded in 1990. The proposed development sites are not located within areas of Special Protection (SPA) or Special Areas of Conservation (SAC).

No Annex I habitats were recorded within or in the immediate vicinity of the site during the desktop study or field survey.

A protected non-volant mammal survey (including otter) was conducted within the Proposed Upgrade area and along the access tracks, culverts and areas where suitable habitat for these species occurred within the vicinity of the Proposed Upgrade.

During the desktop study, Otter spraint (Grid W353725) was recorded in May 2017 in the database Mammals of Ireland 2016-2025. This was located 500m downstream of the site, indicating Otter are likely to commute/forage along the River Sullane. During the field survey, an otter holt was identified on the left



	<p>hand bank of the River Sullane, located 50m upstream of the site boundary (Grid reference W 34884, 73082).</p> <p>No other Annex II species were recorded during the multi-disciplinary walkover survey of the proposed development site. No invasive species listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2015) were recorded within the proposed development site during the field survey.</p> <p>The habitats directly within the Proposed Upgrade area are considered to be unsuitable for protected species such as Otter or wintering waterbirds.</p> <p>Following an evaluation of the relevant information, including details of the Proposed Upgrade works and its relationship with European sites, it is not considered possible to rule out the potential for likely significant effects on the Otter which is a Qualifying Interest of The Gearagh SAC based on the application of the precautionary principle and in the absence of mitigation.”.</p> <p>Thus, a Natura Impact Statement was prepared in accordance with the provisions of Article 6(3) of the Habitats Directive and Part XAB of the Planning and Development Act 2000, as amended, providing information to enable the competent authority to perform its statutory function to undertake an AA in respect of the proposed development.</p> <p>Following the application of the detailed mitigation measures and the pre-construction Otter survey proposed in advance of construction works, potential adverse effects will be avoided or reduced.</p> <p>Consequently, it is expected that there will be no risk of adverse effects on the qualifying interests, habitats and species, or on overall site integrity, nor in the attainment of their specific conservation objectives for The Gearagh SAC.</p> <p>The closest monument to the existing WwTP Site (as defined in The Record of Monuments and Places (RMP) for Cork) is an ‘Stone Row’ which is situated approximately 104 metres east of the existing site and which shall not be impacted by the works in any way.</p> <p>None of the proposed work sites are in close proximity to any sites included in the Register of Historic Monuments or Record of Protected Structures. An Archaeological screening of the developments has been completed.</p>
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	<p>The surrounding area is relatively heavily populated. The proposed works are to be constructed so that structures do not significantly exceed the height of the existing infrastructure and are to be contained within the footprint of the existing site.</p> <p>In addition, invasive non-native species were recorded within the site during the walkover survey. Species of the butterfly bush (<i>Buddleja davidii</i>) were recorded present at the north of the site in an area of scrub. Four stands were recorded. This is inside of the boundary line of the proposed upgrade works. An Invasive Species report has been prepared in relation to the proposed Upgrade Work.</p> <p>There is a possibility that this plant may be disturbed during the construction works as it is located within the boundary line of the site. As this species is not listed in Part 1 of the Third Schedule of S.I No. 477 of 2011, European Communities (Birds and Natural Habitats) Regulations 2011 and the IAS Regulations, there is no legal obligation to remove it from the site. However, Butterfly bush is a plant that favours disturbed grounds. To avoid the spread of this invasive species across the proposed development site, it is recommended that the species is removed prior to any works onsite. The control or management of any Invasive Alien Plant Species (IAPS) shall be undertaken in the four distinct phases as outlined in GE-ENV-011045 (The Management of Invasive Alien Plant Species on National Roads – Standard)</p>
<p>3. Type and characteristics of the potential impact</p>	<p>Consideration of the proposed development</p>
<p>The likely significant effects of projects on the environment must be considered in relation to criteria set out in points 1 and 2 of this Annex, with regard to the impact of the project on the factors specified in Article 3(1), considering:</p> <ul style="list-style-type: none"> <li>(a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected).</li> <li>(b) the nature of the impact.</li> <li>(c) the transboundary nature of the impact.</li> <li>(d) the intensity and complexity of the impact.</li> </ul>	<p>The potential impacts will be limited to the existing WwTP site. It is anticipated that the proposed works will not cause any adverse impact on the existing geographical area or population. Limited waste will be produced during the construction only and removed from site to a suitably licenced waster facility.</p> <p>The development is located in Co. Cork. It is located in a relatively highly populated area. Nuisance impacts are anticipated to be limited and controlled by applicable standards where appropriate. In regard to noise this will be during construction only and during permitted construction hours. The works will be carried out in accordance with the requirements of BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites and the European Communities (Noise Emission by Equipment for Use Outdoors) Regulations, 2001. There will be some operational noise at the WwTP site, however the level of noise generated at the WwTP are not expected to be any greater than the levels generated by the existing treatment works at this site.</p>



<p>(e) the probability of the impact.</p>	<p>The principle impacts will be during the construction phase and will be short term and temporary in nature.</p> <p>There should be no impact on other existing/approved projects.</p> <p>The Proposed Upgrade site is not located within or directly adjacent to any designated European site. Therefore, there will be no direct impact on any European sites as a result of the Proposed Upgrade works.</p> <p>Following an evaluation of the relevant information, including details of the Proposed Upgrade works and its relationship with European sites, it is not considered possible to rule out the potential for likely significant effects on the Otter which is a Qualifying Interest of The Gearagh SAC based on the application of the precautionary principle and in the absence of mitigation.”.</p> <p>Thus, a Natura Impact Statement was prepared in accordance with the provisions of Article 6(3) of the Habitats Directive and Part XAB of the Planning and Development Act 2000, as amended, providing information to enable the competent authority to perform its statutory function to undertake an AA in respect of the proposed development.</p> <p>Following the application of the detailed mitigation measures and the pre-construction Otter survey proposed in advance of construction works, potential adverse effects will be avoided or reduced.</p> <p>Consequently, it is expected that there will be no risk of adverse effects on the qualifying interests, habitats and species, or on overall site integrity, nor in the attainment of their specific conservation objectives for The Gearagh SAC.</p> <p>The potential for reduction in water quality from the release of suspended solids, pollutants and/or untreated wastewater into the surface water system and entering the River Sullane will also be avoided or reduced following the application of the detailed mitigation measures.</p> <p>Following an analysis and evaluation of the relevant information including, in particular, the nature of the proposed development, characteristics of the qualifying interests, the potential link between the proposed development and The Gearagh SAC, no significant adverse effect on the integrity of the European site during development and operation of the Proposed Upgrade at the Macroom WwTP is anticipated alone or in-combination with any other plans or projects.</p> <p>Disturbance to fauna during the construction stage may potentially arise as a result of a short-term increase in human presence on-site and additional construction noise and lighting within the site. Some trees along the boundary of the site closes to the river Sullane, and some vegetation within the site may be</p>
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	<p>removed to facilitate flood protection wall construction. These trees at the boundary of the site shall be replaced with similar species following completion of construction.</p> <p>The predicted landscape impact will be localised due to the scale of the development and the impact on the fabric of the surrounding landscape will be minimal, short term and is temporary only.</p>
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### 3.1 Overview of EIA Screening

In order to inform the screening evaluation, consideration was first given to the potential for impacts on particular aspects of the environment, as set out in Section 4 of this report.

The Environmental Topics as set out in the EIA Directive are as follows:

- a) human beings, fauna and flora.
- b) soil, water, air, climate and the landscape.
- c) material assets and the cultural heritage; and
- d) the interaction between the factors referred to in points (a), (b) and (c)

It is noted that the EPA (2002) guidelines on the information to be contained in Environmental Impact Statements, outlined in Section 2.4.7 that “Where reasonable concerns exist that a single or very limited number of environmental topics may be adversely affected by a development proposal then an appropriate evaluation of the relevant topic(s) may be carried out.”

Environmental Assessments of the proposed works have been carried out for a number of subject areas. An overview of the potential impacts against the environmental assessment areas in the Directive are presented in Table 3-1 below:

*Table 3-1 - Screening for Environmental Assessment*

Topics	Screening for Environmental Assessment
Human Beings, Material Assets, Traffic and Transport.	<p>It is expected that this proposal will have a positive impact in the wider area by providing improved wastewater services infrastructure. Consequently, the proposed development will have a very beneficial impact as there will be a net positive impact from the proposed development on water quality in the River Sullane.</p> <p>During the construction period there will be an increase in traffic volumes as a result of employees travelling to and from the site and for the delivery and disposal of construction related materials. This will impact on users of the local and regional roads and local residents only during working hours but will be temporary in nature. Suitable traffic management measures will be implemented during the construction period to mitigate potential construction related impacts and it is intended that construction related activities will be restricted to normal working hours</p>
Soil and Geology	The proposed development will result in the excavation of soils and subsoils. It is proposed that significant quantities of this material will be reused onsite. Excess material will be disposed of at a suitably licenced facility.
Air, Climate, Noise and Vibration	There may be additional noise during construction and the possibility of an impact on air quality though the generation of dust during the construction stage. The works will be carried out in accordance with the requirements of BS5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites and the European Communities (Noise Emission by Equipment for Use Outdoors) Regulations, 2001. Any impacts would be localised and temporary in nature. It is intended that construction related activities will be restricted to permitted working hours.



Landscape and Visual	The impacts on Landscape will be local in nature and not significant. The visual appearance at the WwTP will not be altered significantly and any existing visual screening which may be removed to facilitate construction shall be replaced following completion of construction .
Cultural heritage and the Built Environment	Archaeological screening has been conducted. The features of note are recorded above and no impacts are expected.
Interactions of the foregoing (Cumulative Impacts)	On the basis of the assessment of the above it is not considered that any environmental impacts resulting from the cumulative interaction of the above assessment impacts would be significant.

## 4.0 CONCLUSION

It is concluded that the proposed development is not a Schedule 5 Part 1 or Part 2 Development and EIA is not mandatory. Considering ‘the type of development’ as per Article 92 of the 2001 regulations, it is respectfully submitted that the proposed development is not a sub-threshold development. Recognising that the planning authorities may reach a different conclusion on classification of sub-threshold development, an EIA screening has been carried out. This EIA screening has considered the nature of the proposed development, its size and location whilst having due regard to the criteria listed in Schedule 7 and the relevant information listed in Schedule 7A of the 2001 Regulations, as amended.

This screening review concludes that the proposed development is unlikely to result in significant effects, and that the consideration of appropriate mitigation measures reduces the potential for significant effects further.

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