FETHARD WWTP UPGRADE

EIA Screening Report

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Prepared by:

RPS

Prepared for:

Uisce Éireann

Dublin | Cork | Galway | Sligo | Kilkenny
rpsgroup.com

RPS Group Limited, registered in Ireland No. 91911
RPS Consulting Engineers Limited, registered in Ireland No. 161581
RPS Engineering Services Limited, registered in Ireland No. 99795
The Registered office of each of the above companies is West Pier Business Campus, Dun Laoghaire, Co. Dublin, A96 N6T7

Contents

Tables

Figures

Appendices

1 INTRODUCTION

RPS has been commissioned by Uisce Éireann (UÉ) to produce this Environmental Impact Assessment (EIA) Screening Report. This report is required as support for an application to the Environmental Protection Agency (EPA) for a review of the existing Waste Water Discharge Licence (WWDL) Ref. D0164-01, in accordance with the requirements of the European (Waste Water Discharge) Regulations 2007 to 2020 for the

Fethard Waste Water Treatment Plant (WWTP) in Fethard, Co. Tipperary (hereafter referred to as 'the proposed development'). Planning permission for the proposed development was granted by Tipperary County Council in May 2023 (Planning Ref: 23/60207) subject to 6 No. conditions.

The existing WWTP site is located approximately 0.75km south-east of Fethard town in the townland of Moneypark as shown in **Figure 1-1**. The existing WWTP site is approximately 0.39ha and is to be extended by 0.56ha to the west to create an extended site boundary. The proposed development will be contained within the footprint of the extended Fethard WWTP facility, on a site area of approximately 0.95ha.

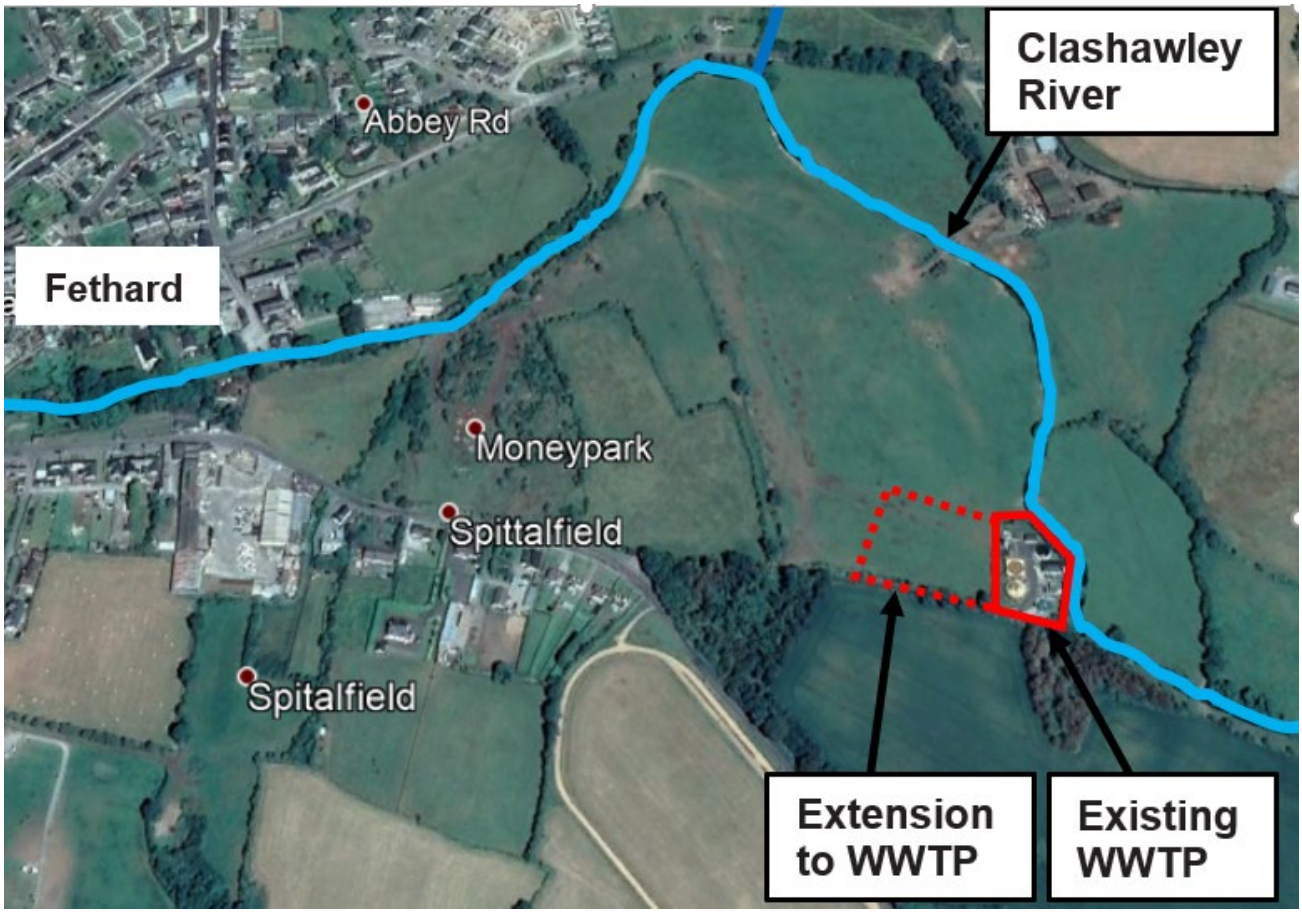
The site is accessed from the R706 Regional Road via a private access road which is approximately 275m in length.

Fethard WWTP is operated under a Design Build Operate Contract (DBO) by Murphy Engineering Process (MPE). The existing WWTP was originally designed to cater for flows and loads from a population equivalent (PE) of 2,000. The plant was upgraded in 2005 to cater for a design population equivalent of 3,000 PE. The upgrade works included re-laying the influent sewer from the storm overflow weir chamber on the northern end of the site. New storm facilities including a storm overflow screen and overflow pipe to the Clashawley River, an anoxic tank, storm water holding tank and overflow screen were also provided. A new sludge dewatering facility was provided, which can accept liquid sludge from other plants.

The site location and extent of boundary are indicated in **Figure 1-1** and **Figure 1-2** below respectively. The layout for the proposed development is presented in **Appendix A.**

Figure 1-1: Location of Fethard WWTP

Figure 1-2: Aerial Image of Fethard WWTP and Boundary Extension



1.1 Purpose of the Report

The purpose of this report is to ascertain the legal requirement or otherwise for an EIA for the project. As a first step, this report sets out why the proposed development does not require mandatory EIA. Thereafter, the report considers whether the development is a sub-threshold class of development that would require EIA. To this end, the report presents information consistent with the requirements of the European Union (Waste Water Discharge) Regulations 2007 to 2020 and Section 176A(3)(d) of the Planning and Development Act 2000, as amended, including the information specified in Schedule 7A of the Planning and Development Regulations, 2001, as amended. It also presents an assessment of whether the development would or would not be likely to have significant effects on the environment, based on the criteria set out in Schedule 7 of the Planning and Development Regulations, 2001, as amended and in accordance with the provisions of Section 176B(3)(b) of the Planning and Development Act, 2000, as amended.

1.2 Statement of Authority

This EIA Screening Report has been prepared by RPS Environmental Scientist who holds a Bachelor of Science (Hons) in Earth Science and a Masters in Planning and Sustainable Development and with 8 years' experience of preparing EIA Screenings for a range of small to large-scale projects, including road projects, mixed-use residential developments, renewable energy projects and various other infrastructural projects. The EIA Screening Report has been reviewed by RPS Associate who holds a Bachelor of Social Science and a Masters of Regional and Urban Planning with over 18 years' experience planning and development projects including EIA and environmental management.

The intention of this EIA Screening Report is to detail findings from a desktop analysis (as well as additional reports including Appropriate Assessment (AA) Screening, Archaeological Screening and Flood Risk Assessment) of the receiving environment that may be affected by the proposed development and to further document the procedures and outcome of the process undertaken as part of the screening assessment. The report is to establish the likely significant effects of the proposal on the environment and advise if an EIA would be appropriate for the proposed development.

1.3 Background

The existing WWTP comprises of an inlet pumping station (including a storm water overflow (SWO) facility), preliminary treatment (screening and grit removal), storm water management, secondary treatment (anoxic and aeration tanks followed by a final settling tank), chemical dosing for phosphorus removal, and a tertiary filtration system that is not currently in use. The WWTP also has a sludge treatment facility consisting of sludge thickening and dewatering. The sludge treatment facility has an import facility to accept liquid sludge from other plants. Treated effluent is discharged through a final effluent flume to the Clashawley River at E221654, N134695 and there are two storm water overflows, one from the inlet (E221639, N134755) and one from the storm water tank (E221652, N134738).

The WWTP was designed in the 2005 upgrade to achieve treated effluent discharge standards of 10mg/l BOD, 125mg/l COD, 10mg/l SS, 1mg/l Total Phosphate, 5mg/l Ammonia and 20mg/l Total Nitrogen, in accordance with the emission limit values stipulated by the DBO (Design Build Operate) Contract with Murphy Process Engineers (MPE). The organic design capacity is 180kg/d and the hydraulic design capacity is 675m3/day (1 Dry Weather Flow (DWF[1])).

The current Waste Water Discharge Authorisation (WWDA) Licence (Ref. D0164-01) granted by the EPA for the WWTP, sets more stringent discharge Emission Limit Values (ELVs), as stated in **Table 1-1**. It is proposed as part of these works to apply to the EPA for an amendment to the existing waste water discharge license, and the proposed revised ELVs to be included in the proposed amendment are also shown in **Table 1-1** below. In addition, this table also includes the applicable Urban Waste Water Treatment Directive (UWWTD) discharge standards for comparison.

Table 1-1: Waste Water Discharge Authorisation Licence Limits (Ref. D0164-01)

Parameter	UWWTD Effluent Limits (mg/l)	Current WWDA Effluent Limits (mg/l)	Proposed WWDA Effluent Limits (mg/l)	DBO Contract Effluent Limits (mg/l)
BOD (mg/l)	25	5	11	10
COD (mg/l)	125	125	125	125
Suspended Solids (mg/l)	35	35	35	10
Total Phosphate (mg/l)	-	-	-	1
Ortho – Phosphate (mg/l)	-	0.2	0.4	-
Total Nitrogen (mg/l)	-	-	-	20
Ammonia (mg/l)	-	0.3	0.9	5

[1] Dry weather flow (DWF) is the average daily flow to a wastewater treatment plant during a period without rain. The flow in a combined sewerage system will increase when it rains. This flow may vary seasonally due to changing levels of sewer infiltration and population numbers

The final treated effluent discharges through the primary discharge point to the Clashawley River. Prolonged storm conditions, which generate flows greater than Flow to Full Treatment (FFT[2]) result in storm water overflowing to an existing stormwater storage tank, sized to provide storage for a volume equivalent to (Formula A[3] - FFT) for a 2-hour duration. When storm conditions abate and the inflow to the WWTP drops below 3 Dray Weather Flow (DWF), the water retained in the storm tank is pumped back to the head of the inlet works upstream of the screens, by duty/stand-by pumps.

There are currently two separate storm water overflows (SWO) from the Fethard WWTP, both of which discharge to the Clashawley River:

- The inlet pump station contains storm water management facilities including a screened storm water overflow facility within. This SWO diverts flows greater than Formula A to a storm water overflow pipe from the inlet pumping station to the Clashawley River (Irish Grid co-ordinates: 221639 E, 134755 N) via a dedicated discharge point. It is included in the current WWDL (EPA Reg No. D0164-01) as SW005,
- There is also a storm overflow facility from the inlet works which directs flows in excess of FFT to a storm water holding tank. The storm holding tank is fitted with an overflow screen and storm water overflow pipe also discharging to the Clashawley River via an independent discharge point (Irish Grid co-ordinates: 221652 E, 134738 N). It is included in the current WWDL (EPA Reg No. D0164-01) as SW006.

Both of these SWO's are compliant with DoECLG criteria set out in *'Procedures and Criteria in Relation to Storm Water Overflows'*.

1.3.1 Fethard Agglomeration Loading Assessment

Details of the current load estimation, and future load projections for the Fethard agglomeration are summarised in **Table 1-2** below.

Table 1-2: Current/Future PE for Fethard WWTP Agglomeration

Title	Unit	PE Load
Current Estimated Load Entering Plant (2023)	PE	3,951
Projected +10 Year Load Entering Plant (2033)	PE	4,133
Future +25 Year Load Entering Plant (2048)	PE	4,274

1.3.2 Project Need

Fethard WWTP is designed to provide secondary treatment for incoming flows associated with a design PE of 3,000PE. The WWTP is required to treat the waste water to achieve the WWDA limits as set out in **Table 1-1**.

As set out in **Section 1.3.**1 above, the current population associated with the Fethard agglomeration has been assessed at 3,951PE. This population is estimated to increase to 4,133PE and 4,274PE in the +10 Year and +25 Year design horizons respectively. Therefore, it is necessary to increase the treatment capacity of the WWTP to meet the current and increasing population within the agglomeration.

1.3.3 Design Horizon

It is proposed to upgrade the Fethard WWTP to provide sufficient treatment capacity to cater for the waste water loads associated with the projected +10 Year design horizon of 4,133PE, while including an allowance for an additional 10% to allow for sludge returns. On this basis, a wastewater treatment design load of **4,150PE** (rounded up from 4,133PE) has been adopted for the proposed Fethard WWTP upgrade works.

[2] Flow to Full Treatment, often referred to as FFT for short, is a measure of how much wastewater a treatment works must be able to treat at any time

[3] The maximum storm flow received at a treatment works is calculated by a formula known as Formula 'A'. This sets the minimum level at which the wastewater is sufficiently diluted by rainwater so as to avoid pollution of the receiving watercourse when overflowed from the sewer.

The mechanical and electrical (M&E) systems proposed at Fethard WWTP will be sufficient to cater for the +10 Year design loading of 4,150PE.

However, the civil works required to be provided with the upgrade works (i.e. inlet works structure, aeration tank, anoxic tank, clarifier tank and storm tank) will be sized in accordance with the requirements of the +25 Year design horizon 4,274PE and therefore a design load of 4,300PE (rounded up from 4,274PE) has been adopted for the civil works design. Should a further capacity upgrade be deemed necessary in the future, this will allow the WWTP to be upgraded again by simply replacing the M&E plant with new equipment capable of treating the increasing design loading associated with the +25 Year design horizon and this would be subject to a separate planning application. This would remove the requirement for intrusive excavations to be carried out in the future, should a further capacity upgrade be deemed necessary.

There are no works proposed to be carried out in or adjacent to the Clashawley River.

As the existing grounds of the WWTP are currently fully utilised, the required upgrade works are to be undertaken on greenfield lands adjacent to the western boundary of the existing WWTP.

1.4 Waste Assimilative Capacity (WAC) Assessment

1.4.1 Basis of Waste Assimilative Capacity Calculations

Treated effluent from Fethard WWTP is discharged to the River Clashawley, which is a freshwater river. The River Clashawley was assessed in terms of designation, quality, available dilution and assimilative capacity for the existing and projected loads and flows. The assimilative capacity assessment was based on the background concentrations of ammonia, orthophosphate, and BOD in the Clashawley River upstream of the primary discharge, which have been obtained from the chemistry monitoring station upstream of the Fethard WWTP (Ref RS16C010460).

Waste Assimilative Capacity (WAC) assessment and mass balance calculations were undertaken on the receiving waterbody to establish potential impact of the discharge effluent generated from the proposed upgraded Fethard WWTP on the Clashawley River. A summary of this assessment is provided in the following section.

The assessment was completed considering the following loads:

- +10 Year projected population load of 4,150PE, with an associated average effluent flow of **1,167.2m^3/day,**
- River flows: 0.101m^3/s (8,726.4m^3/d) for the 95%ile flow and 2.16m^3/sec (186,624 m^3/day) for the mean flow, as obtained from the hydrological analysis of the Clashawley River,
- The values of the actual sampling data obtained for the river background water quality upstream of the WWTP discharge location.

Mass balance calculations have been completed on the Clashawley River using both the 95%ile and the mean values of the river flows to study the impact of the effluent discharge from Fethard WWTP on the receiving water the WAC assessment utilises the Uisce Éireann WAC workbook as produced to accompany Uisce Eireann's Interim Technical Guidance for Water Impact Assessments (Freshwater) document. This spreadsheet utilises the mass-balance calculation to determine the required ELVs for each relevant parameter in the discharge effluent to ensure that the receiving waters continue to achieve "Good" status.

For the BOD, Ortho-Phosphate and Ammonia parameters, the resultant concentration downstream of the proposed discharge will be required to be within the required Environmental Quality Standard (EQS) for the receiving waters to continue to achieve "Good" status.

1.4.2 Mass Balance Calculations to Evaluate Required ELV's for the Treated Effluent Discharge, based on Existing River Background Concentration and 95%ile River Flows, +10 Year Future PE Load

To assess the potential impacts of the discharge from the upgraded Fethard WWTP at 95%ile flows in the Clashawley River, a WAC assessment based on the future operation of the proposed upgraded WWTP has been undertaken.

The flow data for the Clashawley River upstream of the WWTP site has been evaluated and from this assessment, the 95%ile flow in the Clashawley River upstream of the WWTP is 0.101m^3/s (8,726.4m^3/d). This flow is used for the assimilative capacity assessment.

The most recent recorded 3 years of river background concentrations May 2021 to March 2024 have been obtained from the Water Framework Directive sampling analysis. There is a Water Framework Directive (WFD) chemistry monitoring station approximately 70m upstream Fethard WWTP (Station Name *ambient u/s TPEFF2900D0164SW001*, Station Code *RS16C010460*).

The background concentrations of Ammonia, Orthophosphate and BOD in the Clashawley River obtained from this station over the period of time of the May 2021 to March 2024 period are summarised in **Table 1-3** below.

Table 1-3: Clashawley River Upstream Background Concentrations

	Ammonia as N (mg/l)	Orthophosphate as P (mg/l)	BOD (mg/l)
Mean	0.029	0.021	1.678
Minimum	0.008	0.005	0.500
Maximum	0.092	0.060	4.400
95%ile	0.084	0.052	4.230
Relevant 95%ile River EQS	**0.140**	**0.075**	**2.600**
Relevant Mean River EQS	**0.065**	**0.035**	**1.500**

From review of the data as included in **Table 1-3** above, it can be seen that the 95%ile values for Ammonia and Orthophosphate within the Clashawley River, both upstream and downstream from the primary discharge location, are both with required EQS values for achieving Good Status. However, the 95%ile values for BOD, both upstream and downstream from the primary discharge location, exceed the required EQS values for achieving Good Status.

It can also be seen that the mean values for Ammonia and Orthophosphate within the Clashawley River, both upstream and downstream from the primary discharge location, are both with required EQS values for achieving Good Status. However, the mean values for BOD, both upstream and downstream from the primary discharge location, exceed the required EQS values for achieving Good Status.

On this basis, the Waste Assimilative Capacity assessments will use the existing water quality values when assessing Ammonia and Orthophosphate but will use the Notionally Clean approach when assessing BOD, for both the 95%ile and mean conditions.

The +10 year design population of **4,150PE** has been used as the primary design period for the WAC assessment. The calculations are based the design future mean flow of 1,167.2m^3/day from Fethard WWTP and the Clashawley River 95%ile condition flow of 0.101m^3/s (8,726.4m^3/d).

Following the completion of the assessment, the calculations indicate that the ELV's required for the +10 Year Design Year population for Fethard WWTP under 95%ile conditions for Ammonia, BOD and Ortho-P are 0.9mg/l, 11.0mg/l and 0.4mg/l respectively are appropriate and compatible with achievement of the waterbody's WFD objectives. **Table 1-4** summarises the outputs from the mass balance calculations and assimilative capacity assessment for the Clashawley River at the Fethard WWTP Primary Discharge point under 95%ile conditions. This table provides a summary of the required treated effluent ELV values as calculated for the proposed PE for which this application related, to allow the Clashawley River to continue to meet "Good" status.

Table 1-4: Mass Balance Calculations to Evaluate Required ELV's for the Treated Effluent Discharge, based on Existing River Background Concentration and 95%ile River Flows, +10 Year Future PE Load

Parameter			Ammonia (NH_4)	BOD	Ortho P
2019 SW EQS Std for "Good" Status	**95%ile**	**mg/l**	**0.14**	**2.60**	**0.075**
Current Upstream River Concentration	**95%ile**	**mg/l**	0.084	4.230	0.052
Good Status EQS Exceeded?			No	Yes	No
Use Notionally Clean Condition?			No	Yes	No
Available WAC at Existing/ Notional Concentrations	**95%ile**	**mg/l**	0.14 - 0.084 = 0.056	2.600 - 0.44 = 2.16	0.075 - 0.052 = 0.023
WAC to Be Utilised	**%**		75	50	75
Predicted Downstream Concentration	**Mean**	**mg/l**	0.084 + (0.056 x 75%) = 0.126	0.44 + (2.16 x 50%) = 1.52	0.052 + (0.023 x 75%) = 0.069
Clashawley River Flow	**95%ile**	**m^3/sec**	0.101		
Required Effluent ELV Value - +10 Year	**WWTP Average Flow**	**m^3/sec**	0.014		
	Required ELV	**mg/l**	**0.9**	**11.0**	**0.4**

From the mass balance calculations, it has been determined that when the Clashawley River is assessed using a 95%ile river flow of 0.101m^3/s, it has sufficient assimilative capacity to accept the discharge for the proposed discharges from the Fethard agglomeration, while not impacting on the achievement of "Good" Status 95%ile EQSs (Good status the appropriate target status class with notionally clean approach used for BOD), as demonstrated by the predicted downstream concentrations in **Table 1-4** above.

1.4.3 Mass Balance Calculations to Evaluate Required ELV's for the Treated Effluent Discharge, based on Existing River Background Concentration and Mean River Flows, +10 Year Future PE Load

To assess the potential impacts of the discharge from the upgraded Fethard WWTP at mean flows in the Clashawley River, a WAC assessment based on the future operation of the proposed upgraded WWTP has been undertaken.

The flow data for the Clashawley River upstream of the WWTP site has been evaluated, and from this assessment, the mean flow in the Clashawley River upstream of the WWTP is 2.160 m^3/s (186,624 m^3/d). This flow is used for the assimilative capacity assessment.

Again, the background concentrations of ammonia, orthophosphate and BOD in the Clashawley River obtained from this station over the period of time of May 2021 to March 2024 are summarised in **Table 1-3** above.

The +10 year design population of **4,150PE** has been used as the primary design period for the WAC assessment. In addition, the +25 Year design population of 4,300PE has also been used within the calculations. Following the completion of the assessment using the Uisce Éireann workbook, at 95%ile flows, as summarised in **Section 1.4.2** above, the calculations indicate that the emission values required for the proposed discharge for Fethard WWTP for Ammonia, BOD and Orthophosphate as P are 0.9mg/l, 11mg/l and 0.4mg/l respectively. **Table 1-5** summarises the outputs from the mass balance calculations and assimilative capacity assessment for the Clashawley River at the Fethard WWTP Primary Discharge point under mean flow conditions, when these proposed ELV's are applied. This table provides a summary of the required treatment standards as calculated for the PE for which this application relates, to allow the Clashawley River to continue to meet "Good" status. The table also indicates the predicted Clashawley River

downstream concentrations under mean flow conditions. The calculations are based the design future mean flow of 1,167.2m^3/day from Fethard WWTP and the Clashawley River 2.220 m^3/s (190,080 m^3/d).

Table 1-5: Mass Balance Calculations to Evaluate Required ELV's for the Treated Effluent Discharge, based on Existing River Background Concentration and Mean River Flows, +10 Year Future PE Load

Parameter			Ammonia (NH_4)	BOD	Ortho P
2019 SW EQS Std for "Good" Status	**Mean**	**mg/l**	**0.065**	**1.50**	**0.035**
Current Upstream River Concentration	**Mean**	**mg/l**	0.029	1.678	0.021
Good Status EQS Exceeded?			No	Yes	No
Use Notionally Clean Condition?			No	Yes	No
Predicted Downstream Concentration	**Mean**	**mg/l**	0.034	0.33	0.023
Clashawley River Flow	**Mean**	**m^3/sec**	2.160		
Required Effluent ELV Value - +10 Year	**WWTP Average Flow**	**m^3/sec**	0.014		
	Required ELV	**mg/l**	**0.9**	**11.0**	**0.4**

From the above mass balance calculations, it has been determined that when the Clashawley River is assessed using a mean flow of 2.160m^3/s and with the proposed discharge ELVs for Ammonia, BOD and Orthophosphate as P set at 0.9mg/l, 11.0mg/l and 0.4mg/l respectively (as determined under the 95%ile assessment), it has sufficient assimilative capacity to accept the proposed discharges from the Fethard agglomeration, while not impacting on the achievement of "Good" Status Mean EQSs, as demonstrated by the predicted downstream concentrations in **Table 1-5** above.

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1.4.4 ELVs Required to Maintain Good Status

The objective of the WAC assessment is to determine the ELVs required for the treated effluent discharge for the parameters of BOD, Ammonia and Orthophosphate as P, to allow the receiving waters of the Clashawley River to continue to maintain "Good" status. On the basis of the WAC as undertaken and summarised in Sections 1.4.2 and 1.4.3 above, the effluent ELVs required to achieve target indicative water quality downstream for each water quality parameters (Ammonia, BOD and Orthophosphate as P) under projected future average effluent flow rates under 95%ile and mean flow conditions are as shown in **Table 1-6** below.

Table 1-6: ELVs Required for the Fethard WWTP to Maintain Good Status

ELVs Proposed for the Fethard WWTP to Maintain Good Status		
Ammonia (mg/l)	**BOD (mg/l)**	**Orthophosphate (mg/l)**
0.9	**11.0**	**0.4**

1.5 Process Treatment Review

The key objectives for the Fethard WWTP Upgrades project include:

- The provision of adequate capacity to facilitate the planned development and growth of the Fethard agglomeration.
- The provision of improvement works, to ensure compliance with UWWTD standards the current WWDA and future WWDA ELVs.

As described in **Section 1.3.2** above, the proposed upgrade works will be designed to cater for the hydraulic load of 4,150PE associated with the +10 Year design horizon PE load. However, the civil works required for the upgrade shall be designed for the +25 Year design horizon population of 4,300PE.

The existing inlet works shall be decommissioned and replaced with a new inlet works sized to cater for a hydraulic flow of 79l/s (equivalent flow of Formula A for the +25 Year design horizon).

The existing storm water tank has a capacity of approximately 202m^3 and has been designed to provide 2 hours stormwater retention at a flow of 4,500m^3/d (52l/s). It is proposed to retain the existing storm water tank and to construct an additional storm water tank to supplement the onsite storage capacity. The two tanks will provide a combined capacity sufficient for (Formula A – 3DWF) flows arising from the +25 Year design horizon (4,3000PE) for 2 hours, which will allow the WWTP to meet the requirements for SWO compliance.

The existing secondary treatment which compromises of anoxic tank and aeration tanks is capable of treating up to 2,800PE. Therefore, additional secondary treatment to treat the waste water generated from the 4,300PE (+25 Year design horizon) is required. To allow for this additional treatment capacity, the following process tank will be constructed:

- An above ground anoxic tank, designed to cater for 1,500PE plus an additional 10% for sludge returns. The proposed tank size is approximately 6.5m in diameter and 3.5m deep.
- An above ground aeration tank, designed to cater for 1,500PE plus an additional 10% for sludge returns. The proposed tank size is approximately 12m in diameter and 3.5m deep.
- Clarifier (secondary settling tank), designed to cater for 1,500PE plus an additional 10% for sludge returns. The proposed tank size is approximately 15m in diameter and 2.5m deep.

2 SCREENING FOR MANDATORY EIA AND CONSIDERATION OF THE NEED FOR EIA SCREENING

2.1 Screening for Mandatory EIA

The requirement for an EIA of a project was set by EU Directive (85/337/EEC) as amended by Directive 97/11/EC, 2003/35/EC and 2009/31/EC on the assessment of the effects of certain public and private projects on the environment (known as the 'EIA Directive'). The amendments were codified and replaced by 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment (and as amended in turn by Directive 2014/52/EU).

The requirements in relation to EIA Screening for waste water discharge licences are also outlined in the European Union (Waste Water Discharge) Regulations 2020 (S.I. No. 214/2020) which, collectively with the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007), the Waste Water Discharge (Authorisation) (Amendment) Regulations 2010 (S.I. No. 231 of 2010), the Waste Water Discharge (Authorisation) (Environmental Impact Assessment) Regulations 2016 (S.I. No. 652 of 2016) (other than Part II), may be cited as the European Union (Waste Water Discharge) Regulations 2007 to 2020.

The Waste Water Discharge (Authorisation) (Environmental Impact Assessment) Regulations 2016 (S.I. No. 652/2016) set out the requirements for the Agency (EPA) in relation to carrying out screening for EIA.

S.I. No. 214/2020 also sets out the requirements of the Agency (EPA), the Planning Authority and/or An Bord Pleanála in relation to EIA Screening for an application for, or a review of, a waste water discharge licence.

Regulation 18 (8) (a) states:

> Where an application in respect of a waste water discharge from a waste water treatment plant not specified in Regulation 17(i) is not accompanied by an EIAR, but is accompanied by the information specified in Schedule 7A to the Regulations of 2001 and paragraph (7), or where a water services authority submits to the Agency such information pursuant to a requirement issued under paragraph (6)(b), the Agency shall carry out an examination of, at the least, the nature, size or location of the development for the purposes of a screening determination.
>
> (b) The Agency shall make a screening determination and—
>
> (i) if such determination is that there is no real likelihood of significant effects on the environment arising from the proposed development, it shall determine that an EIA is not required, or
>
> (ii) if such determination is that there is a real likelihood of significant effects on the environment arising from the proposed development, it shall—
>
> (I) determine that the development would be likely to have such effects, and
>
> (II) by notice in writing served on the water services authority, require the authority to submit to the Agency, within such period, if any, as is specified in such notice, an EIAR and to comply with the requirements of Regulation 18A.

Regulation 18 (10)(a) of the European Union (Waste Water Discharge) Regulations 2007 to 2020 states:

> The Agency shall, in making its screening determination under paragraph (8)(b) whether there is no real likelihood of significant effects on the environment arising from a proposed development or there is a real likelihood of significant effects on the environment arising from a proposed development, have regard to—
>
> (i) the criteria set out in Schedule 7 to the Regulations of 2001,
>
> (ii) the information submitted pursuant to Schedule 7A to the Regulations of 2001,
>
> (iii) the further relevant information, if any, referred to in paragraph (7)(a) and the description, if any, referred to in paragraph (7)(b),

The purpose of EIA Screening as set out in the European Commission's Guidance on Screening (2017) is to determine whether or not an EIA is required for a particular project. Screening must implement the Directive's overall aim, which is to determine if a Project that is listed in Annex II, that does not meet or exceed a defined threshold, is likely to have significant effects on the environment and, therefore, be made subject to a requirement for Development Consent and an assessment, with regards to its effects on the environment. The EIA Directive was transposed into Irish legislation by the Planning and Development Act

2000, as amended, and the Planning and Development Regulations, 2001, as amended. Part 1 of Schedule 5 to the Planning and Development Regulations lists projects included in Annex I of the Directive which automatically require EIA. Part 2 of the same Schedule outlines thresholds for other projects which also require EIA, as per Annex II of the Directive.

This EIA Screening Report, in the first instance, considers whether the proposed development could be considered as a class of development listed under Schedule 5 Part 1 of the Planning and Development Regulations that requires the preparation of an EIA. The EIA Screening Report then considers whether the proposed development could be considered as a class of development listed in Schedule 5 Part 2 of the Planning and Development Regulations and if so, whether the development meets or exceeds a prescribed threshold or criteria, and therefore requires the preparation of an EIA.

2.1.1 Schedule 5 Part 1 Planning and Development Regulations

Schedule 5 Part 1 of the Planning and Development Regulations sets out classes and scales of development that require EIA. Under the provisions of Schedule 5 Part 1 the class of development that relates to the proposed development is included under Item 13:

> *"Waste water treatment plants with a capacity exceeding 150,000 population equivalent as defined in Article 2, point (6), of Directive 91/271/EEC[4]."*

The proposed development relates to the upgrade of an existing WWTP to cater for the +10 Year design horizon waste water loading of 4,150PE.

The proposed development is therefore not a class of development listed under Schedule 5 Part 1 that requires a mandatory EIA.

2.1.2 Schedule 5 Part 2 Planning and Development Regulations

Schedule 5 Part 2 of the Regulations identifies classes of development for which EIA must be carried out where either such development would equal or exceed, as the case may be, a quantity, area or other limit specified in that Part, or, where no quantity, area or other limit is specified in the Part in respect of the development concerned. Under the provisions of Schedule 5 Part 2 the closest class of development to the proposed development is included under Item 11 (c):

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

The proposed development relates to development at an existing WWTP and therefore, is characterised as a type of development described in Item 11(c). The proposed development relates to the upgrade of an existing WWTP to cater for the +10 Year design horizon waste water loading of 4,150PE and therefore falls below the threshold specified in Item 11(c). A mandatory EIA is therefore not required under Item 11(c).

The works were also assessed against Infrastructure Projects Class 10 (b)(iv):

> "*urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built up area and 20 hectares elsewhere*"

The site of the existing WWTP is approximately 0.39ha and the extension is 0.56ha resulting in a total site area of 0.95ha. Therefore, the works fall below the threshold specified in Item 10 (b)(iv). A mandatory EIA is therefore not required under Item 10 (b)(iv).

Class 13 Changes, extensions, development and testing:

a) Any change or extension of development already authorised, executed or in the process and 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% or*
- *An amount equal to 50% of the appropriate threshold,*

whichever is greater.

[4] OJ No. L 135, 30.5.1991, p.40. Directive as last amended by the 1994 Act of Accession

b) *Projects in Part 1 undertaken exclusively or mainly for the development and testing of new methods or products and not used for more than 2 years*

c) *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 has not previously been authorised, and where such demolition would be likely to have significant effects on the environment, having regards to the Criteria set out under Schedule 7.*

The proposed works would not comprise any change or extension to a development being of a class listed in Part 1 to 12 of Part 2. No demolition works are proposed as part of this project. Therefore, the works do not fall within this Class of development. There will be decommission of the existing inlet works which is to be replaced with a new one.

There are no other classes of development listed under Schedule 5 Part 2 would apply to the current proposed development.

Having regard to the foregoing, while the proposed development can be considered to fall within a class of development listed in Schedule 5 Part 2 under Item 11(c): it does not fall within the relevant specified threshold. Therefore, there is no requirement for mandatory EIA in this instance.

2.1.3 Conclusion on Requirement for Mandatory EIA

As described in **Section 2.1.1** and **Section 2.1.2** above, the proposed development is not a type of development listed in Schedule 5 (Development for the Purpose of Part 10) of the Planning and Development Regulations, 2001 (as amended), that requires mandatory EIA.

2.2 Potential for Likely Significant Effects Sub Threshold

In line with Regulation 18 of the European Union (Waste Water Discharge) Regulations, 2020 and pursuant to Item 15 of Part 2, Schedule 5 of the Planning and Development Regulations, 2001 (as amended), it is necessary to consider whether the 'project' is likely to have significant effects on the environment, such that an EIAR is required. Item 15 describes circumstances which relate to the assessment of projects that are deemed not to exceed a threshold, but may give rise to significant effects and is considered as follows:

> ***Item 15:*** *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.*

Item 15 has regard to any project listed in Part 2 where the proposed development in itself does not exceed a quantity, area or other limit, specified (where described), but would be likely to have significant effects on the environment on consideration of the criteria described under Schedule 7. This provides for sub-threshold EIA Screening, under which consideration of projects that do not exceed a prescribed threshold may give rise to significant effects on the environment.

As discussed above, the class of development for which the proposed development may potentially require a sub-threshold development EIA is Item 11(c) of Schedule 5 Part 2 in relation to development relating to a WWTP.

As such, the purpose of this EIA Screening Report is to assist the competent authority in determining whether the 'project' is likely to have significant effects on the environment. The methodology for undertaking the screening is described below in **Section 3** and the evaluation of the potential for significant effects is described in **Section 4**.

3 METHODOLOGY FOR EIA SCREENING

3.1 Legislative Basis for Screening Approach

A screening determination is required to be undertaken by the competent authority for any sub-threshold developments listed in Schedule 5 Part 2 where no EIAR has been submitted, or where a determination of such has been requested, unless, on preliminary examination it can be concluded that there is no real likelihood of significant effects on the environment.

The Department of Housing, Local Government and Heritage's (formerly the Department of Housing, Planning and Local Government) guidance document *Guidelines for Planning Authorities and An Bord Pleanála on Carrying out EIA (August 2018)* states that:

> *"For all sub-threshold developments listed in Schedule 5 Part 2, where no EIAR is submitted or EIA determination requested, a screening determination is required to be undertaken by the competent authority unless, on preliminary examination it can be concluded that there is no real likelihood of significant effects on the environment. This is initiated by the competent authority following the receipt of a planning application or appeal. A preliminary examination is undertaken, based on professional expertise and experience, and having regard to the 'Source – Pathway – Target' model, where appropriate. The examination should have regard to the criteria set out in Schedule 7 to the 2001 Regulations.* "

As such, the approach to the screening undertaken in **Section 4** of this report and to the detail presented and considered in the screening are grounded on the relevant legislative basis for this project which comprise the Planning and Development Act 2000 as amended and the Regulations made thereunder as well as the European Union (Waste Water Discharge) Regulations 2007 to 2020.

The European Union (Waste Water Discharge) Regulations 2020 (S.I. No. 214/2020) set out the requirements of the Agency (EPA), the Planning Authority and/or An Bord Pleanála in relation to EIA Screening for an application for, or a review of, a waste water discharge licence. The assessment provided in this Scoping Report is in line with the European Union (Waste Water Discharge) Regulations 2007 to 2020.

S.I. 214/2020 amends Regulation 16 of the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007), by the insertion of the following text regarding EIA. Paragraph (3A) states:

> *"Where an application for a licence or the review of a licence is made to the Agency in respect of a waste water discharge that involves development or proposed development for which a grant of permission is required the applicant shall furnish to the Agency—…*
>
> *(b) a copy of a grant of permission comprising or for the purposes of the waste water discharge to which the application relates that was issued by the planning authority concerned or An Bord Pleanála and in that case shall also furnish to the Agency either—*
>
> *(i) where the planning authority or An Bord Pleanála accepted or required the submission of an EIAR in relation to the application for permission, a copy of the EIAR, or*
>
> *(ii) confirmation in writing from the planning authority or An Bord Pleanála that an environmental impact assessment was not required by or under the Act of 2000.".*

In line with the above, paragraph h) of the grant of planning permission as issued by Tipperary County Council states:

> *"Having regard to the content of the submitted Screening Report, the nature and scale of the proposed development and the nature and scale of the receiving environment, the Planning Authority is satisfied that an environmental impact assessment is not required."*

S.I. 214/2020 also amends Regulation 18 of the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007), in relation to provision of information to the Agency as specified in Schedule 7A to the Planning and Development Regulations of 2001.

The information set out in Schedule 7A is equivalent to the information specified in Annex II.A of the EIA Directive.

The Criteria as set out in Schedule 7 are grouped under three headings as follows which are comparable with the criteria set out in Annex III of the EIA Directive:

1. Characteristics of the proposed development;
2. Location of the proposed development; and
3. Characteristics of potential impacts.

The criteria under each of these headings as provided for in the Act and Annex III of the EIA Directive are set out in **Table 3-1** below. The characteristics and location of the proposed development are described in **Section 4.1** and **4.2** respectively. The characteristics of the potential impacts is provided under **Section 4.3.**

Table 3-1: Criteria for Determining Whether Development Listed in Part 2 of Schedule 5 should be subject to an Environmental Impact Assessment

Characteristics of the Proposed Development
The characteristics of projects must be considered, with particular regard to: (a) the size and design of the whole proposed development; (b) cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment; (c) the nature of any associated demolition works; (d) the use of natural resources, in particular land, soil, water and biodiversity; (e) the production of waste; (f) pollution and nuisances; (g) the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge; (h) the risks to human health (for example due to water contamination or air pollution).
Location of the Proposed Development
The environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to: (a) the existing and approved land use, (b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground, (c) the absorption capacity of the natural environment, paying particular attention to the following areas: (i) wetlands, riparian areas, river mouths (ii) coastal zones and the marine environment, (iii) mountain and forest areas, (iv) nature reserves and parks, (v) areas classified or protected under national legislation, Natura 2000 areas designated by Member States pursuant to Directives 92/43/EEC and Directive 2009/147/EC, (vi) areas in which there has been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure, (vii) densely populated areas, (viii) landscapes and sites of historical, cultural or archaeological significance.
Type and Characteristics of Potential Impacts
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), taking into account:

Characteristics of the Proposed Development
(a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected),
(b) the nature of the impact,
(c) the transboundary nature of the impact,
(d) the intensity and complexity of the impact,
(e) the probability of the impact,
(f) the expected onset, duration, frequency and reversibility of the impact,
(g) the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and,
(h) the possibility of effectively reducing the impact

Where an application in respect of a waste water discharge from a waste water treatment plant is not accompanied by an EIAR, Regulation 18 (5) (b) of the Waste Water Discharge (Authorisation) Regulations 2007, as amended, provides for the Agency to require the authority to submit the information specified in Schedule 7A to the 2001 Planning and Development Regulations (as amended).

In the interest of comprehensively examining the proposed development, this EIA Screening Report considers the proposed development against the criteria set in Schedule 7A of the Planning and Development Regulations, 2001 as amended and Annex IIA of the EIA Directive:

1. *"A description of the proposed development, including in particular –*
   a. *a description of the physical characteristics of the whole proposed development and, where relevant, of demolition works, and*
   b. *a description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.*
2. *A description of the aspects of the environment likely to be significantly affected by the proposed development.*
3. *A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from -*
   a. *the expected residues and emissions and the production of waste, where relevant, and*
   b. *the use of natural resources, in particular soil, land, water and biodiversity."*

3.2 Relevant Guidance Documents

3.2.1 Waste Water Discharge Authorisation, Application Guidance Document (EPA, July 2021)

This EPA guidance provides comprehensive instructions for the application and management of waste water discharge authorisations. The document provides guidance on EIA Screening and the information to be contained in EIA Screenings in line with Schedule 7A to the Planning and Development Regulations, of 2001 and Regulation 18 (10) (a) of the European (Waste Water Discharge) Regulations 2007 to 2020.

The guidance advises that where an EIAR does not accompany an application, an EIA screening may be provided. The EIA Screening report comprises of the following:

- Information specified in Schedule 7A to the Planning & Development Regulations of 2001,
- Any further relevant information on the characteristics of the proposed development and its likely significant effects on the environment, including, where relevant, information on how the available results of other relevant assessments of the effects on the environment carried out pursuant to European Union legislation other than the Environmental Impact Assessment Directive have been taken into account,

- May be accompanied by a description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment of the development,
- Aan assessment and conclusion of the likelihood of significant effects on the environment arising from a proposed development having regard to the criteria set out in Regulation 18 (10)(a) of the European Union (Waste Water Discharge) Regulations 2007 to 2020.

3.2.2 Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018)

In August 2018, the Minister for Housing, Planning and Local Government (now Department of Housing, Local Government and Heritage) published *Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment*. These guidelines address key areas introduced by Directive 2014/52/EU including procedures for screening and the introduction of new information requirements to be provided by the developer (Annex IIA) (Schedule 7A of the Planning and Development Regulations, 2001 (as amended)) and revised selection criteria to be used by the competent authority in making a determination (Annex III of Directive) (Schedule 7 of the Planning and Development Regulations, 2001 (as amended).

3.2.3 Guidelines on the Information to be contained in Environmental Impact Statement – (EPA, 2022)

In May 2022, the EPA published *Guidelines on the Information to be Contained in Environmental Impact Statements*.

The stated primary objective of the guidelines is to improve "*the quality of EIARs with a view to facilitating compliance (with the Directive). By doing so they contribute to a high level of protection for the environment through better informed decision-making processes*". According to the guidelines the start of the EIA process involves making a decision about whether an EIAR needs to be prepared or not. The guidelines note that the decision-making process begins by examining the regulations and if this does not provide a clear answer then the nature and extent of the project, the site and the types of potential effects are examined.

3.2.4 Other Guidance

This screening assessment was also undertaken with regard to the following guidance including:

- European Commission (June 2001), Guidance on EIA Screening;
- EPA (2003), Advice Notes on Current Practice in the preparation of Environmental Impact Statements;
- Department of Environment, Heritage and Local Government (2003), EIA Guidance for Consent Authorities regarding Sub-threshold Development; and
- EPA (September 2015), Advice Notes for Preparing Environmental Impact Statements, Draft.

3.3 Screening Methodology

Based on the legislative basis and guidance documentation set out in **Sections 3.1** and **3.2** the proposed approach for undertaking this screening assessment is to present information on the proposed development, the location of the development and the type and characteristics of potential environmental impacts of the development with reference to the three headings of Annex III. In presenting this information, we have also had regard to the closely aligned assessment criteria of Annex II A of the Directive.

The Characteristics of the Development identifies the key characteristics of the proposal with reference to its nature, scale and design, its construction requirements and approach, decommissioning and operational aspects of the development, including use of resources, production of wastes and emissions and risks of accidents. We also identify as relevant potential for cumulation of the proposed development with other existing and / or approved projects.

The Location of the Project will identify any environmental sensitivities and characteristics of importance within the site and surrounding area potentially affected by the project.

Having set out the characteristics of the development (potential impact sources) and identified sensitivities within the development site and surrounds (potential impact receptors) allows potential impacts on the environment to be identified. The main potential impacts are listed and described with reference to the impact criteria listed in Annex III of the directive. Categorising the potential impacts with regard to these criteria allows for the identification of potential impacts which are likely to be significant impacts on the environment.

Where likely significant impacts are identified, the EIA screening process will determine that an EIA of the project is required. Where no likely significant impacts on the environment are identified through this screening process, a determination that an EIA is not required will be made.

In line with the EPA guidance and relevant legislation, the EIA Screening report comprises of the following:

- Information specified in Schedule 7A to the Planning & Development Regulations of 2001,
- Any further relevant information on the characteristics of the proposed development and its likely significant effects on the environment, including, where relevant, information on how the available results of other relevant assessments of the effects on the environment carried out pursuant to European Union legislation other than the Environmental Impact Assessment Directive have been taken into account,
- A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment of the development,
- Aan assessment and conclusion of the likelihood of significant effects on the environment arising from a proposed development having regard to the criteria set out in Regulation 18 (10)(a) of the European Union (Waste Water Discharge) Regulations 2007 to 2020.

3.4 Information to Inform the EIA Screening

Baseline information to inform the screening exercise is drawn primarily from desk studies and supplemented by site visits. The desk study component of the EIA Screening has drawn information from the following sources:

- Department of Housing, Local Government and Heritage EIA Portal;
- Environmental Protection Agency (EPA) online interactive mapping tools (https://gis.epa.ie/EPAMaps) and (https://www.catchments.ie/maps/) for water quality data including surface and ground water quality status, and river catchment boundaries;
- Geohive online Environmental Sensitivity Mapping tool (https://airomaps.geohive.ie/ESM);
- Geological Survey Ireland (GSI) Public Data Viewer (https://www.gsi.ie/en-ie/Pages/default.aspx)
- Health Safety Authority (HSA) – List of Notified Seveso Establishments;
- Tipperary County Council – planning search function and general planning homepage (https://www.tipperarycoco.ie/planning);
- Tipperary County Development Plan 2022-2028;
- Mapping of European Site boundaries and Conservation Objectives, available online from the NPWS (https://www.npws.ie/protected-sites);
- National Inventory of Architectural Heritage (NIAH); and
- National Monument Service – Historic Environment Viewer (Department of Housing, Local Government and Heritage) (https://www.archaeology.ie/).

An EIA site survey / site visit was undertaken by a Project Planner of RPS, in July 2020 in order to inform the environmental assessment of the proposed development. An ecological site walkover and invasive species site survey was undertaken by a Senior Ecologist of RPS and or Mayfly Ecology in October 2022, in order to inform the ecological assessment of the proposed development.

3.4.1 Supporting Assessment

3.4.1.1 AA Screening / AA ('Stage 2')

The screening assessment and Stage 2 Appropriate Assessment are used to inform the relevant consideration criteria of this EIA Screening Report.

A Report to Inform Appropriate Assessment Screening and an NIS (Mayfly Ecology for RPS, 2023) have been prepared to determine whether, in view of best scientific knowledge and applying the precautionary principle, the proposed development, either individually or in combination with other plans or projects, is likely to have a significant effect on any European site(s).

The Report to inform Appropriate Assessment Screening (Mayfly Ecology for RPS, 2023) concluded that in the absence of mitigation there is potential for Likely Significant Effects upon European Sites and, therefore, a Natura Impact Statement (NIS) was prepared.

The NIS concluded that with mitigation in place the proposed development will not adversely affect the integrity of European Sites.

3.4.1.2 Archaeological Screening

An Archaeological Screening Report (RPS, 2023) has been prepared to examine the known archaeology within the vicinity of the proposed development site. The archaeological assessment has informed the considerations for potential impacts on archaeology as part of this EIA Screening.

3.4.1.3 Flood Risk Assessment

A Stage 1 Flood Risk Assessment (FRA) was prepared by RPS for the proposed development in order to demonstrate compliance with the requirements of The Planning System and *Flood Risk Management Guidelines for Planning Authorities* (2009).

The conclusions of the Stage 1 FRA are summarised in **Table 3-2** below.

Table 3-2: Flood Risk Assessment for the Fethard WWTP Site

Potential Source of Flooding	Risk to the ite
Fluvial Flooding	High
Coastal Flooding	Low
Pluvial Flooding	Low
Groundwater Flooding	Low
Existing Infrastructure	Low

As a high risk of fluvial flooding was identified, a Stage 2 FRA was then prepared.

The Stage 1 and Stage 2 FRA Reports inform the relevant considerations for flood risk effects as part of the EIA Screening.

3.4.1.4 Scheme Drawings

The nature and extent of the proposed development is presented on drawings prepared by RPS which have informed the screening exercise.

4 EIA SCREENING EVALUATION

This section provides information on the proposed development for EIA Screening purposes, provides information to address the requirements of Schedule 7A and considers the criteria in Schedule 7 of the EIA Regulations. The information contained within this section provides for an assessment on whether there are any likely significant impacts arising from the proposed development which would trigger the requirement for an EIA. The assessment has considered the proposed individually and cumulatively with other projects.

As outlined above, the Criteria as set out in Schedule 7 of the Planning and Development Regulations 2001 as amended for determining whether a project should be subject to EIA, are grouped under three headings. We address these headings as follows:

1. Characteristics of the proposed development (**Section 4.1**);
2. Location of the proposed development (**Section 4.2**); and
3. Characteristics of potential impacts (**Section 4.3**).

4.1 Characteristics of the Proposed Development

The EPA *Guidelines on the Information to be contained in Environmental Impact Assessment Reports* (2022) describe the information to be considered under this heading as:

> *'the site location, the size, design and appearance of the proposed project, the cumulation with other proposed projects, the use of natural resources, the production of waste, emissions and nuisances and a description of the risk of accidents – having regard to substances or technologies used'*.

4.1.1 Scale, Size and Design of the Whole of the Proposed Development

The scope of the works required within the project is summarised as follows:

- Excavation of approximately 750m^3 of existing top and subsoil from a 1,250m^2 section of greenfield land to the west of the existing WWTP to form a floodwater compensatory storage area. The excavated topsoil to be re-used in the area afterwards to allow for a new landscaped area.
- Raising of the levels of approximately 2,740m^2 section of lands to the west of the existing WWTP lands by an average of 1.0m, to raise the WWTP extension site above the predicted 0.1% AEP flood level. Fill material to consist of imported structural fill (Clause 804 or similar) and the suitable excavated subsoil material from the adjacent excavations.
- Replacement of the existing inlet pumps in the existing forward feed inlet pumping station with new larger pumps sized for the projected +10-year design inflows to the existing inlet pumping station.
- Provision of a new inlet screen works structure, sized for the +25 Year design load, with the Mechanical and Electrical (M&E) equipment provided for the +10 Year design horizon loading. The M&E component of the inlet works will consist of 6mm fine screens, a 19mm bypass screen, a grit removal unit, a grit classifier and screening handling unit. The new inlet works will occupy a plan area of approximately 17m x 6m.
- Decommissioning of the existing inlet works.
- Provision of a new flow splitting chamber downstream of the new inlet works to limit the flow to 3 Dry Weather Flow (DWF) to the process tanks. The chamber will also contain a stormwater overflow weir chamber to divert excess stormwater to a new storm storage tank. The size of the weir chamber shall be approximately 4.0m long x 2.0m wide x 1.2m deep.
- Construction of a new above ground anoxic tank, sized for the +25 Year design horizon, with the M&E equipment provided for the +10 Year design horizon loading. The size of the tank shall be approximately 6.5m diameter x 3.5m high.
- Construction of a new above ground aeration tank, sized for the +25 Year design horizon, with the M&E equipment provided for the +10 Year design horizon loading. The size of the tank shall be approximately 12m diameter x 3.5m high.
- Construction of a new above ground clarifier (final settling tank), sized for the +25 Year design horizon, with the M&E equipment provided for the +10 Year design horizon loading. The size of the tank shall be approximately 15m diameter x 2.5m high.

- Construction of a new above ground storm storage tank, sized for the +25 Year design horizon, with the M&E equipment provided for the +10 Year design horizon loading. The size of the tank shall be approximately 7.5m diameter x 3.5m high.
- Provision of a ferric dosing system for Ortho-Phosphate removal and ancillary storage equipment. The dosing system will consist of 2 no. above-ground storage tanks and the associated dosing equipment. The tanks will be approximately 2.0m in diameter and approximately 3.4m in height.
- Construction of a new Motor Control Centre (MCC) kiosk, to house the new control equipment for the upgraded plant. The size of the kiosk shall be approximately 12.5m x 5m x 2.2m high.
- Construction of a new ESB MV substation and customer switch room building. The size of the building shall be approximately 9.9m x 4.5m x 3.1m high.
- The widening of the existing vehicular entrance to the facility from the access road to allow for improved vehicular access for delivery and removal vehicles complete with new entrance gate.
- Provision of new concrete roadway internally within the site to facilitate access to the upgraded plant area.
- New fencing along the boundary of the extension to the WWTP consisting of palisade fencing and timber stockproof fencing.
- Site landscaping including tree planting along the boundaries.
- Internal surface water drainage network to be connected to the treatment system,
- Lighting poles (7no.) will be provided adjacent to the new works areas within the proposed extension site to facilitate WWTP operations.

There are no works proposed to be carried out in or adjacent to the Clashawley River.

As the existing grounds of the WWTP are currently fully utilised, the required upgrade works are to be undertaken on greenfield lands adjacent to the western boundary of the existing WWTP.

4.2 Habitat Removal and Alteration

The existing Fethard WWTP comprises of infrastructure associated with the plant, buildings, tarmacked road surface and amenity grassland. The exiting WWTP boundary is bordered with a narrow mature broadleaved treeline and palisade fencing. The Clashawley River flows along eastern boundary of the WWTP.

To facilitate the proposed works associated with the upgrades to the existing Fethard WWTP agglomeration the site boundary will need to be extended to the west to incorporate a section of the adjacent agricultural land parcel. This will necessitate the removal of a section of a treeline along the western boundary of the existing WWTP (approx. 60m consisting of 62no. trees). There will also be a permanent removal of approx. 1,854.2m^2 of improved agricultural grassland to facilitate the new infrastructure, paths and road. The small ornamental cherry laurel hedge and 380m^2 of amenity grass within the grounds of the existing WWTP will also be removed.

The main entrance to the site off the R706 will not need to be amended to facilitate works and construction traffic will access the site via the current entrance which is accessed via a laneway off the R706.

It is not anticipated that instream or bankside works will be necessary to facilitate the proposed WWTP upgrade works.

The habitats to be removed do not correspond to any Annex I habitat or supporting habitat for Annex II species. The treeline does have the potential to support nesting passerine birds during the breeding season but is not considered to support bat roosting potential. Habitats to be removed are considered to be of Local (low) importance.

The removal/trimming of any vegetation during the construction/ operational stage will be undertaken outside the bird breeding and nesting bird season (1st March to 31st August) as per the Wildlife Act (1976, as amended) or under the supervision of a suitably qualified ecologist.

4.3 Site Landscaping

Landscaping has been developed following advice within the *All Ireland Pollinator Plan Advice to Councils* as well as in accordance with relevant UÉ guidance such as *Landscape Treatment Guidelines* (Irish Water, 2018), *Biodiversity Guidance for Irish Water Developments* (Irish Water, 2021) and *Biodiversity Action Plan* (Irish Water, 2021). Following this, no net loss of habitat is predicted and using UÉ's biodiversity calculator there will be a net gain. **Table 4-1** below for summary table of biodiversity measures as per '*Biodiversity Guidance for Irish Water Developments*' and **Table 4-2** for biodiversity net gain summary.

Table 4-1: Summary of Biodiversity Measures for the Proposed Development

Biodiversity Measure	Benefit Derived
Design Measures	Site selection for the expansion of the WWTP is limited to an area of open improved grassland area to the west. This location was deemed the most suitable as it is set back the furthest from the Clashawley River. To facilitate the expansion of the Fethard WWTP 60m of treeline will be removed to join the new and existing WWTP together. These trees are deemed not to provide bat roosting potential but do have nesting bird potential. An ash tree with potential bat roosting potential is identified in close proximity to the development and as part of the landscaping plan it has been highlighted and will not be removed.
Habitat Metric	The area for expansion consists of improved agricultural grassland. Some of this will be permanently lost. In addition, 60m of treeline will be lost. The remaining area was identified as suitable for reseeding with native grass of local provenance which includes yellow rattle to help create a more species rich grassland. This combined with a new native hedgerow, treelines, bolstering of existing hedgerows, planting of individual trees has resulted in the metric indicating biodiversity net gain. Additional gains are also made through the installation of bat boxes and bulb planting for pollinators.
Habitat Connectivity	Hedgerows and treelines connect into existing linear corridors within the landscape. Existing vegetation along the southern boundary will be bolstered with species rich hedgerow to improve connectivity. Trees and treelines within the site also provide new ecological stepping stones and corridors.
Strategic Relevance	Grassland will be managed as a meadow in accordance with the All Ireland Pollinator Plan and pollinator friendly native tree/shrub planting also aligns with the plan.
Habitat Creation	Bat boxes will be erected on the existing building in the northeast corner of the site.
Carbon Offset	Tree planting and less intensive grass management delivers a benefit in terms of carbon sequestration

Table 4-2: Biodiversity Net Gain Calculation using Uisce Éireann's Calculator

Habitat	Score	Area/Length	Total (Biodiversity Unit)
Pre-Development			
Non-linear			
Improved Agricultural Grassland	1	5,589.8m^2	5,589.8
Amenity Grass	1	1,102.3m^2	1,102.3
Linear			
Treeline	4	60m	240
			6,932.1
Post Development			
Non-linear			
Infrastructure	0	1,854.2m^2	0

Habitat	Score	Area/Length	Total (Biodiversity Unit)
Neutral Grassland	4	3,735.6 m^2	14,942.4
Amenity Grass	1	804.3m^2	804.3
Linear			
Native Treeline	6	172m	1,032
Native Hedgerow	6	137m	822
			17,600.7
Additional Measures			
Bulb Planting for Pollinators			
Individual Native Tree Planting			
Bat Boxes			
Net Gain Achieved?			Yes

The proposed Landscaping Plan is provided in **Appendix B.**

The proposed landscaping utilises native trees only. Non-native or invasive tree species shall not be planted. A range of species have been selected to provide food resources as well as habitats. For example, early flowering blackthorn and hawthorns provide a source of nectar for early flying pollinators while also producing a crop of berries in late summer/autumn for birds and small mammals. Landscaping has also been designed to form a new wildlife corridor while also connecting and bolstering existing corridors. Site suitability for each tree species has also been considered.

The 60m of treeline to be removed shall be replaced with approximately 137m of hedgerow and 172m of treeline. Hedgerows will consist of a mix of native species including hawthorn, blackthorn, elder and hazel (*Crataegus monogyna, Prunus spinosa, Sambucus nigra, Corylus avellana*). This hedge shall be planted using a combination of whips and advanced nursery stock (10-12cm girth). This hedgerow shall be planted along the western boundary of the extended WWTP. This same species mix shall also be planted along the laneway at the southern boundary to bolster the existing vegetation and create a linear hedgerow. Along the northern boundary it is proposed to plant a line of tree species more tolerant of wet soil conditions such as alders (*Alnus glutinosa*) and downy birch (*Betula pubescens*) as this area will be prone to flooding.

Within the extended WWTP boundary seven trees adapted for wet ground shall be planted within the area prone to flooding, willow (*Salix caprea*) and alder (*Alnus glutinosa*). Along the top of the new embankment a treeline shall be planted forming a new corridor within the extended WWTP and connecting with new and existing corridors. This shall consist of rowans (*Sorbus acuparia*), wild cherry (*Prunus avium*) and oak (*Quercus* sp.) planted with sufficient spacing in-between to allow unimpeded growth of the trees. Bulbs shall be planted around these trees. The bulbs species selected will follow those recommended within the *All Ireland Pollinator Plan for Councils* as being important for pollinators; common snowdrop (*Galanthus nivalis*), crocus (*Crocus* sp. spring and winter flowering) and grape hyacinth (*Muscari armeniacum*).

The gap in the treeline along the northern boundary of the existing WWTP shall be bolstered with the native mix of trees.

Improved grassland (1,854.2m^2) shall be permanently removed to facilitate the proposed new infrastructure in the new works area, west of the existing WWTP. In addition, 380m^2 of amenity grass within the grounds of the existing WWTP will be permanently removed, while 3,735.6m^2 of improved grassland in the new works area to the west of the existing WWTP will be temporarily disturbed but reseeded. Only native grass seeding of local provenance will be used. These shall not include ryegrass (Lolium spp.) which leads to low diversity, ecologically sterile, lawns. Fine leaved grasses (Festuca spp, Agrostis spp) combined with clovers (red and white) shall be used as a basic standard. This will also include the addition of yellow rattle (Rhinanthus minor). During operation a low mow regime shall be employed as per UÉ's landscape treatment guidelines (Irish Water 2018) and biodiversity guidance for UÉ developments (Irish Water 2021). Both these guidance documents follow the advice given in the All Ireland Pollinator Plan advice for councils which defines a low mow regime as 5 no. cuts per year and material lifted, mowing should not start until 15th April and then cut on a 6-weekly rotation.

This coupled with the additional of yellow rattle in the reseeded area will allow the development of a more species rich grassland of a higher biodiversity value compared to the exiting ryegrass dominated grassland. Mixtures are available with grass and flowers that support the All Ireland Pollinator plan and work well with low mow regimes. For example, Connecting Natures'- low growing meadow mix contains with 80% grass seed and 20% wildflower seed which is suitable for any soil type. A large ash tree is present along the southern boundary of the proposed extended WWTP. This tree was identified as having potential to support bat roosts. The tree shall not be removed and in addition bat boxes shall be installed on the existing WWTP building to support bats within the area.

During operation a low mow regime shall be employed as per UÉ's standard practice in new developments. This coupled with the addition of yellow rattle in reseeded areas will allow the development of a more species rich grassland of a higher biodiversity value compared to the exiting ryegrass dominated grassland.

4.3.1.1 Surface Water Management

The proposed development is situated within the River Suir catchment (Hydrometric Area 16). The Clashawley River is located less than 10m to the east of the WWTP and is separated by a narrow strip of broadleaf trees. The existing WWTP sits at slightly higher elevation to the surrounding agricultural grassland and the land slopes toward the Clashawley River.

No instream works or bank interference are required, as all works are confined to within the extended WWTP boundary.

Surface water runoff (including runoff from construction works, infrastructure, road surfaces and other impermeable areas within the area of the proposed development) will be managed in accordance with an appropriate surface water management system and the further mitigation stipulated which was considered required in the NIS (Mayfly Ecology for RPS, 2023).

4.3.2 Construction

It is proposed to import material to the site to raise the level of the extended WWTP lands by an average 1.0m in height. On completion of the ground raising exercise, it is proposed to construct a new inlet works, anoxic tank, aeration tank and clarifier tank, complete with splitter chambers onsite as part of the upgrade works. While these tanks will typically be above ground, excavation into virgin ground will be required to be undertaken to facilitate foundations for the new structures. These will require excavations of typically 1m deep below original ground level respectively. The excavations for these tanks are most likely to encounter the existing water table.

The groundwater encountered during the excavation of the proposed new underground structures / new surface water drainage network will be pumped clear from the excavations. Any pumped water will be trapped and treated prior to release to the Clashawley River (and ultimately the River Suir). This pumped water could be directed to a grassed area to allow filtration, however, there are no agreements in place regarding the use of any adjacent suitable grassed areas available on site to allow for filtration of pumped water. Pumps will be used to extract any groundwater from excavations. Using submersible pumps can generate more sediment through water turbulence. To avoid this, a corner of the excavation shall be used as a sump and care taken to avoid disturbing that corner. Groundwater will be directed to collect in this sump. Simple additional measures will be taken to reduce unnecessary sediment generation, such as placing the pump in a perforated oil drum, a short length of widebore perforated pipe or concrete manhole rings containing granular fill.

Uncontrolled water leaks from pumps and hoses can create additional surface water problems. To avoid damage, discharge hoses will be routed out of the way of vehicle movements. Wherever hoses pass over a solid edge (the top of an excavation or a concrete sump, for example), care will be taken to ensure no damage can occur. Regular daily checks shall be carried out on the pump, hoses and couplings for leaks and kinks, with any problems being fixed immediately. Electric pumps shall be used wherever possible to reduce the use of fuels on site.

The hose for pumping water from the excavations will be connected to a series of proprietary silt and sediment filtration units, which will be subject to Detailed Design by the Contractor to suit the ground conditions encountered during the works. Site investigation works shall provide the Contractor with information on the ground conditions and soil type, while water sampling shall be undertaken to inform the proprietary filtration unit supplier. This site-specific information shall be used by the Contractor to allow for completing the detailed design. Pumped water will pass through the proprietary units via a lamella plate, which separates the solids contained in the water, allowing them to settle into a discharge chamber. From

this chamber, the settled solids can be easily emptied at ground level and disposed off-site to an appropriate waste facility.

Once the solids have settled out from the water, a pump fitted to the outlet of the proprietary units will discharge the clear water to Clashawley River via a hosed connection via the existing surface water drainage system located within the WWTP. The network discharges the water to the Clashawley River.

Accordingly, these proprietary units will be designed to provide for the effective separation of suspended solids and silt from the water pumped from the excavations, prior to its discharge to the Clashawley River (and ultimately the River Suir). No water generated during excavations will be discharged directly to any waterbody without prior treatment.

The tanks required to be provided on site will be of precast concrete construction. They will be surrounded at ground level with a new poured concrete footway to provide access. However, these will be poured on a plastic sheeting membrane and up against edge shutter units, which will in effect provide a seal for the in-situ concrete.

4.3.3 Operation

All stormwater falling onto the existing concrete roadways and pathways drains to the existing surface water drainage system (surface drains and pipe) located within the WWTP. The network discharges to the inlet pumping station within the treatment plant, which the pumps the collected water through the treatment plant where it goes through the treatment process, until it is discharged to the Clashawley River (and ultimately the River Suir) as part of the treated effluent.

As new hardstanding and access roads will be required to be provided as part of the works, a new underground surface water drainage network will be provided.

As the proposed site consists of a wastewater treatment plant, there is an inherent risk associated with providing a new surface water network to collect and discharge surface water to the surface water network / river network. As the site is a wastewater treatment plant, there is an ongoing operational risk that there could be spillages or during a worst-case scenario associated with equipment failure etc., that there could be overflows of sewage onto the plant hardstanding. Therefore, any drainage network discharging to the surface water system would attract a risk of discharging contaminated waste to the river.

In the event of such emergency and as part of standard design measures for WWTPs, the internal drainage network to be provided to the WWTP site will also collect any water falling on to the hardstanding and discharge it to the existing forward feed pumping station in the WWTP, from where it will be pumped through the treatment plant works where it will pass through the treatment process as required. This arrangement removes the risk of any untreated sewage discharging to the adjacent Clashawley River as a result of accidental spillages/emergency equipment failure.

4.4 Construction Time and Phasing

The duration of the construction period is estimated to be between 12 and 18 months. Construction traffic will be managed in accordance with best practice standards and signage will be erected as appropriate. The proposed development will stimulate some HGV movements associated with the construction phase. Construction traffic will access the site from the R706 and then utilise the existing private laneway access road.

The first phase of works will comprise the remodelling of the compensatory flood storage area and the importing and placement of material (Clause 804 or equivalent) to raise the levels of the new site area above the flood level, and to match that of the existing WWTP site. The quantity of excavated materials to allow for remodelling the flood plain is estimated to be 750m^3, and approximately 250m^2 of this material, consisting of topsoil, will be re-used to finish the area afterwards. The quantity of imported materials is estimated to be 2,450m^3, with the surplus 500m^3 of excavated material from the adjacent flood compensatory storage area being used as fill material also.

The second phase of works will comprise the construction of the proposed infrastructure. The quantity of excavated materials associated with the installation of the civil works is estimated to be 950m^3. Waste arising from excavations will be stockpiled on-site in line with the requirements of the mitigation measures specified in the NIS and any material that cannot be re-used as part of the development works will be removed off-site to an appropriately licensed facility.

The third phase of works will complete the necessary connections to the existing pipework.

The fourth phase will consist of testing and commission of the proposed infrastructure. There will be a short outage of operations required during the third phase to facilitate the final connection of the new process stream into the existing. It is proposed that the time period for this outage would not exceed 2 hours and would be undertaken out of peak hours. A suction tanker should be provided at the terminal pump station locations during the outage to vacuum up and store incoming waste water during this outage.

It is not envisaged that piling will be required for the proposed development. This will be verified by undertaking detailed site investigations in advance of the works.

4.4.1 Operational Phase

On completion of the upgrade works, there will be an increase in capacity up to 4,150PE associated with the provision of the M&E equipment for the +10 Year projected population. This additional capacity will allow the Fethard WWTP to receive and treat the projected load entering the plant, while maintaining compliance with the requirements as set out in the WWDL.

The proposed civil works will ultimately allow for an increase in the hydraulic and organic treatment capacity of the WWTP to 4,300PE, based on the civil works being designed for the +25 year design horizon.

4.4.2 Cumulation with Other Existing Development and/or Development the Subject of a Consent for Proposed Development

The proposed development was considered in combination with other plans and projects in the area that could result in cumulative effects on the environment. In order to undertake this review, data sources including the Tipperary County Council planning enquiry search and general information sections, An Bord Pleanála planning search function, the Department of Housing, Local Government and Heritage's EIA Portal, the EPA's website, Health Safety Authority's (HSA) website (for nearby Tier 1 and Tier 2 Seveso sites) and Tipperary County Development Plan 2022-2028 were assessed. No plans or projects have been identified within the study area that would be considered to have any potential significant cumulative impact with the proposed development.

A review of Part VIII developments listed on the Tipperary County Council website which are within the vicinity of the proposed development has been undertaken to determine whether there are any planned local authority projects which may give rise to potential cumulative impacts. No Part VIII proposals have been identified that could give rise to a potential in-combination effect with the proposed development.

The online planning system for Tipperary County Council was consulted on 20th March 2023 for the area within the vicinity of the proposed development. There are several permitted planning applications in the broader environs of the proposed development and within the town itself The projects identified within the rural area broadly relate to small scale alterations/extensions to residential properties, and small-scale agricultural development. Within the town of Fethard, planning permission has been granted for a primary care centre, residential development and a sports complex and pitches.

None of the consented planning applications within the past two years identified within 1km of the proposed development have been subject to EIA. Notwithstanding, all granted planning applications have been assessed in the context of the requirements of the EIA Directive as part of the planning process and are only granted planning permission by the competent authorities where it can be demonstrated that the development adheres to the proper planning and sustainable development of the area.

The potential for cumulative effects to occur with the aforementioned projects relates solely to the construction phase of the subject development. The effects would be characterised as not significant.

There are no Seveso sites in the vicinity of the proposed works. The nearest, is an upper tier Seveso site is MSD Ireland (Ballydine) which is located c.16km south-east of the site.

As described on the Department of Housing, Local Government and Heritage's EIA Portal, the nearest EIA development is located c. 4.5km south east of the proposed development site at Knockroe and relates to development of a 7 no. turbine windfarm (Tipperary Co. Co. planning ref. no. 211502 and EIA Portal ID 2021214). Permission was granted for the development on the 31st of October 2022. According to the Building Control Management System of the National Building Control and Market Surveillance Office, no commencement notice has been submitted to Tipperary County Council to date. As such, there is no potential for cumulative effect to occur with the aforementioned project.

It is generally considered that proposed development will provide for improved treatment of waste water generated prior to discharge to the Clashawley River.

In terms of other factors which could lead to consequential environmental impact, it has been concluded that the proposed development will not result in any obvious consequential development that could lead to environmental impacts.

4.4.3 The Nature of Any Associated Demolition Works

The existing inlet works shall be decommissioned and replaced with a new inlet works. There are no demolition works required as part of the proposed development.

4.4.4 The Use of Natural Resources (in particular Land, Soil, Water and Biodiversity)

The use of natural resources is considered hereunder in respect of land, soil, water and biodiversity.

Land: The proposed works will necessitate the extension of existing Fethard WWTP boundary to the east to incorporate a section of the adjacent agricultural land parcel resulting in the loss of 0.56ha of agricultural land.

Soil: It is proposed to import material ((Clause 804 or equivalent) to the extended site to raise the level of the lands by up to 1.0m and match that of the existing WWTP site. The quantity of imported materials is estimated to be 2,450m^3.

The construction of the proposed works will involve some excavation. Excavation for the purposes of facilitating infrastructure will be approximately 1m below the original level and are likely to encounter the water table. The quantity of excavated materials associated with the installation of the civil works is estimated to be 950m^3. Excavations will also be required to reprofile the outer perimeter of the extended WWTP. The quantity of excavated materials to allow for remodelling the flood compensation area is estimated to be 750m^3, and approximately 250m^2 of this material, consisting of topsoil, will be re-used to finish the area afterwards.

Where material is excavated at the WWTP site, it will be reused where possible including that for the purposes of the embankments along the northern and western boundaries of the proposed extended site. Should there be surplus soil or unsuitable soil arising from excavation or site preparation works it will be stockpiled on-site at an appropriate remove from the adjacent river and will be removed off-site to an appropriately licensed facility.

Water: No abstraction of water is proposed as part of the development. No instream works or other watercourse abstraction is required for any part of the proposed development.

Non-Renewable Resources: The construction stage will likely give rise to the use of energy and construction materials such as concrete, etc., some of which are characterised as non-renewable resources.

No resources that are in short supply will be required.

There are a number of sources of material required for the construction phase located in proximity to the Fethard WWTP, for example, Gleesons, which is located at Crogue, c. 1km from the site and provides a source of concrete sand and gravel fill. The exact source of material cannot be confirmed at this time but the Contractor will be required to use an appropriately licensed source and will tend to source material as locally to the site as possible to minimise time and costs associated with haulage.

As outlined above material excavated on site will be reused where possible.

Given that the contract for the construction of the proposed development will be design built, the Contractor will source precast elements from a chosen supplier.

At operational stage no natural resources from the area will be required.

4.4.5 Production of Waste

The proposed works will involve various excavation and earthworks activities. The materials to be excavated at the site will amount to approximately 750m^3 for the flood compensation area and 950m^3 for the civil infrastructure. There will be limited habitat removal to facilitate the works, agricultural land (improved agricultural grassland), trees and hedging. Material excavated on-site will be reused on-site where possible

or removed off-site to an appropriately licensed facility if unsuitable for reuse. Where existing infrastructure is decommissioned, namely that of the existing outlet flume as part of the proposed development, it shall be removed and replaced.

Waste where it arises will be source segregated to accommodate re-use and recycling. All waste and recyclable material will be dealt with through a suitably licensed Contractor and sent to an appropriately licensed waste facility.

Sanitary waste and general construction waste will be managed in accordance with the Waste Management Act 1996 (as amended).

Waste will be generated by the operational staff from the welfare facilities.

4.4.6 Pollution and Nuisances

The main potential sources of pollution arising from the construction stage of the proposed development relate to air quality (dust), sediment runoff and noise. The main potential receptors will be local residents and wildlife.

The nearest residential receptor to the proposed development is located approximately 250m to the west of the extended western boundary of the WWTP. This property is the first of a number which form ribbon development along the R706 extending from the built-up area of Fethard.

The nearest ecological receptor to the site is the Clashawley River. The Clashawley River is located less than 10m to the east of the WWTP and is a tributary of the River Suir (via the Anner River). Approximately 0.19km downstream of the WWTP the Clashawley River enters the Lower River Suir SAC.

4.4.6.1 Dust

There is potential for dust generation during the construction phase from plant and construction traffic. There is also potential for material in temporary exposed soil/stockpiles to become airborne and impact on human health. Given that the nearest residential receptor to the proposed development is located approximately 200m to the west of the extended western boundary of the WWTP dust from the WWTP site will be limited. However, dust generated from construction traffic along the R706 has the potential to impact on residential properties.

4.4.6.2 Sediment Runoff

The Clashawley River is located less than 10m to the east of the WWTP and is separated by a narrow strip of broadleaf woodland siting on a high berm which slopes down to a narrow improved agricultural field. The proposed works shall be 30m from this river at its closest point.

There is potential for water pollution during the construction phase due to the potential release of sediment or accidental spillages to the water. In addition, the accompanying NIS (Mayfly Ecology for RPS, 2023) concludes that with mitigation the construction phase of the proposed development will not result in significant negative impacts to the Lower River Suir SAC/Clashawley River. See **Section 4.7.2.1** for Mitigation Measures.

4.4.6.3 Noise

The nearest sensitive receptor is located approximately 200m to the west of the extended WWTP and comprises a residential property.

Best practice construction techniques and methods will be implemented to ensure construction noise levels remain within acceptable limits. The works shall be carried out in accordance with the requirements of *BS 5228-1:2009+A1:2014, Code of practice for noise and vibration control on construction and open sites*. No night time works are proposed.

Following the construction period, noise levels will be typical to those of the existing WWTP. In this regard, the EPA recommend in their *Guidance Note for Noise in Relation to Scheduled Activities* (2006) that facilities, such as WWTPs should be designed in such a way that the noise attributable to on-site activities at any noise sensitive locations should not exceed the following values;

- Day time (08:00 to 22:00): 55dBa
- Night time (22:00 to 08:00): 45dBa

4.4.7 Traffic

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. During the construction period, it is estimated that the project will generate 10 construction HGV daily trips (5 arrivals and 5 departures) and 6 no. construction workers during the peak period.

Construction traffic will be managed in accordance with best practice standards and signage will be erected as appropriate. Construction traffic will access the site from the R706 and then utilise the existing private laneway access road.

Movement of plant, vehicles and associated human activity will be required for the maintenance of the WWTP. Operational vehicular and human activity will be intermittent in nature.

4.4.8 Odour

SI 787/2005 European Communities (Waste Water Treatment) (Prevention of Odours and Noise) Regulations 2005 defines the operational principles for the prevention of odour from WWTPs plants in Ireland. The Regulations set out to ensure that WWTPs are '*designed and construction so as to ensure that it avoids causing nuisance through odours or noise'*, … [and that it is so] … '*operated and maintained as to ensure that it avoids causing nuisance through odours or noise*.' These Regulations require that the WWTP is operated and maintained in such a way that avoids causing a nuisance through odours or noise source.

In terms of the Fethard WWTP, the potential sources of odour related to the components which are open to the elements, namely the inlet works are open channel flows and the tanks. However there is a continuous flow so no odour will arise from stagnant water. The Current Estimated Load Entering the WWTP is 3,709PE, i.e., greater than the design PE of 3,000PE and the WWTP still operates within the WWDL ELVs.

The addition of the new infrastructure works will see an increase in efficiencies to the treatment of effluent at the WWTP and no increase in odour is expected.

4.4.9 The Risk of Major Accidents and/or Disasters which area Relevant to the Project Concerned including those Caused by Climate Change in accordance with Scientific Knowledge

A major emergency is defined by the EPA as an event which, usually occurs with little or no warning, causes or threatens death or injury, serious disruption of essential services, or damage to property, the environment or infrastructure beyond the normal capabilities of the principal emergency services in the area in which the event occurs and requiring the activation of specific additional procedures to ensure an effective, co-ordinated response.

The proposed development will be constructed in accordance with the Safety, Health and Welfare at Work Act 2005 as amended and the requirements of the Health and Welfare at Work (Construction) Regulations 2013 and 2019 (SI No. 291 of 2013 and SI No. 129/2019) and any other relevant Health and Safety legislation.

The nature of the type of construction for the development and associated works would be considered standard, with no novel construction methodologies and is not particularly complex. Construction methods have been formulated in line with best practice standards that will seek to reduce potential for sediment or soil loss and hydrocarbon / polluting substance release.

4.4.10 Flood Risk

A review of the Office of Public Works (OPW) Flood Maps (www.floodinfo.ie) reveals that there are no records of flooding in the vicinity of the proposed development. A Stage 1 FRA was carried out by RPS (2022) and concluded that a Stage 2 FRA was required. This included a review of the ICPSS and CFRAM mapping published for the Fethard area and notes the following:

- **Existing WWTP:** Is located outside of the predicted flood plains for both the 1.0% AEP (1 in 100 Year) and the 0.1% to 1.0% AEP (between 1 in 100 and 1 in 1000 year) events for fluvial flooding. Therefore, the risk of flooding to the existing WWTP is considered to be low.

- **Extension of WWTP:** Is currently located in an area at risk from both the 1.0% AEP (1 in 100 Year) and the 0.1% to 1% AEP (between 1 in 100 and 1 in 1000 year) fluvial flood events. This development proposes to raise the levels to this section of greenfield lands to levels similar to the existing WWTP. This will ensure that the ground levels at the WWTP are above the predicted flood levels. Therefore, the risk of flooding to the extension to the WWTP is considered to be low.
- The raising of the site to mitigate flood risk will reduce the storage capacity in the flood plain for floodwaters. Therefore, to mitigate any increased consequential flood risk, compensatory flood storage will be provided within the extended WWTP site boundary. Therefore, the risk of flooding elsewhere due to the upgrade of the WWTP is considered to be low.
- Residual flood risk will be addressed within the Operation and Maintenance Plan to be prepared for the WWTP and a suitable Flood Emergency Plan can be implemented to ensure safe operation of the treatment plant.
- All proposed works to the WWTP will undergo detailed design to confirm the above. Any revisions to the layouts as described within this assessment will require the FRA to be revised to determine the risks associated with the revised layout.

4.4.11 Risk to Human Health (for example, due to water contamination or air pollution, etc.)

The aim of the proposed development is to provide sufficient capacity within the WWTP to meet projected demand in line with future population growth. This will reduce the risk of contamination of receiving water by ensuring the facility is not overloaded or operating above capacity. The development will therefore provide for an improvement on the existing situation.

In considering the risk to human health, consideration of nearby sensitive receptors has been taken into account. Sensitive receptors typically relate to homes, hospitals, hotels and holiday accommodation, schools, tourism and recreational amenities and facilities, economic activities such as visitor attractions based on cultural / historic or natural assets. The nearest residential receptor to the proposed development is located approximately 250m to the west of the proposed works.

There are also a number of additional commercial and residential receptors located within 500m of the WWTP and this includes local farmyard and agricultural activities and the edge of the built-up area of Fethard. There are no schools or hospitals within 500m of the WWTP.

4.5 Location of the Proposed Development

According to Schedule 7 of the Planning and Development Act and Annex III of the EIA Directive, the environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to the following criteria:

a) *the existing and approved land use;*
b) *the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;*
c) *the absorption capacity of the natural environment, paying particular attention to the following areas:*
    i. *wetlands, riparian areas, river mouths;*
    ii. *coastal zones and the marine environment;*
    iii. *mountain and forest areas;*
    iv. *nature reserves and parks;*
    v. *areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and;*
    vi. *areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered there is such a failure;*
    vii. *densely populated areas; and*
    viii. *landscapes and sites of historical, cultural or archaeological significance.*

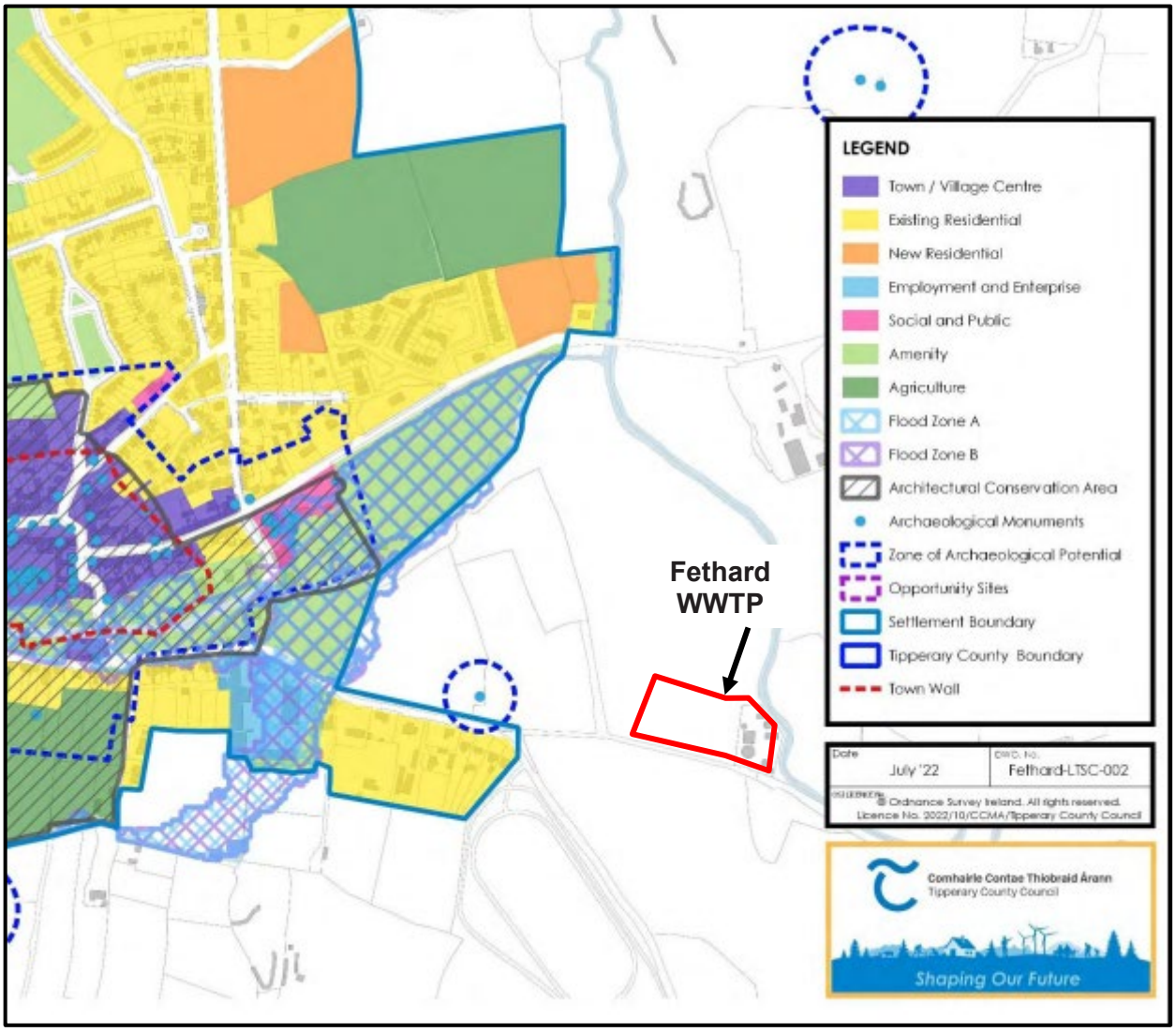
The location of the proposed development is described and considered with reference to each of these criteria hereunder.

4.5.1 Existing and Approved Land Use

The existing WWTP currently functions as the WWTP serving Fethard. The extension of the WWTP to the west will incorporate a section of the adjacent agricultural land parcel.

The extended WWTP falls outside the settlement boundary of Fethard as shown below in **Figure 4-1.**

Figure 4-1: Extract from Fethard Land Zoning Map



The Tipperary County Development Plan (CDP) 2022-2028 zones the rural area in which the WWTP is located as an *Area under Urban Influence*. This zoning designation however is for the purposes of the management of rural housing development and no policy content of the CDP is identified with respect to development of other types of projects to be assessed against such a zoning designation.

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

The habitats to be removed; - trees, hedgerow and improved agricultural pasture - do not correspond to any Annex I habitat or supporting habitat for Annex II species and are abundant in the landscape.

The proposed development is located within the Suir catchment (Hydrometric Area 16). The Clashawley River is a tributary of the River Suir (via the Anner River) which flows along the eastern boundary of the existing WWTP boundary. It is mapped by the EPA as the Clashawley_030 waterbody.

The Clashawley River is currently assigned Good WFD Status for the monitoring period 2013-2021. The closest active EPA biological monitoring station is located 1.4km downstream of Fethard WWTP (Br 2km SE Fethard – 16C010500). The most recent EPA biological monitoring for this station was conducted in 2020 and a Q Value 3-4 was assigned indicating Moderate biological quality. The year 2020 was the first year that every waterbody in the Clashawley was assigned moderate biological quality with no waterbody achieving good. The WFD objective for the Clashawley is to achieve at least Good WFD Status and is classed as not being at risk of failing to meet this objective (WFD risk assessment 2013-2021).

The Clashawley_030 is not classified as being at risk however the upper reaches, Clashawley_010 and Clashawley_020 are at risk (2018-2023 WFD risk assessment) with agriculture identified as a significant pressure. These two waterbodies were included as an Areas for Action (AFA) in the 2nd cycle of the River Basin Management Plan. In the draft 3rd Cycle Catchment Report the entire Clashawley River has been incorporated into an AFA under the category of restoration (EPA, 2021).

It is not anticipated that instream or bankside works will be necessary to facilitate the proposed WWTP upgrade works.

4.5.3 Absorption Capacity of Natural Environment

The absorption capacity of the natural environment is considered to be the measure of the ability of the proposed development to 'fit in' with the receiving environment. As such, as per the requirements of Annex III Location of Projects, details deriving from Schedule 7(2) of the Act, are explored below.

(i) Wetlands, riparian areas, river mouths

The subject site is not characterised as a wetland habitat, nor is the site located within a riparian area or at a river mouth. The Clashawley River is located less than 10m to the east of the WWTP and is separated by a narrow strip of broadleaf woodland siting on a high berm which slopes down to a narrow improved agricultural field. The existing discharge from the WWTP is to the Clashawley River and will continue to be with the extension of the WWTP.

(ii) Coastal zones and the marine environment

The subject site is not located within a coastal zone or a marine environment.

(iii) Mountains and forest areas

There are no mountain and forest areas in proximity to the proposed development.

(iv) Nature reserves and parks

There are no designated nature reserves or parks in proximity to the proposed development according to NPWS and EPA databases.

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

This EIA Screening process has been carried out in conjunction with an AA Screening process. This allows for an early indication of the potential environmental effects likely to occur as a result of the implementation of the proposed development.

As noted in the Report to inform Appropriate Assessment Screening (Mayfly Ecology for RPS, 2023) there are 2 European sites located within the Zone of Influence of the proposed works. These 2 sites are as follows:

Table 4-3: European Sites within Zone of Influence of Proposed Works

Site (Code)	Source-Pathway – Receptor Identified?	Rational
Lower River Suir SAC [002137]	**Yes**	The Lower River Suir SAC is located in close proximity to the proposed development, 0.22km as the crow flies. In addition, the Clashawley River flows adjacent to the proposed development. Part of this river is designated as the Lower River Suir SAC (002137) which located 0.19km downstream of the WWTP. A source-pathway-receptor for potential impacts has been identified for this European site. Source (pollutants arising during construction and/or operation phase) – pathway (Clashawley River) – Receptor (Lower River Suir SAC).
River Barrow and River Nore SAC [002162]	**No**	The Clashawley River flows adjacent to the proposed development. This river is hydrologically connected to the estuarine reaches of the River Barrow and River Nore SAC located 70km downstream. There are no pathways to Qualifying Interest (QI) species and habitats whose lifecycle and habitats are solely associated with the freshwater reaches of this SAC. Given the distance from the proposed development site, the dilution capacity available within the Barrow/Suir/Nore Estuary and the robust nature of estuarine habitats, no source-pathway receptor for potential impacts have been identified.

Only one European Sites was brought forward for further assessment in the NIS (Mayfly Ecology for RPS, 2023), namely that of the Lower River Suir SAC. The remaining site has been excluded for further assessment as no pathways for potential impacts were identified.

The Report to inform Appropriate Assessment Screening examined potential likely significant effects as a result of the proposed development upon European sites. The Report to inform Appropriate Assessment Screening concluded that, in the absence of mitigation the potential for likely significant effects on the Lower River Suir SAC could not be excluded. This is owing to the following;

- The potential for sediment laden water/ pollutants to enter the Clashawley River during construction which may impact upon QIs; salmon (1106); otter (1355), lamprey (1095, 1096, 1099); white-clawed crayfish (1092); twaite shad (1103) and water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation (3260) - referred to as Vegetation of flowing waters.
- In the absence of invasive species management and control there is the potential for Third schedule invasive plant species to colonise/expand colonisation within the WWTP. The WWTP would act as a source for further spread to downstream QI habitats; Alluvial forests (2137) and Hydrophilous tall herb fringe communities (6430).

Therefore, it was concluded that a NIS is required to inform Stage 2 Appropriate Assessment. Potential exists for impacts to QIs of the SAC during the construction and operational stage of the proposed Fethard WWTP upgrade; however, these can be readily mitigated through the implementation of mitigation as outlined in **Section 4.7**. **Table 4-4** provides a summary of potential impacts identified for QIs of the Lower River Suir SAC and mitigation required.

Table 4-4: Potential Impacts and Mitigation

Habitat and Code	Brief Explanation of Potential Impact	Mitigation Required
Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]	No direct impact as this habitat is not found within the proposed development boundary and no instream works are required. Habitat is potentially located downstream of the proposed development. Potential for temporary indirect impacts from sedimentation and/or water quality deterioration to this habitat during construction.	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to surface water and groundwater management during construction.
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]	No direct impact as this habitat is not found within the proposed development boundary. Habitat is located downstream of the proposed development and there is a potential impact as a result of spread of invasive species (Giant hogweed).	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to invasive species management during operation.
Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]	No direct impact as this habitat is not found within the proposed development boundary. Habitat is located downstream of the proposed development and there is a potential impact as a result of spread of invasive species (Giant hogweed).	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to invasive species management during operation.
***Austropotamobius pallipes* (White-clawed Crayfish)**	No instream works are required as part of the proposed development however potential indirect impact via sedimentation and/or pollutants resulting in a deterioration of habitats and water quality during construction.	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to surface water and groundwater management during construction.
***Petromyzon marinus* (Sea Lamprey) [1095]**	No instream works are required as part of the proposed development however potential indirect impact via sedimentation and/or pollutants resulting in a deterioration of habitats and water quality during construction.	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to surface water and groundwater management during construction.
***Lampetra planeri* (Brook Lamprey) [1096]**	No instream works are required as part of the proposed development however potential indirect impact via sedimentation and/or pollutants resulting in a deterioration of habitats and water quality during construction.	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to surface water and groundwater management during construction.
***Lampetra fluviatilis* (River Lamprey) [1099]**	No instream works are required as part of the proposed development however potential indirect impact via sedimentation and/or pollutants resulting in a deterioration of habitats and water quality during construction.	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to surface water and groundwater management during construction.
***Alosa fallax fallax* (Twaite Shad) [1103]**	No instream works are required as part of the proposed development however potential indirect impact via sedimentation and/or pollutants resulting in a deterioration of habitats and water quality during construction.	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to surface water and groundwater management during construction.

Habitat and Code	Brief Explanation of Potential Impact	Mitigation Required
***Salmo salar* (Salmon) [1106]**	No instream works are required as part of the proposed development however potential indirect impact via sedimentation and/or pollutants resulting in a deterioration of habitats and water quality during construction.	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to surface water and groundwater management during construction.
***Lutra lutra* (Otter) [1355]**	No direct impacts as habitats within the proposed development do not support otter. During construction there is potential indirect impact via sedimentation and/or pollutants deteriorating habitats and water quality for species which otter rely on as a food resource.	Yes - Mitigation measures stipulated as part of the NIS and shall be incorporated into the CEMP. Measures relate to surface water and groundwater management during construction.

The NIS concluded that "*through the implementation of best practice and the recommended mitigation measures there will be no potential for direct, indirect or cumulative impacts arising from the proposed development in combination with any other plans or projects. Therefore, the proposed Fethard WWTP upgrade and associated works will not adversely affect the integrity of the Lower River Suir SAC, or the overall European site network. No reasonable scientific doubt remains as to the absence of such adverse effects".*

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

The current WFD river waterbody risk status of the Clashawley River (Clashawley_030) is classified as 'Not at Risk'. The water quality of the Clashawley River upstream of the treated discharge point is of 'Moderate' status.

The EPA plays a pivotal role in enforcing environmental law. Where pollution occurs, the EPA seeks redress arising from any such environmental pollution and to avoid a recurrence. This is achieved by prosecution where the circumstances warrant it. A review of EPA prosecutions and penalties over the past five years was undertaken. No prosecutions or penalties have been identified that would suggest a failure to meet environmental quality standards in proximity of the WWTP.

The WAC Assessment indicates that taking into consideration the river background concertation and the dilution available in the Clashawley River, it can be concluded that the discharge effluent from Fethard WWTP will not result in a deterioration in the current water quality of the river or prevent the achievement of WFD objectives.

(vii) Densely populated areas

The proposed development is located outside of the settlement boundary of Fethard and is not zoned.

The receiving environment for the proposed development is characterised by agricultural uses and to low residential density consisting of ribbon development along the R706 leading from Fethard to the access road to the WWTP. The site is outside of the Fethard Settlement Boundary as set out in the Tipperary CDP 2022-2028.

The settlement of Fethard in Table 2.4: Core Strategy Table of the Tipperary CDP 2022-2028 is noted of having a population count of 1,545 for the year 2016 and a projected population count of 1,751 for the year 2028.

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

Landscape:

The site is located outside of the amenity designations identified within the Tipperary CDP 2022-2028; the nearest designated amenity area is that around Slievenamon which is at a distance to the southeast.

According to the *Tipperary CDP 2022-2028: Appendix 3 Landscape Character Assessment and Schedule of Views and Routes* contains the *Landscape Character Assessment of Tipperary 2016* the area is within the designation of Landscape Architype: A. The Plains, and Landscape Character Type: A1 Lowland Pasture & Arable and Landscape Character Area 4. Suir Central Plain.

This landscape character area '*is characterised by its rich and productive agricultural lands and rolling landscape. It also incorporates the large towns of the County and many settlements and villages'.*

One such settlement is Fethard.

In general the River Suir Central Plain has a normal capacity for growth and development generally, and in terms of sensitivity is classified as being Normal Class 1 (Ranges from Robust Class 0 to Vulnerable Class 5).

The site is not located along any of the designated scenic routes identified within the CDP. There are two scenic views identified in Fethard:

- V39 View over Clashawley River to the south from quay west of Watergate Street, Fethard.
- V40 Views north-west and south-east from bridge at west end of Main Street, Fethard.

These are localised views within the urban area.

Cultural Heritage:

An Archaeological Screening Report of the proposed development was prepared by RPS in 2022 and notes the archaeological features in the vicinity of the works.

Fethard is a medieval walled town and contains an Architectural Conservation Area (ACA) within the urban area. The proposed development site is outside of the historic town walls and the associated zone of archaeological potential. The ACA and associated zone of archaeological potential are approximately 400m to the west of the WWTP.

The WWTP is also outside of the zone of archaeological potential for the nearest recorded monument, a former hospital (TS070-044----), which is located over 250m to the west of the WWTP site. This features is also a National Monument Entity ID:TS02461.

The National Excavations Database 1970-2016 (www.excavations.ie) indicates that two archaeological excavation took place in the vicinity of the works and are summarised in **Table 4-5**.

Table 4-5: National Excavations Database

Name	Licence	Summary
Barrack Street and Burke Street, Fethard, Co. Tipperary	95E0118	Barrack St. site revealed cultivated ground developed for housing in the post-medieval period. A medieval ditch below the houses probably performed the double task of land drain and barrier around the open fields on the east side of the town. Burke St. excavation revealed cultivation furrows and field boundary ditches with medieval pottery within the furrows. Also revealed were mortared stone walling, mud floors, and suggestions of wicker buildings associated with medieval pottery.
Fethard, Co. Tipperary	94E0054	Excavations centred on the town wall of Fethard which is dated to the 15th century and is noted as being in a remarkable state of preservation. Excavations revealed wall foundations and pre-wall features, including rows of stakeholes. Also shreds of pottery dated to the late 13th/early 14th century were recorded.

The Archaeological Screening Report (RPS, 2023) concluded that there are no obvious implications for recorded archaeological monuments.

In terms of Architectural Heritage, there are no protected structures or structures on the National Inventory of Architectural Heritage (NIAH) on or adjacent to the subject site. The nearest RPS is a Mill (Abymill) (Ref. TRPS1231) located approximately 500m to the north west of the WWTP, this structure is also designated as an NIAH, Abymill Theatre (Reg. No. 22110039).

4.6 Characteristics of the Potential Impacts

Having identified the significant aspects of the proposed development and the environmental sensitivities of the site and surrounding area is **Section 4.1** and **Section 4.2** above, we set out hereunder a consideration of the likely significant effects on the environment due to the proposed development on a range of environmental topics set out in Article 3(1) of the EIA Directive. This is undertaken in accordance with Article 3(1). These environmental aspects are:

a. Population and human health;
b. Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
c. Land, soil, water, air and climate;
d. Material assets, cultural heritage and the landscape; and
e. The interaction between the factors referred to in points (a) to (d).

The likely significant effects identified in respect of these various environmental aspects are described below taking into account as relevant the following:

- The magnitude and spatial extent of the impact;
- The nature of the impact;
- The transboundary nature of the impact;
- The intensity and complexity of the impact;
- The probability of the impact;
- The expected onset, duration, frequency and reversibility of the impact;
- The cumulation of the impact with the impact of other existing or permitted development; and
- The possibility of effectively reducing the impact.

It is noted that in the case of the current proposed development, there is no potential for transboundary impacts given its location and the nature of the proposed development.

Additionally, in considering the potential for environmental impact arising from the proposed development in combination with other plans or projects within the area, it can be reasonably concluded that the potential for cumulative effects to arise is unlikely given, inter alia, the intervening distance and scale of development of the aforementioned projects.

4.6.1 Population and Human Health

The nearest sensitive receptor is a residential property located approximately 200m to the west of the works. It is estimated that approximately 6 no. construction workers[5] will be employed over the construction period which is estimated to last for 12 to 18 months. It is estimated that the project will generate 10 construction HGV daily trips (5 arrivals and 5 departures).

Construction

The construction phase of the proposed development may give rise to a positive effect within the settlements of Fethard and broader receiving environs associated with the temporary to short-term increase in the number of persons associated with construction related employment locally. The construction phase is also likely to have a temporary to short-term positive indirect effect on ancillary support services at a local and regional level in the building supply services and technical professions. It is also anticipated that the increase in construction workers will have the potential to impact positively on businesses within the local area of Fethard in a similar manner to that of ancillary construction support services.

During the construction period, it is estimated that the project will generate 10 construction HGV daily trips (5 arrivals and 5 departures) and 6 no. construction workers during the peak period. A Temporary Traffic Management Plan (TTMP) has been prepared by RPS in relation to the proposed development. The proposed development will give rise to a temporary increase in construction related traffic on the local

[5] Number of construction works on site will be finalised by the Contractor prior to commencement of development on site

roadways. The extent of construction traffic would not be excessive and will not result in significant impact given the proposed volumes, the temporary to short-term duration involved, and the existing quantity of traffic on the local road network. The extent of impact on the condition of the road network is considered to be slight negative and temporary to short-term. The TTMP will be agreed with the local authority in advance of construction works.

The nature of the effects during construction will be typical to the type of works undertaken to upgrade a WWTP and will not utilise any novel or untested construction methodologies. Any activities that emit dust, air or odour particles, or generate noise during the construction phase will be controlled in line with best practice construction methods and techniques. Given that the nearest residential receptor to the proposed development is located approximately 200m to the west of the extended western boundary of the WWTP dust and noise from the works will be limited. However, dust and noise generated from construction traffic along the R706 has the potential to impact on residential properties. The construction phase is likely to give rise to some potential for temporary to short-term negative effects on population and human health to sensitive receptors along the R706 as a result of noise and dust during the construction phase from the construction traffic. Any impacts will be intermittent and the resultant effect is brief adverse and imperceptible.

Operational

The purpose of the proposed development is to provide adequate capacity at the WWTP to facilitate the planned development and growth of the Fethard agglomeration as well as to provide improvement works to ensure ongoing compliance with UWWTD standards. This is considered to have a long-term, moderate positive effect on population and human health within the catchment area of the Fethard agglomeration given that the proposed development will allow for the WWTP to cater for continued growth in the medium to long-term and ensure enhanced efficiency of the WWTP.

No increase in operational traffic will arise as a result of the proposed development and noise levels are not anticipated to increase above existing.

Conclusion

It is considered that the proposed development will not give rise to any potential for significant adverse effects on population and human health within the vicinity during the construction or the operational phase.

4.6.2 Biodiversity

A desktop survey was undertaken to understand the habitats and species which may be present within the proposed development and adjacent area. Please see the Report to inform Appropriate Assessment Screening and the NIS report for full details of sources consulted for the desktop survey (Mayfly Ecology for RPS, 2023). This desktop survey was further informed by an ecological walkover survey of the proposed development which was undertaken in July 2020 by RPS principal ecologist. Given the time period that had lapsed between this survey and project development a further survey was conducted on the 7th October 2022 by Mayfly Ecology for RPS. The following sections set out the habitats and species identified and any potential impacts to them.

Habitats

To facilitate the proposed upgrade to the Fethard WWTP the site boundary will need to be extended to the west to incorporate a section of the adjacent agricultural land parcel. This will require acquisition of a 5,598m^2 of land that currently comprises improved agriculture pasture. Improved grassland (1,854.2m^2) shall be permanently removed to facilitate the proposed new infrastructure in the new works area, west of the existing WWTP. In addition, 380m^2 of amenity grass within the grounds of the existing WWTP will be permanently removed, while 3,735.6m^2 of improved grassland in the new works area to the west of the existing WWTP will be temporarily disturbed but reseeded.

The extension of the boundary of the existing WWTP will necessitate the removal of a section of hedgerow (approx. 60m consisting of 62 trees). These trees were deemed not to provide bat roosting potential but do have nesting bird potential. An ash tree with potential bat roosting potential was identified in close proximity to the proposed development and as part of the landscaping plan it has been highlighted and will not be removed.

Construction

The proposed works will be contained within the extended WWTP boundary. There will habitat removal to facilitate the works (60m treeline, ornamental cherry laurel hedge and improved grassland). These habitats are considered to be of local (low) ecological value and do not correspond to any Annex I habitat or supporting habitat for Annex II species. It is considered the proposed development will not result in habitat loss or habitat fragmentation within any European site or any supporting ex-situ site associated with SPA populations of SCI birds. Where there is a need to undertake removal of vegetation, there is potential for a temporary to short-term, slight localised negative effect on biodiversity in the absence of mitigation.

Operational

Areas of the extended WWTP site were identified as suitable for reseeding with native grass of local provenance which includes yellow rattle to help create a more species rich grassland. This combined with a new native hedgerow, treelines, bolstering of existing hedgerows, planting of individual trees has resulted in the metric indicating biodiversity net gain. Additional gains are also made through the installation of bat boxes and bulb planting for pollinators. Biodiversity net gain shall result in a long-term positive effect.

During the operational phase, a low mow regime shall be employed as per UÉ's standard practice in new developments. This coupled with the addition of yellow rattle in reseeded areas will allow the development of a more species rich grassland of a higher biodiversity value compared to the exiting ryegrass dominated grassland. Grassland will be managed as a meadow in accordance with the All Ireland Pollinator Plan and pollinator friendly native tree/shrub planting also aligns with the plan.

Birds

The desk study included a search of NBDC mapping6 and returned records for one SCI bird species from the preceding 10 years, within 2km of the proposed development. This species was the kingfisher (Alcedo atthis). Kingfishers are associated with freshwater habitats and it is considered likely to occur along the Clashawley River. Habitats within the proposed development boundary including those to be removed do not support kingfisher breeding habitat. Kingfisher may utilise the treeline along the eastern boundary overhanging the river as an area to perch while hunting.

The birds observed during the surveys are considered to be locally common in the area (include: Blackbird, Goldfinch, Wren, Magpie, Hooded crow, Swallow, Rook and Little egret). The treeline within the existing WWTP has potential to support nesting passerine birds and approximately 60m of this will be lost along the western boundary approx. 62nr trees.

Other bird species may utilise the adjacent agricultural lands to forage however the lands to be removed are not considered to provide significant foraging habitats and any foraging is likely to occur on an ad-hoc basis. Supplementary foraging lands are provided in the wider area. The closest SPAs are the; River Nore SPA, Dungarvan Harbour SPA and Mid Waterford Coast SPA which are located 23km northeast, 40km south and 41km south respectively.

Construction

Kingfisher may utilise the treeline along the eastern boundary overhanging the river as an area to perch while hunting. These trees will not be removed or disturbed during works no impact is predicted for kingfisher as a result of the proposed development.

The trees to be removed do have the potential to support nesting passerine birds during the breeding season. The following mitigation is proposed:

Mitigation – Mitigation stipulated within the NIS and CEMP for the management of birds shall be adhered to. (See below in **Section 4.7.4**).

[6] https://maps.biodiversityireland.ie/Map (consulted Nov 2022)

Operational

As part of the landscaping plan for the proposed development 137m of new hedgerow and 172m of new treeline and individual trees shall be planted. Existing vegetation shall be bolstered with native hedgerow mix where gaps have been identified. This will create new habitats for nesting / shelter and also foraging. A mix of native species have been selected to provided food resources for bird species (e.g., trees which provide berries, fruit and nuts). Overall, there will be a net gain of habitat provided for birds.

Bats

A review of NBDC mapping indicates the surrounding landscape has moderate bat habitat suitability for a number of bat species; brown long eared bat (*Plecotus auratus*), common pipistrelle (*Pipistrellus pygmaeus)* and soprano pipistrelle*,* (*Pipistrellus pipistrellus),* The treelines and hedgerows bounding the WWTP likely provide commuting corridor for bats connecting with external habitats particularly Clashawley River, open grasslands, small areas of woodland and hedgerows.

Trees adjacent to the proposed development boundary were considered to have bat roosting potential. Two large mature sycamore (*Acer pseudoplatanus*) trees are located along the R706 just at the laneway entrance and the ash tree (*Fraxinus excelsior*) near the entrance to the existing WWTP. None of these trees will be removed to facilitate the proposed development.

The treeline along the western boundary of the existing Fethard WWTP will be removed (approx. 60m consisting of 62 trees) and it appeared to have no bat roosting potential given limbs are regularly trimmed creating narrow straight trunks with no cracks/crevices observed. The small ornamental cherry laurel identified within the WWTP will also be removed but does not support any bat roosting potential.

Construction

No trees with bat roosting potential will be removed to facilitate the proposed development.

Operational

As part of the landscaping measures bat roosting boxes will be provided. This is predicted to have a positive effect upon bats by providing commuting corridors and roosting habitat. In addition, 137m of new hedgerow and 172m of new treeline shall be planted. Existing vegetation shall be bolstered with native hedgerow mix where gaps have been identified. These shall create new corridors within and around the boundary of the proposed development. The hedgerow and treelines will connect into exiting corridors to bolster and improve connectivity.

Mitigation – The installation of the box boxes shall be informed by suitably qualified bat ecologist.

Additional lighting within the extended WWTP will be required. It is considered that mitigation is required regarding the final lighting design to prevent impacts upon commuting/ foraging routes or potential roosing habitats.

Mitigation – The final lighting design and location shall be informed by a suitably qualified bat ecologist and shall be designed in accordance with the most relevant guidance on bats and lighting (e.g. BCI, 2010; BCT/ILP, 2018 [update expected April 2023]; Marnell *et al.,* 2022). All lamps shall be fitted with cowls/covers to prevent light spill and ensure light is only directed where it is required.

Otter

Otter (*Lutra lutra*) are a QI of the Lower River Suir SAC. An old record (1981) of was returned during the desktop review. This was within the Clashawley River at Fethard town 1.6km upstream of the proposed development.

The ecological surveys conducted in June 2020 and October 2022 did not identify any signs of otter or potential otter resting/breeding habitat within 150m of the proposed development. Although no signs of otter were observed during the site visits, their absence at the time does not indicate a complete absence from the Clashawley River. Otter have a wide distribution in Ireland and there are records within 2km of the proposed development and they may utilise this section of river along the WWTP for feeding/commuting.

The Conservation Objective (CO) for otter of the Lower River Suir SAC is to restore favourable conservation condition. There is a specific target for couching sites and holts which states there should be no significant decline. It is also noted under this target that otter need lying up areas throughout their territory where they are secure from disturbance.

Construction

Otters are predominantly crepuscular being most active at dawn and dusk, therefore, avoiding working hours during construction. The main area of development is set back from the Clashawley River and screened via a mature treeline and the existing WWTP infrastructure. Given the works are set back from the river and no resting/breeding locations were identified it is considered that the activities associated with construction of the WWTP will not result in a disturbance to otter utilising the Clashawley river.

Operational

During operation, lighting is required for the new infrastructure within the proposed development. This area is set back from the river (approximately 55m west at its closest point) and screened by the existing Fethard WWTP and existing treeline along the river. Along the northern boundary of the proposed extension a new treeline and planting will also screen the proposed development from the river.

Given the works are set back from the river and no resting/breeding locations were identified it is considered that the activities associated with operation of the WWTP will not result in a disturbance to otter utilising the Clashawley.

Other Mammals

No signs of mammal activity were observed within the proposed development boundary. It is considered likely that the boundary treeline will support small mammals (e.g., mice, shrew etc.) and there will be a loss of 60m of this habitat.

A scat was present on a boulder along the bank of the Clashawley River, consisting of seeds. A small print was also located in the mud beside the scat. These signs were attributed to American mink rather that otter given that fish bones were not present in the scat and size and shape of the prints corresponded with mink. No potential otter holts were identified 150m up or downstream of the WWTP.

Deer tracks were also observed crossing the Clashawley River downstream of the WWTP. Mammal trails were identified from the wooded area opposite the WWTP and down the laneway. These were not well-worn paths that badger utilised and no signs of badger or setts were identified within the woodland. It is likely trails were made by other mammals such as fox and fox scat was identified in the 2020 survey.

No signs of mammal activity were observed within the proposed development boundary.

Construction

There will be a loss (60m) of boundary treeline which is likely to support small mammals.

Operational

As part of the landscaping plan for the proposed development 137m of new hedgerow and 172m of new treeline and individual trees shall be planted. Existing vegetation shall be bolstered with native hedgerow mix where gaps have been identified. This will create new habitats for shelter and foraging.

Insects

The existing improved agricultural grassland is dominated by rye grass. While it is considered to be of local low biodiversity value it does provide some flowering plants for pollinating insects (e.g., nettles, dandelion). In addition, the treelines, provide habitats for insect and flowers for pollinators.

Construction

Grassland within the extended development boundary and treeline (60m) shall be removed to facilitate the proposed development reducing available habitat for insects.

Operational

As part of the landscaping plan for the proposed development 137m of new hedgerow and 172m of new treeline and individual trees shall be planted. Existing vegetation shall be bolstered with native hedgerow mix where gaps have been identified. These will consist of native trees only and the mix includes early flowing species (hawthorn, blackthorn) for pollinators which start to forage early in the year.

While there will be a permanent loss of some improved grassland, the remaining habitat shall be improved for pollinators. Only native grass seeding of local provenance will be used. These shall not include ryegrass (*Lolium* spp.) which leads to low diversity, ecologically sterile, lawns. Fine leaved grasses (*Festuca* spp, *Agrostis* spp) combined with clovers (red and white) shall be used as a basic standard. This will also include the addition of yellow rattle (*Rhinanthus minor*).

During operation a low mow regime shall be employed as per UÉ's standard practice in new developments. This coupled with the addition of yellow rattle will allow the development of a more species rich grassland of a higher biodiversity value compared to the exiting ryegrass dominated grassland supporting pollinators. In addition, bulbs shall be planted around trees planted along the raised area. The bulb species have been selected following the All Ireland Pollinator Plans for Councils and are additional food sources for pollinators in winter/early spring.

Third Schedule Invasives Plants

No Third Schedule invasive plant species were identified within the proposed development boundary. There is a small cherry laurel at the entrance to the existing WWTP which is managed as a low ornamental hedge. This species can have a High risk of impact where in certain conditions it can outcompete native plants with its dense foliage shading out any understorey vegetation. It spreads via layering and suckering and to some extent via birds eating berries and dispersing seeds. Unlike some other invasive plants however, like Japanese knotweed for instance, it does not spread via fragmentation.

One Third schedule species, giant hogweed, was observed growing in close proximity to the proposed development (See **Figure 4-3** for location). This was growing on the right bank of the Clashawley River approximately 10m and 200m east of the WWTP boundary. The areas where giant hogweed was identified are outside of the proposed development boundary.

Construction

The small cherry laurel will be removed to facilitate a wider road surface at the entrance of the WWTP and disposed of in appropriate facility. Construction works will not result in the disturbance of giant hogweed.

Operational

Given the close proximity of giant hogweed to the WWTP, in the absence of management it is considered likely that giant hogweed will colonise the boundary. There is potential for further spread within and along the boundary of the WWTP during operational activities such as vegetation maintenance activities. Pathways for potential impacts were identified for two QI habitats of the Lower River Suir SAC which have targets relating to invasive species, these are Alluvial forests and Hydrophilous tall herb fringe communities.

Mitigation – Mitigation stipulated within the NIS and CEMP for the management of invasive plant species shall be adhered to. (See below in **Section 4.7.5**)

Conclusion

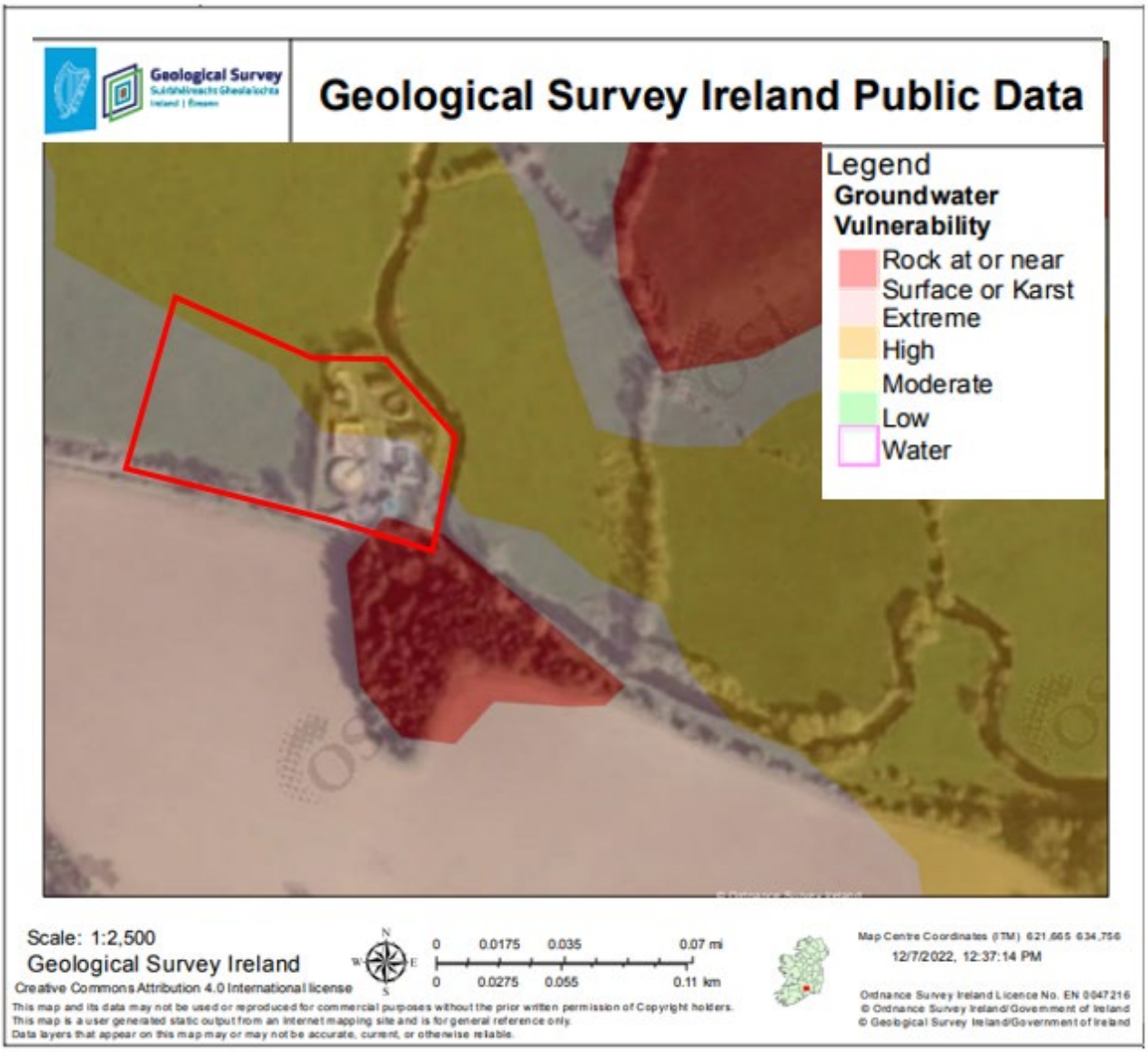
Impacts upon biodiversity have been avoided by; identifying sensitive habitats during the planning and design phase and avoiding removal; the incorporation of mitigation stipulated within the NIS as well as best practice within the CEMP (Mayfly Ecology for RPS, 2023). Mitigation is stipulated for the protection of breeding birds and their nests, water quality and invasive species management. With mitigation measures in place, no likely significant impacts are anticipated including those to the species of the Lower River Suir SAC.

4.6.3 Land, Soils, Geology and Hydrogeology

The construction phase of the proposed upgrades will comprise the extension of the existing WWTP to include improved agricultural grassland to the west. The extended area will partially comprise of the lands for the infrastructure associated with the WWTP and the remainder of the site will act as flood compensation storage lands. No site investigation works have been undertaken to determine the type of material excavated, however, it is envisaged that the excavated material will typically comprise of typical made ground associated with the hardstanding surface and foundations of the existing WWTP site, as well as soil where excavations of earth is required.

The proposed development overlies the Clonmel ground waterbody (IE_SE_G_040). This is a Regionally Important Aquifer - Karstified (diffuse) ground waterbody. Most of the groundwater moves relatively rapidly along short flow paths and discharges into the streams which cross the aquifers. The bedrock geology underlying the WWTP is the Ballyadams Formation which is described as a Crinoidal wackestone/packstone limestone. The bedrock is very susceptible to karstification, which is accentuated along structural features such as fold axes and faults and can result in very high permeability and throughput in relatively narrow zones. Some of the rivers have relatively high specific base flows. Groundwater vulnerability is classified as High in the northern section of the existing WWTP and extension to the WWTP and Extreme in the southern section of the existing WWTP and extension to the WWTP as shown in **Figure 4-2** below. The south eastern section of the existing WWTP site is classed as Rock at or near Surface or Karst. Clonmel groundwater body is assigned Good WFD status (2016-2021 and classed as 'At Review' in terms of failing to meet WFD objectives.

Figure 4-2: Groundwater Vulnerability (Courtesy of GSI online mapping resource)



Construction

Lands for Infrastructure: Will require importing and placement of material (Clause 804 or equivalent) to raise the ground level by 1m above the flood level, and to match that of the existing WWTP site. The area to be raised will be protected with proposed 2.4m high security fencing on the northern western and southern boundaries to link in with existing fencing of the existing WWTP.

Lands for Flood Compensation Storage: Will be provided to the west and north of the lands for infrastructure. A 1.2m high post and rail stock proof timber fence will demarcate the outer boundary of these lands. These lands will require excavation to lower the ground level so as to provide flood storage and protect the lands for infrastructure. There will be the construction of approximately 360m of embankment to grade the raised WWTP lands to the lowered lands and will continue along the southern and western boundaries of the flood compensation storage area so as to contain the flood waters. This embankment will comprise profiled soil material and will be planted with grass.

Site clearance and excavation works are likely to have a negative impact on land and soil within the immediate environment of the WWTP. The total quantity of excavated materials is estimated to be 750m^3 for the flood compensation area and 950m^3 for the infrastructure civil works. Excavated material will typically comprise of soil from the lowering of the flood compensation lands and the excavations for the foundations of the new above ground tanks. Site clearance (soil and vegetation stripping) will be required on improved agricultural grassland west of the WWTP. Given the spatial extent of the works and nature of the works then there is potential for temporary to short-term negative effects from sediment to enter the Clashawley River.

The proposed WWTP infrastructure will be protected by the raising of the lands providing a positive long-term effect for the continued provision of WWTP services to the agglomeration of Fethard.

The potential for sediment from exposed soil or stockpiles to be carried by wind and cause pollution or nuisance to local sensitive receptors is limited given the nearest sensitive property is located over 200m to the west.

Waste material arising from excavation works will be stockpiled on site, reused where appropriate, or disposed of at an appropriately licensed facility in accordance with the relevant Waste Management Regulations. Site clearance and excavation works are likely to have an imperceptible to not significant neutral permanent effect on land and soil within the immediate environment of the WWTP.

Mitigation: Mitigation stipulated within the NIS and CEMP for the management of sediment shall be adhered to. Refer to **Section 4.7.2.1** for mitigation.

Operational

No impacts on soils and land are noted at the operational phase.

Conclusion

It is considered that the proposed development will not give rise to any potential for significant adverse effects on land, soils, geology and hydrology within the vicinity during the construction or the operational phase.

4.6.4 Water (including aquatic species and habitat)

Water Quality

The proposed development is located within the Suir catchment (Hydrometric Area 16). The Clashawley River is a tributary of the River Suir which flows along the eastern boundary of the existing WWTP boundary. The waterbody is mapped by the EPA as the Clashawley_030 waterbody. The land is relatively flat with a very gentle slope from the WWTP toward the river. The Clashawley River then discharges to the Anner River approximately 6.8km downstream of the WWTP. The Anner then flows for 9.4km before entering the main channel of the Suir just downstream of Clonmel.

The Clashawley River is currently assigned Moderate WFD Status (2016-2021). The most recent EPA biological monitoring for this station was conducted in 2020 and a Q value of 3-4 was assigned indicating Moderate biological quality. The Clashawley_030 is classified as being at risk (2018-2023 WFD risk assessment).

The WWTP discharge is directed to the Clashawley River. All stormwater from the WWTP is directed toward the existing surface water drainage system located within the WWTP. The network discharges the water to the Clashawley River. This forms a direct connection for any unattenuated water during construction to enter the Clashawley River.

Construction

The existing Fethard WWTP is located adjacent to the Clashawley River while the area for the proposed extension is located 30m from the river at its closest point. To facilitate works the following is required; vegetation and grassland clearance, excavations, raising of land, stockpiling of sediments; concrete pouring and vehicle movements. Any unattenuated surface water runoff during construction is likely to flow toward the Clashawley River. Runoff from the construction site could contain pollutants such as silt, hydrocarbons and other contaminants associated with the construction phase.

Mitigation: Surface water runoff arising from the construction phase of the proposed development will be managed in accordance with an appropriate surface water management system as described above in **Section 4.3.2.** Furthermore, the NIS (Mayfly Ecology for RPS, 2023) concluded that through the implementation of the mitigation measures stipulated for surface water runoff during construction there will be no potential for significant direct, indirect or cumulative impacts arising from the proposed project upon the Lower River Suir SAC. These mitigation measures are considered sufficient to protect other aquatic species and habitats within the Clashawley River.

The groundwater encountered during the excavation of the proposed new underground structures will be pumped clear from the excavations. Any pumped water will be trapped and treated prior to release to the Clashawley River (and ultimately the River Suir) as set out in **Section 4.3.2.**

Operational

New hardstanding and access roads will be required to be provided as part of the works, a new underground surface water drainage network will be provided. It is proposed that all collected stormwater will connect to the WWTP for the purposes of controlling discharges to the Clashawley River and protecting water quality therein.

The existing WWTP discharges treated effluent via the primary discharge point (EPA Reg No. D0164-01) to the Clashawley River to the east of the WWTP. A WAC Assessment carried out in **Section 1.4** concluded that the discharge effluent from Fethard WWTP will not result in a deterioration in the current water quality of the river or prevent the achievement of WFD objectives.

The purpose of the proposed development is to provide for improvement works to ensure compliance with UWWTD standards. The purpose of the UWWTD is to protect the environment from the adverse impacts of discharges of urban wastewater from populations centres. The proposed development will give rise to a slight to moderate long-term positive effect on water quality within the Fethard agglomeration area by ensuring compliance with the aforementioned standards.

Aquatic Species

There are records of White-clawed crayfish within the Clashawley River. This is an Annex II species and a QI of the Lower River Suir SAC. Other QIs include lamprey, twaite shad and Atlantic salmon and there are records of these species within the downstream hydrologically connected River Anner and/or River Suir. It is assumed that there is potential for these species to also occur within the Clashawley River.

Inland Fisheries Ireland monitor fish populations in rivers and lakes across Ireland. There is no monitoring station within the Clashawley River or Anner River however there are two stations within the River Suir between Clonmel and Carrick-on Suir. The Anner River enters the River Suir between these two stations. In 2018 the following species were also recorded; brown trout, dace, European eel, flounder, gudgeon, minnow, stone loach and three-spined stickleback. With the exception of flounder (estuarine/ marine fish) these species have the potential to occur within the Clashawley River. European eel is classed as being critically endangered.

The Clashawley River also supports a macroinvertebrate community which in-turn support the food chain in the freshwater ecosystem. All these species have the potential to be impacted by deterioration in water quality. In addition, otter is known to occur along the Clashawley River and significant impacts on fish stocks could also impact on prey availability for otter.

While the freshwater pearl mussel (FWPM) is also a QI of the SAC. It is located in a separate sub-catchment, (The Clodiagh) which discharges to the Suir downstream of Carrick-on-Suir. The Clodiagh River does not receive any water from the Clashawley River and therefore any pollution event will not impact upon FWPM within the Clodiagh. Atlantic salmon are a host fish to their larval form (glochidia) and therefore potential indirect impacts are examined. As noted, the Clodiagh River does not receive any water from the Clashawley River. Construction works are temporary, small scale and confined to the WWTP boundary and

adjacent field to the west. It is considered highly unlikely that any pollutant in surface runoff from the proposed works would be of a severe enough magnitude as to result in likely significant effects upon downstream host fish stock associated with the Clodiagh and in turn impact FWPM recruitment.

The ecology survey identified macrophytes species (*Fontinalis antipyretica, Callitriche sp.* and *Ranunculus sect batrachium*) within the Clashawley River which has the potential to correspond within the Annex I habitat - Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation (3260) - referred to as Vegetation of flowing waters. This habitat is a QI of the Lower River Suir SAC.

The description of vegetation of flowing waters habitat covers upland rivers with bryophytes and macroalgae to lowland depositing rivers with pondweeds and starworts. The definition for this habitat is very broad and the selection of Lower River Suir SAC used this broad interpretation. The COs concentrate on the high conservation value sub-types, however it is acknowledged that little is known of the habitat's distribution or its sub-types in the Lower River Suir SAC. The COs note that unmapped habitats may be present within the SAC. This assessment has followed a precautionary principal and assumed this habitat has the potential to occur within the Clashawley River and in the absence of mitigation changes in water quality has the potential to result in likely significant effects upon this habitat.

The remaining aquatic QI habitats of the Lower River Suir occur further downstream with the main channel of the River Suir within its transitional and coastal waterbodies >35km downstream. It is considered surface water runoff during construction will not be of a severity as to result in negative impacts upon these habitats. Given the characteristics of the project these habitats are considered to be outside the ZoI for impacts.

No Annex I groundwater dependent terrestrial ecosystems (GWDTE) were identified within or adjacent to the proposed development. Alluvial forest is a QI of the Lower River Suir SAC and is a GWDTE. The closest mapped location for this habitat is located along the River Suir 35km downstream.

Construction

There is potential for water pollution and in turn, consequential impacts to species and habitats during the construction phase. This is due to the possible release of sediment or accidental spillages of construction related materials on site. Such pollutants can potentially impact on groundwater, surface water during the construction phase and in turn aquatic species including QIs of the Lower River Suir SAC. In the absence of mitigation, potential for significant negative effects on a temporary to short term scale during construction due to unattenuated surface water runoff entering the Clashawley River resulting in a deterioration in water quality for sensitive species and habitats.

Excavations during the construction phase of the proposed development are of a short duration, with localised interference of a temporary nature. Given the large distance between the proposed development and mapped habitat as well as the nature of the works, impacts upon GWDTEs as a result, groundwater interference has been excluded.

Mitigation: The NIS (Mayfly Ecology for RPS, 2023) concluded that through the implementation of the mitigation measures stipulated for surface water runoff (Refer to **Section 4.7.2.1**) during construction there will be no potential for significant direct, indirect or cumulative impacts arising from the proposed project upon the Lower River Suir SAC. These mitigation measures are considered sufficient to protect other aquatic species and habitats within the Clashawley River.

Operational

During operation the upgrade works will allow the WWTP to achieve greater storage and treatment capacity for future predicted loads. The WAC assessments indicates that the Clashawley River has sufficient assimilative capacity to accept the discharge from the Fethard agglomeration. This is based on the proposed WWDA ELVs under both the current and the +10-year future design loads. The ELVs as set out in the proposed discharge licence are set to allow the achievement/maintenance of Good WFD Status and in fact will not prevent the achievement of High Status.

The proposed development will give rise to a slight to moderate long-term positive effect on water quality within the Fethard agglomeration area by ensuring compliance with water quality standards, UWWT directive and proposed ELVs.

Conclusion

Following mitigation stipulated including in the NIS and best practice within the CEMP, no likely significant impacts are anticipated for the construction phase including those to the species and habitats of the Lower River Suir SAC. No likely significant impacts are anticipated for the operational phase. See **Section 4.7.4 and Section 4.7.5** for mitigation measures.

4.6.5 Air and Climate and Noise

The construction activities for the proposed development (such as the proposed excavation works) can contribute to the generation of a quantity of dust, particularly in dry and windy weather conditions. According to the *Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes* (Transport Infrastructure Ireland, 2011), which provides a useful comparator for assessing impacts on air quality and climate on various types of construction projects, the distance for effects of a minor to moderate sized construction site is between 25 and 50 metres. The nearest residential receptor is approximately 250m west of the extended WWTP.

Construction

Screening from any dust is provided by trees within the agricultural fields adjacent to the WWTP. With the adoption of best practice construction methodologies, it is predicted that construction dust will not give rise to significant negative effects on air quality. Temporary to short-term noise impacts may arise during the construction phase however noise will be controlled in line with best practice construction phase techniques and as a result no significant effects from noise are deemed likely to occur.

Construction vehicles travelling to and from the site during the construction phase have the potential to give rise to dust and increased pollutant concentrations at nearby sensitive receptors, particularly along the R706 – i.e. the access route to the WWTP. The significance of impacts due to dust and vehicle emissions from construction traffic is dependent on the number of additional vehicular movements anticipated, and the proximity of sensitive receptors to site access routes. During the construction period, it is estimated that the project will generate 10 construction HGV daily trips (5 arrivals and 5 departures) and 6 construction workers during the peak period and will be managed in accordance with the TTMP. Construction plant and deliveries will access the site via the R706 in Fethard i.e. the route along where the ribbon development is located. Due to the scale, nature and period of construction works, coupled with the distance between site access and existing receptors, it is estimated that the effects will be brief imperceptible adverse.

Operational

Once operational, it is possible that the provision of additional treatment capacity at the WWTP may reduce the level of odour emitted from the WWTP, however, the types of infrastructure that are being replaced do not directly relate to the offsetting of odour from the WWTP. As such, there may be some positive medium to long-term reductions in odour levels overall because of the proposed development; however, this is considered to be imperceptible. In addition, operational odour derived from the WWTP will be set within the parameters of planning conditions, regulations and licencing and will ensure that there is no potential for adverse significant effects to arise as a result of odour, on air and climate.

At operational stage, noise levels will be typical to those of the existing WWTP and will be within values as recommended by the EPA in their *Guidance Note for Noise in Relation to Scheduled Activities* (2006). There is no record of complaints of operational noise with respect to the existing WWTP. Any noise effects arising from the proposed upgrade at operational stage are considered negligible.

Conclusion

It is considered that the proposed development will not give rise to any potential for significant adverse effects on air and climate and noise within the vicinity during the construction or the operational phase.

4.6.6 Material Assets

Given that there are no public utilities, resources or amenities located within proximity to the WWTP site other than those connected with the operation of the plant itself, it is considered that the primary material asset for consideration in relation to the proposed development at the Fethard WWTP relates to the existing local access roads around the site.

Construction

The construction phase of the proposed development will give rise to an increase in vehicles utilising the local road network within the vicinity of the site. During the construction period, it is estimated that the project will generate 10 construction HGV daily trips (5 arrivals and 5 departures) and 6 construction workers during the peak period and will be managed in accordance with the TTMP. It is predicted that the construction traffic may give rise to a temporary, slight localised negative effect on the existing road network.

Operational

Once operational, it is estimated that the significance of effects will be reduced to that of the existing situation and will largely reflect the usage of the road network at present.

Conclusion

It is considered that the proposed development will not give rise to any potential for significant adverse effects on material assets within the vicinity of the works during the construction or the operational phase.

4.6.7 Cultural Heritage

The proposed development will be contained within the extended boundary of the Fethard WWTP and there are no records of cultural heritage features within 200m of the site.

Additional WWTP infrastructure will be constructed in the extended WWTP boundary within greenfield lands.

Construction

As ground works are required, the potential for unrecorded archaeological material cannot be ruled out. Based on the level of cultural heritage in the immediate vicinity of the works it is concluded that there are no obvious implications for recorded archaeological monuments. However, given the potential for unknown material to be encountered, recommendations for guidance from the relevant authorities were provided within the Archaeological Screening as per below:

- That a copy of the proposal (location map, layout plan and brief description of proposed works) is issued to the Development Applications Unit (DAU) of the Department of Housing, Local Government and Heritage (DHLGH) and that any requirements of the DAU are incorporated into the contract documents and/or a planning application as appropriate.
- Likewise, that any requirements advised of by Tipperary County Council Planning Department (including comment from the Tipperary County Archaeologist) at pre-planning stage are incorporated into the planning application documents, and any subsequent conditions of the local authority such as may be attached to a planning permission are incorporated into the contract documents.

During pre-planning consultation, no specific requirements in this regard were identified. The project details have been forwarded to the DAU.

As such, given that the proposed development will be contained within the extended WWTP, that there is no indication of any known or unrecorded archaeological sites within the site as indicated on cartographic mapping or aerial photography, and that any requirements of the DAU and / or the planning authority will be incorporated into the contract documents for the WWTP upgrade works, it is concluded that the proposed development will have a neutral, imperceptible effect on archaeology and cultural heritage within the local environment during the construction and operational phase.

Operational

No operational phase impacts are noted.

Conclusion

It is considered that the proposed development will not give rise to any potential for significant adverse effects on cultural heritage within the vicinity during the construction or the operational phase.

4.6.8 Landscape and Visual Amenity

The works are contained within Landscape Character Area (LCA) 4: River Suir Central Plain and is encapsulated within Landscape Character Type A1: Lowland Pasture & Arable as set out in the Tipperary CDP 2022-2028. The Tipperary CDP 2022-2028 also notes that in general the River Suir Central Plain has a normal capacity for growth and development generally, and in terms of sensitivity is classified as being Normal Class 1 (Ranges from Robust Class 0 to Vulnerable Class 5).

The WWTP is accessed off the R706 road and an existing treeline of varying heights, species and densities, screens the WWTP site from the R706 and the properties along the R706.

Construction

The effects associated with WWTP construction related activity will be imperceptible to slight given the screening from receptors from the southwest. To the north of the WWTP there is a local road leading south from the R692 which has views of the existing plant. Views comprise mainly of the tops of WWTP infrastructure above the tree line. The WWTP construction works will be visible from this road and the trees will not provide screening for the new works as the treeline terminates. The resultant landscape and visual effects are slight adverse and long term.

The construction phase of the proposed development has potential to result in negative effects which could arise from the movement of construction vehicles and traffic which interact with local traffic along the local road network. This will result in slight negative temporary to short-term landscape and visual effects.

Operational

Once operational, the new elements of the WWTP that are located above ground will be similar in scale to those at the existing WWTP and will not give rise to the potential for significant landscape and visual effects at a local level due to the distance from the R706 road and the screening provided by the trees. The extension to the WWTP will be visible from the local road leading south from the R692 until the newly planted trees along the northern boundary mature and provide screening for the extension to the WWTP. Given that there are some elements of the tops of the existing WWTP already visible from this location, including the existing tanks, it is not envisaged that the proposed development will give rise to any significant or adverse landscape and visual effects.

Conclusion

It is considered that the proposed development will not give rise to any potential for significant adverse effects on landscape and visual amenity within the vicinity during the construction or the operational phase.

4.7 Mitigation Measures

The following section sets out the mitigation measures to be employed during the construction phase of the project. This mitigation section takes into account the mitigation measures in the NIS and CEMP.

4.7.1 Environmental Clerk of Works

1. The Contractor shall appoint a suitably qualified person(s), to the role of Environmental Clerk of Works (EnCoW). The role of the EnCoW will be to monitor the construction works and to ensure compliance with relevant legislation, planning conditions, to ensure the implementation of the mitigation measures in the planning approval as may be granted.

2. The EnCoW shall liaise with the Employers Representative (ER) who has the authority to advise the Contractors and all site staff on the contract/project requirements, on elements that require direct supervision and instruct action, as appropriate, including the temporary cessation of works, where necessary and to ensure the implementation of the mitigation measures in the planning approval as may be granted.

3. The EnCoW shall liaise with the Employers Representative (ER) who has the authority to advise the Contractors and all site staff to ensure that all personnel working on site are trained in pollution incident control response. A regular review of weather forecasts of heavy rainfall is required, and the Contractor is required to prepare a contingency plan for before and after such events.

4. The EnCoW shall be present onsite for the activities stipulated for this role in the following sections below.

4.7.2 Water Pollution Control Measures

The project design elements and mitigation measures below are set to address potential sedimentation and water quality impacts upon the following Qis:

- *Salmo salar* (Salmon) [1106]
- *Petromyzon marinus* (Sea lamprey) [1095]
- *Lampetra planeri* (Brook lamprey) [1096]
- *Lampetra fluviatilis* (River lamprey) [1099]
- *Austropotamobius pallipes* (White-clawed crayfish) [1092]
- *Alosa fallax fallax* (Twaite shad) [1103]
- *Lutra lutra* (Otter) [1355]
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260]

1. Before works commence and before they are needed - drainage, erosion control and sediment control measures detailed within the project description and following mitigation (set out below) must be in place and functioning. The EnCoW shall inspect that these systems are in place and functioning.

2. As part of the project design no instream works are required and no instream works shall be permitted within the Clashawley River.

3. Regular inspections of all installed water management systems shall be undertaken by the Contractor and appointed EnCoW, especially after heavy rainfall, to check for blockages within filtration systems, failure of silt fencing / pumps and ensure systems are operating.

4. The Contractor shall ensure that no harmful materials shall be deposited into nearby waterbodies, including drainage systems within or adjacent to the site.

5. The Contractor shall comply with the requirements of the Water Pollution Act of 1977 as amended, Public Health Acts and Fisheries Acts.

4.7.2.1 Sediment

The sumps and proprietary filtration units described within the project description break the pathway for a potential impact via a deterioration in water quality. The Report to inform Appropriate Assessment Screening (Mayfly Ecology for RPS, 2023) considered this mitigation and concluded that further mitigation would be required to reduce the potential for silt laden water during construction from entering the Clashawley River and impact QIs of the Lower River Suir SAC.

1. Prior to the commencement of works, triple silt fencing (e.g., geotextile silt fencing/straw bales) shall be installed to prevent surface water runoff to the river. The siting of the fencing shall be informed and inspected by the EnCoW prior to the commencement of any works. In addition, the EnCoW shall regularly inspect the silt fences to ensure they are functioning, and no damage has occurred (e.g., holes, blown over in wind) and fencing shall be amended as required.

2. Silt fencing shall remain in place for the duration of works and until exposed soils have revegetated.

3. There shall be no direct discharge of untreated water from excavations, surface runoff, dewatering activities, washdown or any other construction works directly to any surface water body or surface water drainage network at any time.

4. Any water encountered during the excavations shall be trapped and treated appropriately prior to release as described below or tankered off site and treated at an appropriately licensed facility.

5. The groundwater encountered during the excavation of the proposed new underground structures shall be pumped clear from the excavations Groundwater encountered shall be directed toward a sump within the excavations. Using submersible pumps can generate more sediment through water turbulence. To avoid this, a corner of the excavation shall be used as a sump and care taken to avoid disturbing that corner. This shall be pumped to a series of proprietary silt and sediment filtration units to allow for sediment to settle.

6. The number of filtration units required shall be subject to Detailed Design by the Contractor, using the information as obtained from site investigations and groundwater sampling to ensure that the treatment provided suits the actual ground conditions encountered during the construction works (See **Figure 4-3** for indicative location for the filtration units). Site investigation works shall provide the Contractor with information on the ground conditions and soil type, while ground water sampling shall be undertaken to inform the proprietary filtration unit supplier. This site-specific information shall be used by the Contractor to allow for completing the detailed design. The filtration system shall be designed by the Contractor to reduce suspended solids in the discharged water to not exceed 25mg/l.

7. Uncontrolled water leaks from pumps and hoses can create additional surface water problems. To avoid damage, discharge hoses shall be routed out of the way of vehicle movements. Wherever hoses pass over a solid edge (the top of an excavation or a concrete sump, for example), care shall be taken to ensure no damage can occur. Regular daily checks shall be carried out on the pump, hoses and couplings for leaks and kinks, with any problems being fixed immediately. Electric pumps shall be used wherever possible to reduce the use of fuels on site.

8. The pipe intake shall be fitted with a device to minimise disturbance of sediment within the sump, such as a perforated oil drum, a short length of widebore perforated pipe or concrete manhole rings containing granular fill. After passing through a series of sediment filtration units a pump shall be fitted to the outlet of the proprietary units will direct water to a baffle consisting of clean stone aggregate beside the manhole connecting to the existing surface water drainage network. Water shall pass over this aggregate first prior to entering the manhole to dissipate energy and slow the flow being discharged. The outfall pipe to the stone aggregate pipe shall be fitted with a with a filter sock which is designed to also trap hydrocarbons. This will also act as a further baffle to further slow and spread outfall rate.

9. Sediment collected within the proprietary filtration units shall not be disposed of on site. This shall be emptied and disposed off-site to an appropriate waste facility.

10. The discharge to shall be inspected daily (at a minimum) by the contractor and appointed EnCoW to confirm clear water is being discharged. In particular, inspections shall be taken after heavy rainfall events or during significant excavations. This shall be inspected via a combination of visual inspections and turbidity monitoring. The EnCoW shall have the authority to instruct action, as appropriate, including the temporary cessation of pumping as required.

11. To reduce runoff of sediment, topsoil stripping shall only be conducted during periods of dry weather. Any stockpiled soil will likely be reused into the works area composition, and if not, any excess soil will be removed and disposed of to an appropriately licensed facility.

12. Any topsoil to be retained shall be kept separate from general spoil and in a tidy condition. All soil stored on site shall be covered and silt fencing surrounding the soil ensure there is no surface water runoff during rainfall events. Waste arising (including soil) from excavations will be stockpiled on-site at least 50m from the nearest watercourse and removed off-site to an appropriate licensed facility.

4.7.2.2 Hydrocarbons

- All fuels, lubricants, hydraulic oils, solvents, hazardous materials and paints shall be stored within a bund with a volume of 110% of the capacity of the storage tank. They shall be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism within the compound and provided with spill containment according to codes of practice.
- Drip trays and a supply of spill kits and hydrocarbon adsorbent packs shall be stored on site. Personnel shall be trained in the use of this equipment. Any spillage of fuels, lubricants of hydraulic oils shall be immediately contained, and the contaminated soil removed from the site and properly disposed of.
- Machinery used on site, hoses and connections shall be regularly maintained and inspected to ensure there is no leakage of fuel, oils or fluids.
- Vehicles/machinery shall never be left unattended when fuelling. Fuelling will only be conducted within the compound which shall be at least 50m from the Clashawley River. Design and installation of fuel tanks to be in accordance with best practice guidelines BPGCS005, oil storage guidelines. Drip trays and spill kits shall be kept available on site.

4.7.2.3 Concrete

- Prior to cement pouring, local weather conditions shall be reviewed and cement pouring shall be carried out in dry conditions.
- Raw or uncured waste concrete shall be removed from the site and disposed in the appropriate licenced facility.
- Wash water from cleaning ready mix concrete lorries and mixers may be contaminated with cement and is therefore highly alkaline. Lorries and mixers shall not be washed out on-site and shall be washed in an appropriate designated facility where treatment is provided and there are no direct surface water connections.
- Where shuttering is used, measures will be put in place to prevent against shutter failure and control storage, handling and disposal of shutter oils. Biodegradable shutter oil shall be used. All shuttering shall be securely installed and inspected for leaks prior to concrete being poured.

  Any raw or uncured waste concrete shall be contained and disposed of in an appropriate licenced facility.

4.7.3 Construction Waste

- Construction waste shall be collected in skips and the site will be kept tidy and free from debris at all times.
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or re-cycled of in accordance with recognised standards as detailed by the Environmental Protection Agency and/or Tipperary County Council, e.g., approved waste Contractor, off-site treatment/ recycling/disposal, etc.
- On completion of works the area shall be snagged and tidied up.

4.7.4 Breeding Birds

Removal of any hedgerows or trees (including trimming of trees) shall be undertaken outside of the bird nesting season 1st March to 31st August inclusive. Where works involving vegetation clearance must be scheduled in the bird breeding season the following shall be adhered to as per UÉ guidance:

- The area must be surveyed for breeding birds approx. 2 weeks in advance of the proposed works by a suitably qualified ecologist.
- If no birds are nesting or establishing nests, the works should be scheduled to proceed.
- Up to 2 days in advance of works proceeding, a follow-up survey is required to confirm that no birds have established nesting sites in the interim.

- If birds have established nest sites, works must be postponed until the chicks have fledged. The Ecologist will advise on likely dates for this and follow up surveys will be required to confirm.

4.7.5 Invasive Species

- All contractors and site operatives working on-site shall receive training on identification of all potential third schedule IAPS that they might encounter. This shall include a briefing of the health and safety issues regarding giant hogweed.
- Signage shall be erected along the bank of the Clashawley where its visible to all site users. The access point for the primary discharge outfall is an appropriate location. This signage shall alert users that giant hogweed is present, its identification and associated health risks.
- An Invasive Species Management Plan shall be developed outlining the treatment plan and monitoring for giant hogweed. This shall be completed by a competent and suitably qualified person and should be overseen by a suitably qualified Ecological Clerk of Works or Ecologist.
- Given the proximity of the Clashawley River any herbicides used for the treatment shall be non-residual and approved for use near aquatic environments. Spraying within the riparian areas shall be target based and shall avoid spraying non target species. The suitability of stem injection should be considered which reduces risk of spray upon non-target species. Treatment shall only be conducted by suitably trained, qualified and licenced personnel.
- For any material entering the site, particularly soils, the supplier must provide an assurance that it is free of non-native invasive species.
- In order to prevent further non-native invasive species from entering the site the following is stipulated: The Contractor shall be required to inspect vehicles before using them on site and will pay attention to wheels/tracks and where trucks and dumpers may be stowed.
- All plant and equipment employed on the proposed development (e.g. diggers, tracked machines, footwear, pumps etc.) shall be thoroughly cleaned down using a power washer unit, and washed into a dedicated and contained area prior to arrival on site and on leaving site to prevent the spread of non-native invasive species. A sign off sheet shall be maintained by the Contractor to confirm cleaning in advance of entering/leaving the site.
- Biosecurity facilities shall be installed on-site prior to site works commencing within the site compound. This shall include facilities for wheel brushing, brushing down of vehicle and cleaning of footwear prior to arrival on site and on leaving site to prevent the spread of IAPS. It shall also include an area where bushing can be directed into a dedicated and contained area. A sign-off sheet shall be maintained by the Contractor to confirm cleaning. Inland Fisheries Ireland biosecurity guidance shall be followed.

Figure 4-3: Map Identifying Areas where Mitigation Measures are Proposed

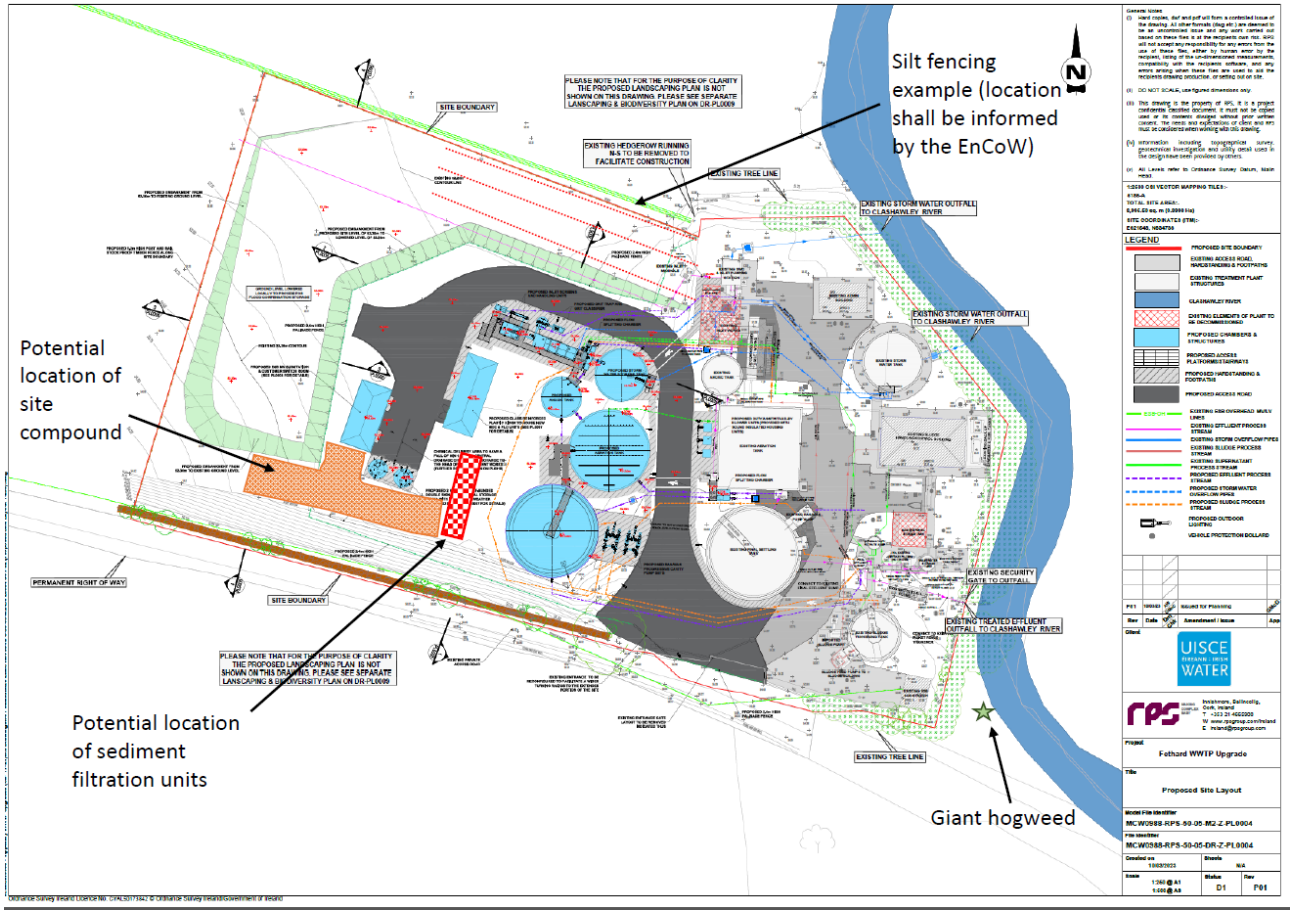


Table 4-6: Summary of Potential Impacts on Environmental Factors

Environmental Receptors	Potential Impacts	Statement of Effect	EIA Required
Population and Human Health	**Construction:** Positive impacts associated with employment in the town. **Operational:** Positive impacts on population and human health in providing an upgrade to the WWTP so as it will continue to be compliant and cater for expansion of Fethard Town in line with the Tipperary CDP 2022-2028.	**Construction:** Positive effect within the settlements of Fethard and broader receiving environs associated with the temporary to short-term increase in construction related employment locally. Best practice construction methodologies and traffic management measures will ensure no significant effects occur in relation to dust, air or odour particles, or noise. **Operational:** The upgrade to Fethard WWTP will be a long-term, moderate positive effect on population and human health within the catchment area of the Fethard agglomeration. The upgrade will cater for continued growth of the town.	No
Biodiversity	**Construction:** There will habitat removal to facilitate the works (60m treeline, ornamental cherry laurel hedge and improved grassland). These habitats are considered to be of local (low) ecological value and do not correspond to any Annex I habitat or supporting habitat for Annex II species. The trees do have the potential to support nesting passerine birds during the breeding season. The grassland has potential to support pollinators and species which prey upon these insects. The mature trees where bat roosting potential was identified will be retained. One Third schedule invasive plant species was observed close to the WWTP boundary, giant hogweed. In the absence of management there is potential for this to spread within the WWTP boundary. **Operational:** Operational activities such as infrastructure or vegetation maintenance may result in further spread of this species. Also potential to impact on QI of the SAC, namely that of Alluvial forests and Hydrophilous tall herb fringe communities.	**Construction:** Impacts upon biodiversity have been avoided by; identifying sensitive habitats during the planning and design phase and avoiding removal; the incorporation of mitigation stipulated within this EIA Screening and NIS as well as best practice within the CEMP (RPS, 2023). Mitigation is stipulated for the protection of breeding birds and their nests, water quality and invasive species management for the construction phase. **Operational:** Infrastructure or vegetation maintenance may result in further spread of giant hogweed which could result in long-term significant negative effects upon habitats sensitive to invasive species colonisation. The landscaping plan has been developed to allow the improvement and enhancement of habitats. Biodiversity net gain shall be achieved resulting in a long-term positive effect. Mitigation is stipulated for the protection of invasive species management for the operational phase.	No.
Land, Soil, Geology and Hydrogeology	**Construction:** Loss of 0.56ha of agricultural land. There is potential for sediment from the works to enter the Clashawley River. **Operational:** No impacts on soils and land are noted at the operational phase.	**Construction:** There is potential for temporary to short-term negative effects from sediment to enter the Clashawley River. Mitigation measures set out in **Section 1.8.1** and **Section 4.7.2** and the NIS then there will be no significant effects. **Operational:** No operational effects are noted.	No

Environmental Receptors	Potential Impacts	Statement of Effect	EIA Required
Water	**Construction:** Potential for unattenuated surface water runoff to enter the Clashawley River resulting in a deterioration in water quality for sensitive species and habitats. **Operational:** During operation a slight to moderate positive long-term effect on water quality has been identified by ensuring compliance with water quality standards, UWWT directive and proposed ELVs.	**Construction:** Potential for sediment and pollutants to impact on water quality during the construction phase and in turn aquatic species including QIs of the Lower River Suir SAC. In the absence of mitigation, potential for significant negative effects on a temporary to short-term scale during construction due to a deterioration in water quality for sensitive species and habitats. Following mitigation stipulated no likely significant impacts are anticipated for the construction phase including those to the species and habitats of the Lower River Suir SAC. **Operational:** During operation the upgrade works will allow the WWTP to achieve greater storage and treatment capacity for future predicted loads. The WAC assessments indicates that the Clashawley River has sufficient assimilative capacity to accept the discharge from the Fethard agglomeration. This is based on the proposed WWDA ELVs under both the current and the +10-year future design loads. The ELVs as set out in the proposed discharge licence are set to allow the achievement /maintenance of Good WFD Status and in fact will not prevent the achievement of High Status. The proposed development will give rise to a slight to moderate long-term positive effect on water quality within the Fethard Town agglomeration area by ensuring compliance with the aforementioned standards.	No
Air, Climate and Noise	**Construction:** Potential for dust emissions and noise during the construction phase of the works on those sensitive receptors located along the R706. **Operational:** Potential for positive medium to long-term reductions in odour levels. No noise impacts during the operational stage.	**Construction:** Best practice and standards for the construction phase will be adhered to for the avoidance of significant effects to air, climate and noise. The nearest sensitive receptor is approximately 200m to the west therefore no significant effects are anticipated in terms of air and noise. The effects of construction traffic on sensitive receptors along the R706 will be brief and imperceptible and adverse. **Operational:** Positive medium to long-term reductions in odour levels overall as a result of the proposed development, however, this is considered to be imperceptible.	No
Material Assets	**Construction:** The construction phase will generate 10 no. construction HGV trips daily and 6 no. construction workers will be present on site during the construction period. **Operational:** No impacts during the operational stage.	**Construction:** The construction phase will give rise to an increase in vehicles utilising the local road and will arise in potential temporary, slight, localised negative effects. Best practice construction standards will be adhered to for the duration of the construction period and no significant effects are predicted. **Operational:** No effects during the operational stage.	No

Environmental Receptors	Potential Impacts	Statement of Effect	EIA Required
Cultural Heritage	**Construction:** There are no identified archaeological, architectural or cultural heritage features within or in proximity to the proposed site that will be impacted by the construction of the proposed works. **Operational:** No operational phase impacts are noted.	**Construction:** Potential impacts to known cultural heritage features will not occur. Although unlikely to occur given the extent of features in the landscape, consultation with the DAU and Tipperary County Council is required to ensure no impacts to unknown finds within the site boundary. **Operational:** No operational phase effects are noted.	No
Landscape and Visual Amenity	**Construction:** Potential for WWTP construction related activity including construction traffic to impact on landscape and visual amenity. **Operational:** Potential for WWTP to impact on landscape and visual amenity.	**Construction:** The WWTP construction works will be screened from the southwest, however the WWTP will be visible from a road to the north of the WWTP. The resultant landscape and visual effects are slight adverse and long term. Construction traffic will result in slight negative temporary to short-term landscape and visual effects. **Operational:** It is unlikely that any significant effects would occur to the landscape or visual amenity as a result of the extension of the WWTP given the receiving landscape, lack of scenic routes, landscaping proposed and the fact that upgrade will create infrastructure similar to that already in the existing WWTP.	No

4.8 Summary of Likely Significant Impacts

Table 4-7 summarises the identified potential for likely significant impacts with reference to the various environmental aspects considered.

Table 4-7: Summary of Potential for Likely Significant Impacts

Environmental Aspect	Construction Phase Impact	Operational Phase Impact
Population and Human Health	No likely significant impacts	No likely significant impacts
Biodiversity	No likely significant impacts (following mitigation stipulated within NIS and CEMP)	No likely significant impacts
Land, Soils, Geology and Hydrogeology	No likely significant impacts (following mitigation stipulated within NIS and CEMP)	No likely significant impacts
Water	No likely significant impacts (following mitigation stipulated within NIS and CEMP)	No likely significant impacts
Air, Climate and Noise	No likely significant impacts	No likely significant impacts
Material Assets	No likely significant impacts	No likely significant impacts
Cultural Heritage	No likely significant impacts (considering mitigation provided within Archaeological Screening)	No likely significant impacts
Landscape and Visual Amenity	No likely significant impacts	No likely significant impacts

5 CONCLUSION

5.1 Mandatory EIA Conclusion

As outlined within this report, it is considered that the proposed development is not a type of development listed in Schedule 5 (Development for the Purpose of Part 10) of the Planning and Development Regulations, 2001 (as amended), that requires mandatory EIA. However, the project is regarded as a sub-threshold form of development; thereby, requiring sub-threshold screening in accordance with the EIA Directive.

5.2 Sub Threshold EIA Conclusion and Recommendations

As set out under **Section 4**, the proposed development is considered having regard to Schedule 7 of the Planning and Development Regulations, 2001 (as amended) in order to ascertain whether the project, due to its characteristics, location or potential effects, may give rise to the requirement for environmental assessment. In parallel to the EIA Screening process a Report to inform Appropriate Assessment Screening including an NIS was prepared by Mayfly Ecology for RPS. Through the implementation of best practice and the recommended mitigation measures it was concluded that proposed Fethard WWTP upgrade works and associated works will not adversely affect the integrity of the River Suir SAC or the overall European Site network.

In considering the sub-threshold criteria, it is considered that an EIAR is not required for the proposed development in considering potential for significant effects on population and human health, biodiversity, land, soils, geology and hydrogeology, water, air, climate and noise, material assets, cultural heritage and landscape and visual amenity.

As such, the project does not require that an EIAR is prepared, as the project does not constitute a class of development that requires mandatory EIA in accordance with Schedule 5, nor will it give rise to any potential for significant effects as set out in the sub-threshold screening contained under **Section 4**.

Appendix A
Site Layout Drawings

PLEASE NOTE THAT FOR THE PURPOSE OF CLARITY THE PROPOSED LANDSCAPING PLAN IS NOT SHOWN ON THIS DRAWING. PLEASE SEE SEPARATE LANSCAPING & BIODIVERSITY PLAN ON DR-PL0009

SITE BOUNDARY

EXISTING HEDGEROW RUNNING NORTH TO SOUTH TO BE REMOVED TO FACILITATE CONSTRUCTION

EXISTING TREE LINE

EXISTING STORM WATER OVERFLOW OUTFALL TO CLASHAWLEY RIVER

EXISTING STORM WATER OUTFALL TO CLASHAWLEY RIVER

EXISTING SECURITY GATE TO OUTFALL

EXISTING TREATED EFFLUENT OUTFALL TO CLASHAWLEY RIVER

PERMANENT RIGHT OF WAY

PROPOSED EMBANKMENT FROM 52.30m TO EXISTING GROUND LEVEL

PROPOSED EMBANKMENT FROM PROPOSED SITE LEVEL OF 53.30m TO LOWERED LEVEL OF 52.30m

PROPOSED 1.2m HIGH POST AND RAIL STOCK PROOF TIMBER FENCE ALONG SITE BOUNDARY

GROUND LEVEL LOWERED LOCALLY TO PROVIDE FOR FLOOD COMPENSATION STORAGE

EXISTING 52.25m CONTOUR LINE

EXISTING 32.25m CONTOUR

PROPOSED 2.4m HIGH PALISADE FENCE

PROPOSED ESB MV SUBSTATION & CUSTOMER SWITCH ROOM (SEE PL0008 FOR DETAILS)

PROPOSED INLET SCREENS AND HANDLING UNITS

PROPOSED GRIT TRAP AND GRIT CLASSIFIER

PROPOSED FLOW SPLITTING CHAMBER

PROPOSED STORM WATER STORAGE TANK

PROPOSED ANOXIC TANK

PROPOSED AERATION TANK

PROPOSED FINAL SETTLING TANK

PROPOSED GLASS REINFORCED PLASTIC KIOSK TO HOUSE NEW MCC & PLC UNITS (SEE PL0007 FOR DETAILS)

CHEMICAL DELIVERY AREA TO HAVE A FALL OF MIN 1:80 TO A CENTRAL DRAINAGE CHANNEL TO DISCHARGE TO THE HEAD OF THE TREATMENT WORKS (FURTHER DETAILS SHOWN ON PL0010)

PROPOSED 2 No. 6,000L SELF-BUNDED DOUBLE SKIN GRP CHEMICAL STORAGE TANKS WITH INTEGRATED WEATHER SHROUDED BUND (SEE PL0007 FOR DETAILS)

PROPOSED RAS/WAS PROGRESSIVE CAVITY PUMP SETS

PROPOSED DUTY/ASSIT/STAND-BY BLOWER UNITS (PROVIDED WITH SOUND INSULATED HOUSING UNITS)

EXISTING AERATION TANK

PROPOSED FLOW SPLITTING CHAMBER

EXISTING FINAL SETTLING TANK

EXISTING ANOXIC TANK

EXISTING INLET WORKS

EXISTING SWO & INLET PUMPING STATION

EXISTING INLET MANHOLE

DECOMMISSIONED INLET WORKS

EXISTING ADMIN BUILDING

EXISTING STORM WATER TANK

EXISTING SLUDGE HANDLING/CONTROL BUILDING

EXISTING BACK UP GENERATOR & FUEL TANK

EXISTING SUPERNATANT/ FILTRATE SUMP

2 No. EXISTING TERTIARY FILTERS (NOTE IN USE)

WASH WATER STORAGE TANK

EXISTING BIOMIN TREATMENT

FINAL EFFLUENT SUMP

EXISTING OUTFALL PLUME

EXISTING SLUDGE THICKENING TANK

IMPORTED SLUDGE PLANT

EXISTING PENNOCK STORAGE TANK

EXISTING ESB SUB-STATION

CONNECT TO EXISTING PICKET FENCE THICKENER

SLUDGE FEED PUMPS TO SLUDGE BUILDING

CONNECT TO EXISTING FINAL EFFLUENT SUMP

EXISTING ENTRANCE TO BE RECONFIGURED TO FACILITATE A WIDER TURNING RADIUS TO THE EXTENDED PORTION OF THE SITE

EXISTING ENTRANCE GATE LAYOUT TO BE REMOVED INDICATED THUS

EXISTING PRIVATE ACCESS ROAD

PROPOSED 2.4m HIGH PALISADE FENCE

PROPOSED OUTDOOR LIGHTING

VEHICLE PROTECTION BOLLARD

PLEASE NOTE THAT FOR THE PURPOSE OF CLARITY THE PROPOSED LANDSCAPING PLAN IS NOT SHOWN ON THIS DRAWING. PLEASE SEE SEPARATE LANSCAPING & BIODIVERSITY PLAN ON DR-PL0009

General Notes

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(v) All Levels refer to Ordnance Survey Datum, Malin Head.

1:2500 OSI VECTOR MAPPING TILES:-
5185-A
TOTAL SITE AREA:-
8,995.50 sq. m (0.8996 Ha)
SITE COORDINATES (ITM):-
E621548, N634736

LEGEND

- PROPOSED SITE BOUNDARY
- EXISTING ACCESS ROAD, HARDSTANDING & FOOTPATHS
- EXISTING TREATMENT PLANT STRUCTURES
- CLASHAWLEY RIVER
- EXISTING ELEMENTS OF PLANT TO BE DECOMMISSIONED
- PROPOSED CHAMBERS & STRUCTURES
- PROPOSED ACCESS PLATFORMS/STAIRWAYS
- PROPOSED HARDSTANDING & FOOTPATHS
- PROPOSED ACCESS ROAD
- ESB-OH — EXISTING ESB OVERHEAD MV/LV LINES
- EXISTING EFFLUENT PROCESS STREAM
- EXISTING STORM OVERFLOW PIPES
- EXISTING SLUDGE PROCESS STREAM
- EXISTING SUPERNATANT PROCESS STREAM
- PROPOSED EFFLUENT PROCESS STREAM
- PROPOSED STORM WATER OVERFLOW PIPES
- PROPOSED SLUDGE PROCESS STREAM
- PROPOSED OUTDOOR LIGHTING
- VEHICLE PROTECTION BOLLARD

Rev	Date	Drn	Chk	Amendment / Issue	App
P01	16/03/23	KW	GMcC	Issued for Planning	GMcG

Client
UISCE ÉIREANN : IRISH WATER

RPS MAKING COMPLEX EASY
Innishmore, Ballincollig, Cork, Ireland
T +353 21 4665900
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

Project
Fethard WWTP Upgrade

Title
Proposed Site Layout and Floor Plans

Model File Identifier
MCW0988-RPS-50-05-M2-Z-PL0004

File Identifier
MCW0988-RPS-50-05-DR-Z-PL0004

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16/03/2023	N/A	
Scale 1:250 @ A1, 1:500 @ A3	**Status** D1	**Rev** P01

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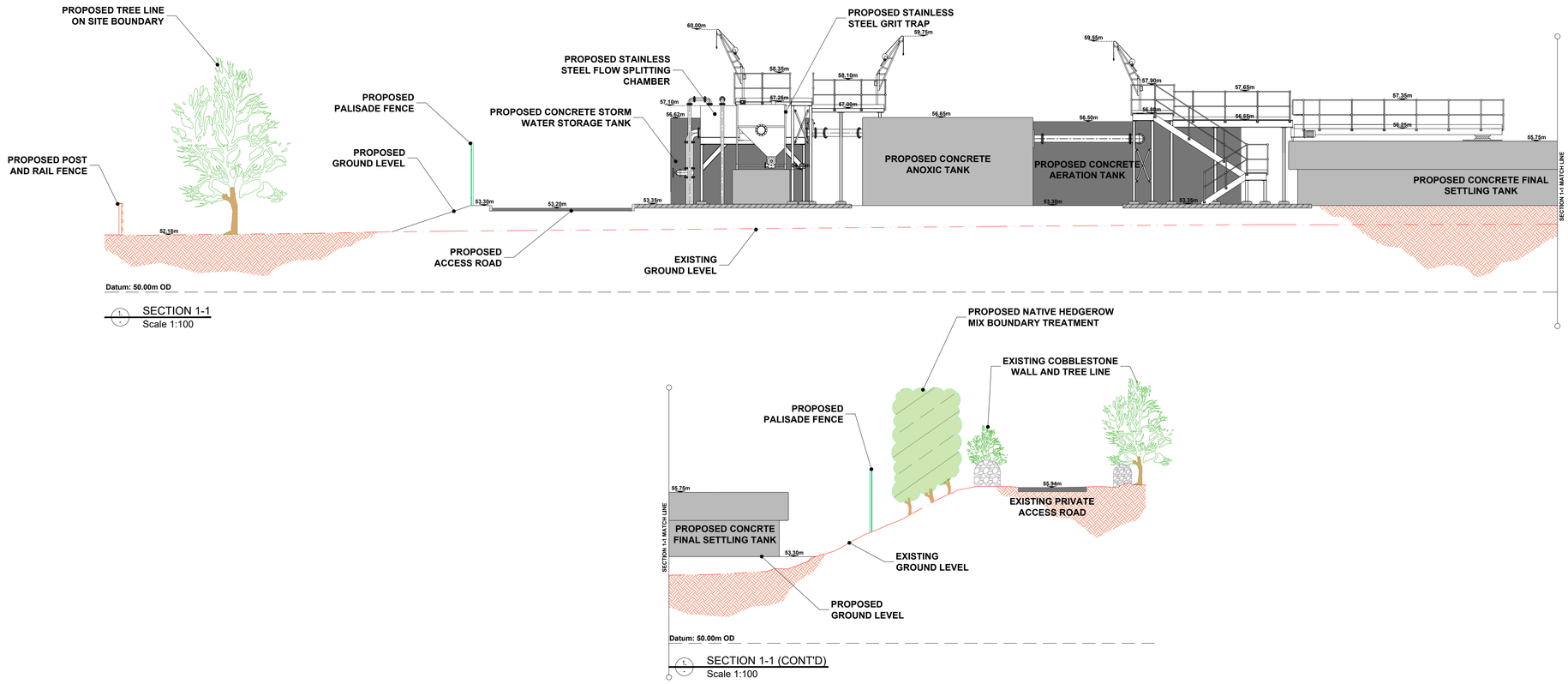

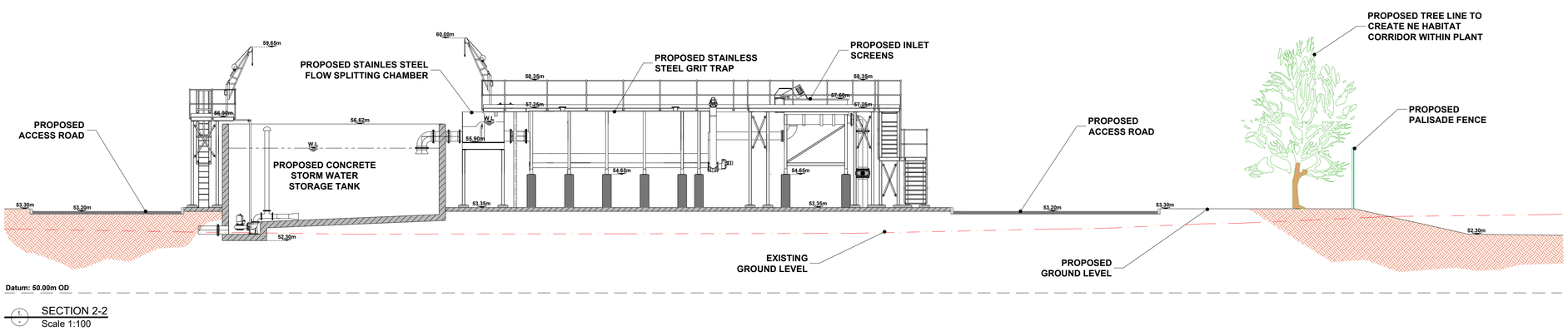

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LEGEND

PROPOSED TREATMENT PLANT STRUCTURE SECTION

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Innishmore, Ballincollig, Cork, Ireland
T +353 21 4665900
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

Project: **Fethard WWTP Upgrade**

Title: **Site Sections/Sections Sheet 1 of 2**

Model File Identifier: **MCW0988-RPS-50-05-M2-Z-PL0005**

File Identifier: **MCW0988-RPS-50-05-DR-Z-PL0005**

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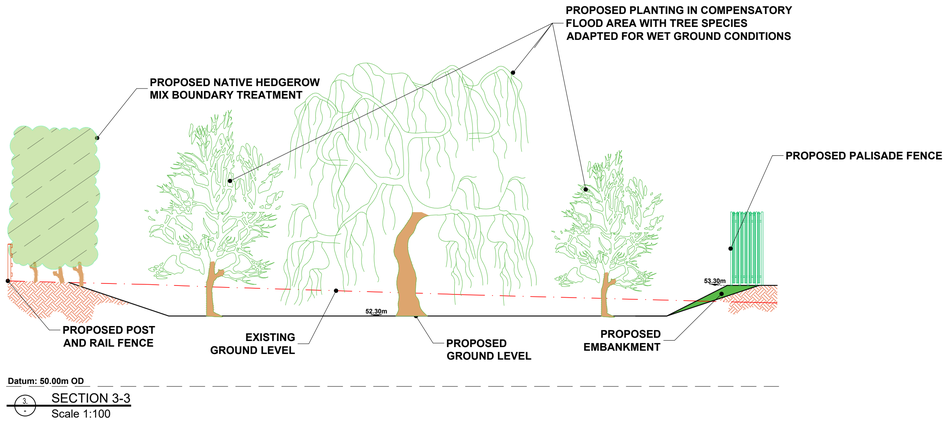

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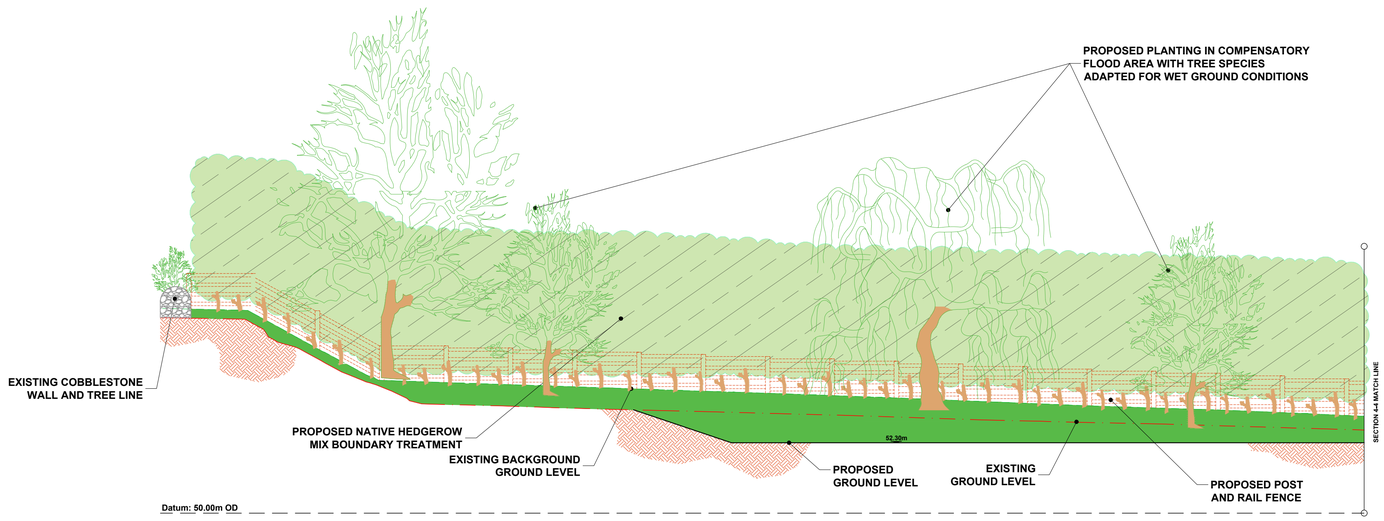

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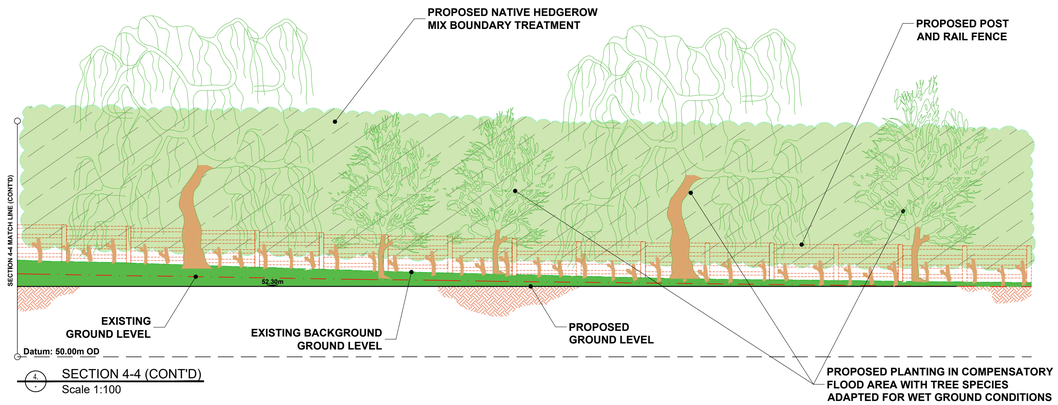

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Scale 1:100

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Client: UISCE ÉIREANN : IRISH WATER

MAKING COMPLEX EASY
Innishmore, Ballincollig, Cork, Ireland
T +353 21 4665900
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

Project: **Fethard WWTP Upgrade**

Title: **Site Sections/Sections Sheet 2 of 2**

Model File Identifier: **MCW0988-RPS-50-05-M2-Z-PL0005**

File Identifier: **MCW0988-RPS-50-05-DR-Z-PL0006**

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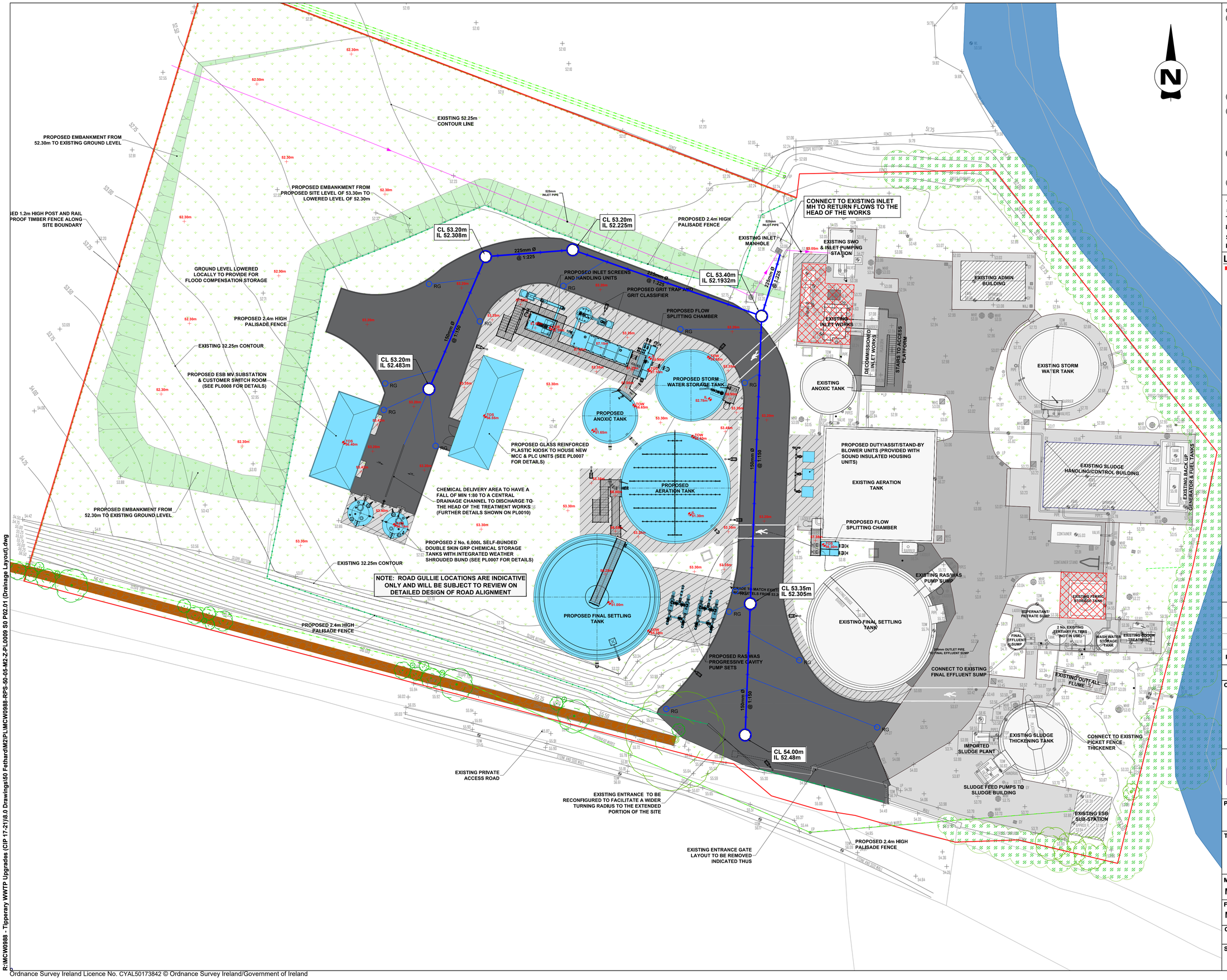

General Notes

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(v) All Levels refer to Ordnance Survey Datum, Malin Head.

1:2500 OSI VECTOR MAPPING TILES:-
5185-A
TOTAL SITE AREA:-
8,995.50 sq. m (0.8996 Ha)
SITE COORDINATES (ITM):-
E621548, N634736

LEGEND

- PROPOSED SITE BOUNDARY
- EXISTING ACCESS ROAD, HARDSTANDING & FOOTPATHS
- EXISTING TREATMENT PLANT STRUCTURES
- CLASHAWLEY RIVER
- EXISTING ELEMENTS OF PLANT TO BE DECOMMISSIONED
- PROPOSED CHAMBERS & STRUCTURES
- PROPOSED HARDSTANDING & FOOTPATHS
- PROPOSED ACCESS ROAD
- EXISTING EFFLUENT PROCESS STREAM
- EXISTING STORM OVERFLOW PIPES
- PROPOSED DRAINAGE NETWORK
- PROPOSED STORM MANHOLE
- RG PROPOSED ROAD GULLY
- PROPOSED OUTDOOR LIGHTING
- PROPOSED ELECTRO MAGNETIC FLOW METER CHAMBER

Rev	Date	Dm Chk	Amendment / Issue	App
P01	16/03/23	KW GMcC	Issued for Planning	GMcG

Client

UISCE ÉIREANN : IRISH WATER

RPS MAKING COMPLEX EASY
Innishmore, Ballincollig, Cork, Ireland
T +353 21 4665900
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

Project
Fethard WWTP Upgrade

Title
Proposed Drainage Layout

Model File Identifier
MCW0988-RPS-50-05-M2-Z-PL0009

File Identifier
MCW0988-RPS-50-05-DR-Z-PL0010

Created on	Sheets	
16/03/2023	N/A	
Scale	**Status**	**Rev**
1:200 @ A1 1:400 @ A3	D1	P01

R:\MCW0988 - Tipperary WWTP Upgrades (CIP 17-21)\8.0 Drawings\50 Fethard\M2\PL\MCW0988-RPS-50-05-M2-Z-PL0009 S0 P02.01 (Drainage Layout).dwg

Appendix B
Landscaping Plan

LANDSCAPING LEGEND

- EXISTING VEGETATION TO BE RETAINED
- PROPOSED TALL SHRUB MIX PLANTING
- EXISTING GRASS AREAS TO BE RETAINED
- PROPOSED POLLINATOR-FRIENDLY SEED MIX
- EXISTING TREES TO BE RETAINED
- PROPOSED STANDARD TREE PLANTING (SEE BELOW TEXT FOR SPECIES TAGS)
- 52.30m — PROPOSED LEVEL
- 50.25m — EXISTING LEVELS

COMPENSATORY FLOOD AREA TO BE PLANTED WITH TREE SPECIES ADAPTED FOR WET GROUND CONDITIONS

NORTHERN BOUNDARY TREE PLANTING TO BE MADE UP OF TREE SPECIES ADAPTED FOR WET GROUND AS THEY ARE LOCATED IN THE DESIGNATED COMPENSATORY FLOOD AREA

EXISTING OVERHEAD ESB POWER LINES ALONG SITE BOUNDARY AS SUCH BOUNDARY TREE LINE SET BACK

EXISTING HEDGEROW RUNNING NORTH TO SOUTH TO BE REMOVED TO FACILITATE CONSTRUCTION

NATIVE MIX HEDGEROW TO BOLSTER GAP BETWEEN EXISTING VEGETATION AND PROPOSED NORTHERN BOUNDARY TREE PLANTING

TREES TO FORM NEW CORRIDOR, HABITAT AND RESOURCE WITHIN THE PLANT

BAT BOX'S TO BE INSTALLED ON THE REAR OF THE EXISTING FACILITIES BUILDING

EXISTING HEDGEROW & BOUNDARY TREATMENT TO BE MAINTAINED

GROUND LEVEL LOWERED TO PROVIDE FOR FLOOD COMPENSATION STORAGE

WESTERN SITE BOUNDARY TO BE PLANTED WITH A NATIVE MIX HEDGEROW TO LINK IN WITH THE EXISTING VEGETATION ON THE SOUTHER SITE BOUNDARY ADJACENT TO THE ACCESS ROAD

GROUND LEVEL RAISED TO PROTECT AGAINST FLOODING

EXISTING ASH AND HAZEL TREE TO BE RETAINED

NATIVE MIX HEDGEROW TO BOLSTER THE EXISTING NATIVE HEDGE MIX

EXISTING TREES AND VEGETATION ALONG SOUTHERN SITE BOUNDARY TO BE RETAINED AND BOLSTERED BY NEW PLANTING

Existing Trees and Shrubs

There are various mature and semi-mature existing trees on site along with some evergreen ornamental hedging. All these existing trees and hedging are to be protected and retained where feasible, or replaced where damaged or removed to facilitate construction. Prior to site clearance and construction these will be surveyed and protection measures implemented where necessary.

Proposed Planting

All plants to be supplied by a certified plant nursery. Planting must only be carried out in suitable conditions during the planting season (October to March). Prior to planting all shrub planting areas are to be de-compacted and covered with 300mm of topsoil. All planting is to be in accordance with the planting methods outlined in the Irish Water 'Landscape Treatment Guidelines'.

Native Mix Hedgerow

Additional new native mix hedgerow planting along as section of the the northern and southern boundary and the entire eastern site boundary will be bare-root transplants in staggered rows, each set 1.5 m apart at 1.5 m spacing between plants in single species groups of 2 to 4. This will result in 2 rows of planting. Transplants are to be supplied as either a well-defined leader or as bushy plants, according to species.

Latin Name	Common Name	Size (cm)	%	Final Height (m)
Corylus avellana	Hazel	60-90	20	4 - 8
Crataegus monogyna	Hawthorn	60-90	35	4 - 8
Prunus spinosa	Blackthorn	60-90	30	2.5 - 4
Sambucus nigra	Elder	40-60	15	4 - 8

After three years the shrub height is expected to range from 1.5 to 3 metres and after 5 years 2.5 to 5 metres.

Proposed Trees

Trees to be planted in locations indicated on drawing. Tree species marked by an abbreviation on each tree on the drawing. The size indicated on the drawing shows the spread of the trees close to maturity. All trees to be planted, staked and tied in accordance with the planting methods outlined in the Irish Water 'Landscape Treatment Guidelines'. Planting pits to be a minimum of 800 x 800 x 650 mm and backfilled with a 3:1 mixture of topsoil and non-peat based compost. The compensatory flood area is to be planted with tree species adapted to wet ground conditions as this area will be susceptible to flooding by design.

Latin Name	Species Tag	Common Name	Girth (cm)	Final Height (m)
Quercus petrea	Qp	Sessile Oak	8-10	15-40
Prunus avium	Pa	Wild Cherry	8-10	12 -15
Sorbus aucuparia	Sa	Rowan	8-10	10 -12
Alnus glutinosa	Ag	Alder	8-10	20-25
Betula pubescens	Bp	Downy Birch	10-12	15-20
Salix caprea	Sc	Goat Willow	10-15	10 -15

At the time of planting the tree heights will be 2.5 to 3 metres. After three years the tree heights are expected to range from 3.5 to 5 metres and after 5 years 5 to 7.5 metres. Bulbs shall be planted around the trees planted in the raised area. The bulbs species selected will follow those recommended within the All Ireland Pollinator Plan for Councils as being important for pollinators; common snowdrop (*Galanthus nivalis*), crocus (Crocus sp. spring and winter flowering), grape hyacinth (*Muscari armeniacum*).

Grass Seeding

Once works are completed landscaping will following advice within the 'All Ireland Pollinator Plan Advice to Councils' and "Biodiversity Guidance for Irish Water Developments. The areas will be reseeded with fine leaved grasses (*Festuca* spp, *Agrostis* spp) combined with clovers (red and white) with the addition of yellow rattle (*Rhinanthus minor*). Seed mix shall be of local provenance and shall not include ryegrass.

Implementation

Planting to be carried out in the first planting season after construction on site has been completed. A 24 month maintenance schedule to be drawn up prior to landscape works commencing on site including the provision for watering, weeding, trimming, replacement of failed plants etc. All landscape works including maintenance must be carried out qualified landscape contractor and be in accordance with the Irish Water 'Landscape Treatment Guidelines'.

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SITE COORDINATES (ITM):-
E621548, N634736

LEGEND

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- EXISTING TREATMENT PLANT STRUCTURES
- CLASHAWLEY RIVER
- EXISTING ELEMENTS OF PLANT TO BE DECOMMISSIONED
- PROPOSED CHAMBERS & STRUCTURES
- PROPOSED ACCESS PLATFORMS/STAIRWAYS
- PROPOSED HARDSTANDING & FOOTPATHS
- PROPOSED ACCESS ROAD
- ESB-OH — EXISTING ESB OVERHEAD MV/LV LINES
- PROPOSED OUTDOOR LIGHTING
- VEHICLE PROTECTION BOLLARD

Rev	Date	Drn	Chk	Amendment / Issue	App
P01	16/03/23	KW	GMcG	Issued for Planning	GMcG

Client: UISCE ÉIREANN : IRISH WATER

RPS — MAKING COMPLEX EASY
Innishmore, Ballincollig, Cork, Ireland
T +353 21 4665900
W www.rpsgroup.com/ireland
E ireland@rpsgroup.com

Project
Fethard WWTP Upgrade

Title
Proposed Landscaping Layout

Model File Identifier
MCW0988-RPS-50-05-M2-Z-PL0006

File Identifier
MCW0988-RPS-50-05-DR-Z-PL0008

Created on	Sheets	
16/03/2023	N/A	
Scale	**Status**	**Rev**
1:250 @ A1 1:500 @ A3	D1	P01

R:\MCW0988 - Tipperary WWTP Upgrades (CIP 17-21)\8.0 Drawings\50 Fethard\M2\PL\MCW0988-RPS-50-05-M2-Z-PL0006 S0 P02.01 (Landscaping & Biodiversity Plan).dwg