

## Eve O'Sullivan

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**From:** Peter Keegan <pkeegan@water.ie>  
**Sent:** Friday 10 May 2024 17:02  
**To:** Licensing Staff  
**Cc:** Eve O'Sullivan  
**Subject:** Youghal EIA RFI - D0139  
**Attachments:** Regulation17B(1)\_Response.pdf

Good Afternoon,

Please see attached Regulation 17B(1) response to Youghal EIA RFI. Unfortunately, the option to upload the response against this RFI on Eden is not available, hence the reason for emailing.

If you have any queries, please do not hesitate to contact me.

Kind regards,  
Peter

**Peter Keegan**  
Asset Strategy Technical Lead (WWDA)

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Is don duine amháin nó don eintiteas amháin ainmnithe ar an seoladh an fhaisnéis agus d'fhéadfadh ábhar faoi rún, faoi phribhléid nó ábhar atá íogair ó thaobh na tráchtála de a bheith mar chuid den fhaisnéis. Tá toirmeasc ar aon daoine nó aon eititis; nach dóibh siúd an fhaisnéis- aon athbhreithniú a dhéanamh, aon atarchur a dhéanamh nó aon athdháileadh a dhéanamh, nó aon úsáid eile a bhaint as an bhfaisnéis, nó aon ghníomh a bhraithfeadh ar an bhfaisnéis seo a dhéanamh agus d'fhéadfaí an dlí a shárú dá ndéanfaí sin. Séanann Uisce Éireann dliteanas as aon ghníomh agus as aon iarmhairt bunaithe ar úsáid neamhúdraithe na faisnéise seo. Séanann Uisce Éireann dliteanas maidir le seachadadh iomlán agus ceart na faisnéise sa chumarsáid seo agus séanann Uisce Éireann dliteanas maidir le haon mhoill a bhaineann leis an bhfaisnéis a fháil. Má tá an ríomh-phost seo faighte agat trí dhearmad, déan teagmháil leis an seoltóir más é do thoil é agus scríos an t-ábhar ó gach aon ríomhaire. D'fhéadfadh ríomhphost a bheith so-ghabhálach i leith truailithe, idircheaptha agus i leith leasuithe neamhúdraithe. Séanann Uisce Éireann aon fhreagracht as athruithe nó as idircheapadh a rinneadh ar an ríomhphost seo nó as aon dochar do chórais na bhfaighteoirí déanta ag an teachtaireacht seo nó ag a ceangaltáin tar éis a sheolta. Tabhair faoi deara go bhféadfadh monatóireacht a bheith á dhéanamh ar theachtairreachtaí chuig Uisce Éireann agus ó Uisce Éireann d'fhonn ár ngnó a chosaint agus chun a chinntiú go bhfuiltear ag teacht le beartais agus le caighdeáin Uisce Éireann. Is cuideachta gníomhaíochta ainmnithe é Uisce Éireann atá faoi theorainn scaireanna, a bunaíodh de bhun fhorálacha na n-Achtanna um Sheirbhísí Uisce 2007-2022, a bhfuil a bpríomh-ionad gnó ag Teach Colvill, 24-26 Sráid na Talbóide, BÁC 1.

Go raibh maith agat as d'aird a thabhairt.

Environmental Licensing Programme  
Office of Environmental Sustainability  
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10/05/2024

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**Re: Regulation 17B)(1)\_Youghal Wastewater Discharge Licence Application D0139-03**

Dear Inspector,

In response to Regulation 17B(1) request for information dated 05<sup>th</sup> April 2024, please see Appendix 1, an addendum to the EIAR submitted to the Agency 31<sup>st</sup> July 2023. This provides further clarification and information to supplement specific sections of the EIAR, addressing each of the Agency's requests for information. Please also refer to appendix 2 for an updated *Non-Technical Summary* of the EIAR as requested and specifically *Section 2: Consideration of Alternatives*.

**Enclosed:**

**Appendix 1:** EIAR Addendum\_RFI Response May 2024

**Appendix 2:** Updated Volume 1: Non-Technical Summary

Yours sincerely

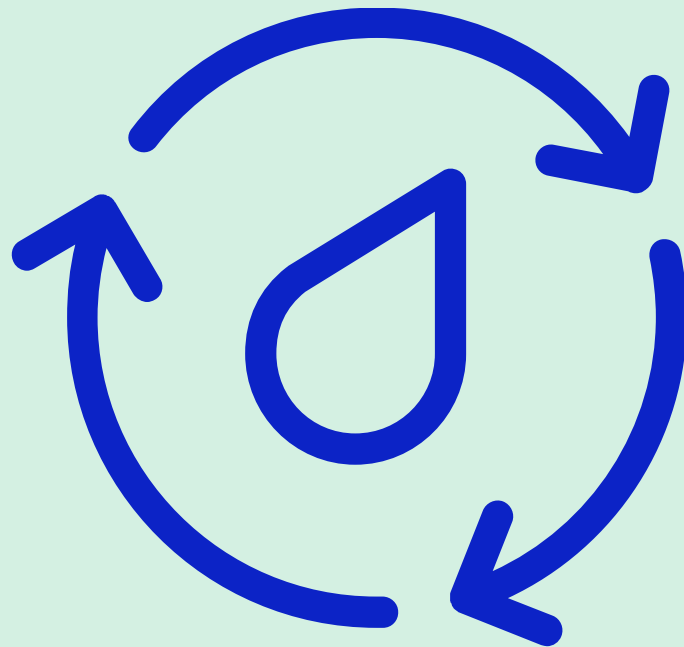


Peter Keegan  
Wastewater Strategy

**Appendix 1: EIAR Addendum\_RFI response May 2024**

# Youghal EIAR - RFI May 2024

Further Information



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# Youghal EIAR – Request for Further Information

A request for further information from the Environmental Protection Agency (EPA), dated 5<sup>th</sup> April 2024, was received by Uisce Éireann (UÉ) regarding ‘Notification in accordance with Regulation 17B of the European Union (Waste Water Discharge) Regulations 2007 to 2020, in respect of a licence review from Uisce Éireann for agglomeration named Youghal, Co. Cork’.

The EPA has specifically requested the following:

- “1. Provide the environmental effects associated with the Ferry Point alternative option and a comparison of the environmental effects of all options.*
- 2. Clarify the main reasons for selecting the chosen option over the ‘do nothing’ scenario.*
- 3. Provide an update of the description of the ‘do nothing’ scenario with its specific characteristics.*
- 4. In addition to the above please also provide an updated non-technical summary to reflect the information provided in your reply.”*

The following sections provide a technical response to the EPA request for further information.

Please note that the **blue font** is additional text, and the **black font** is text from the EIAR – Volume 2 (Atkins, 2023).

- 1. Provide the environmental effects associated with the Ferry Point alternative option and a comparison of the environmental effects of all options.**

## Youghal EIAR. Volume 2, Chapter 2, Section 2.3.2

### Option 1 – Construction of permanent primary outfall at Ferry Point

One alternative considered was the construction of a new permanent primary outfall pipe emerging into a deep trench at Ferry Point (SW001: 210852E, 078125N), in the Blackwater Estuary / Youghal Harbour as per the 2001 Environmental Impact Statement (EIS) (Atkins McCarthy, 2001). However, this outfall pipe was never constructed and following completion of the WwTP, the Dunn’s Park discharge outfall has remained in use as the temporary outfall for discharges of treated wastewater from Youghal WwTP. The construction of the proposed Ferry Point outfall was delayed for legal reasons. Therefore, the existing primary discharge, Dunn’s Park, (SW000: 210464E 78504N) continues to be in use. If pursued, the construction phase of Ferry Point has the potential to cause construction impacts on the environment, which are summarised below.

Option 1 is therefore the less favourable option due to the impacts associated with the construction of a new permanent outfall pipe at Ferry Point which would not occur in the case of Option 2.

### Landscape & Visual

Option 1, the construction of a new outfall pipe at Ferry Point, has the potential to result in landscape and visual impacts during associated construction activities. During the operational phase, Youghal Wastewater Treatment Plant (WwTP) will continue to operate in its current format and capacity. However, there would be a new outfall at Ferry Point. This would be underwater (except for a short section of pipe partially visible at low tide similar to existing temporary

discharge point at Dunn's Park) and therefore, the significance of impacts would be neutral and of long-term duration for landscape and visual receptors during the operational phase.

### **Air Quality and Odour and Climate**

During the construction phase of a new outfall pipe at Ferry Point there is the potential for the release of dust and other emissions from transport during construction activities. There is also the potential for increased emissions of greenhouse gases associated with the construction. Save for a new discharge point, Youghal WwTP will continue to operate in its current format and capacity. Monitoring onsite as part of the existing WwDL (Reg No. D0139-03) at the WwTP results in a non-odorous final effluent, which would be discharged via the new outfall pipe at Ferry Point. As such, there will be no change in terms of environmental impact in relation to air quality, odour, and climate during the operational phase.

### **Noise and Vibration**

Construction activities required for the construction of a new permanent outfall pipe at Ferry Point will generate noise and vibration in the vicinity of the works area during the construction phase of the new outfall pipe. The works will result in temporary to short-term increase in noise levels at noise sensitive locations adjacent to the works. During the operational phase, save for a new discharge point, Youghal WwTP will continue to operate in its current format and capacity. A new outfall at Ferry Point would operate similar to the existing temporary discharge point at Dunn's Park and therefore, no noise or vibration impacts are envisaged during the operational phase in line with the noise assessment discussed in Section 5.6 of the Youghal Wastewater Discharge Licence (Reg No. D0139-03).

### **Land & Soils**

During the construction phase of the new permanent primary outfall pipe, marine sediments will likely be disturbed. It is likely that soil excavation will be required on land to facilitate integration of the new outfall pipe to the existing wastewater infrastructure of Youghal agglomeration. Also land take will be associated with the construction phase. During the operation of the new permanent outfall pipe at Ferry Point, impacts on land, soils and geology are not envisaged.

### **Traffic**

During the construction phase of the new permanent outfall pipe at Ferry Point, the volume of construction associated traffic will increase. Youghal WwTP will continue to operate in its current format and capacity. During the operational phase, Option 1 will not have any effect on traffic.

### **Cultural Heritage**

The construction works area and tie-in location to existing wastewater infrastructure for the new permanent primary outfall pipe at Ferry Point extend into the Zone of Archaeological Potential (CO067-029001- ) and Architectural Conservation Area of Youghal town. Construction activities for the new outfall pipe will have the potential to result in temporary impacts on the settings of associated protected structures and recorded archaeological sites. The excavation of the outfall pipe trench will also have the potential to permanently impact on unrecorded subsurface and underwater archaeological sites. Therefore, there is potential for impacts on cultural heritage resources during the construction phase of the new outfall pipeline. The operational phase of the new outfall pipe at Ferry Point would not result in effects on cultural heritage resources.

### **Population and Human Health**

The construction of a new permanent primary outfall pipe within Ferry Point will have potential effect on human health. There is a potential to have an effect on tourism and amenities, economic profile, land use and settlement pattern, bathing water and aquaculture during the construction and operation phases of Ferry Point.

## **Biodiversity**

The construction of a new permanent primary outfall pipe in the channel at Ferry Point will result in the temporary disturbance of marine benthic habitats within the Blackwater River (Cork/Waterford) SAC (002170) during construction of the outfall pipe. The marine habitat type in this area is sand and mixed sediment with polychaetes and crustaceans community complex, and coarse sediment community complex marine community types. The pipe would be laid within an open trench which would then be backfilled with marine sediments; this would result in temporary disturbance to benthic habitats within the works corridor; it would also have the potential to generate silt laden waters during construction works. In addition, outfall construction activities have the potential to impact upon migratory movements of anadromous aquatic species of the SAC, such as sea lamprey, river lamprey, Atlantic salmon and twaite shad. It also has the potential to result in temporary disturbance impacts to wintering bird species which are qualifying interests of Blackwater Estuary SPA (004028); as well as to certain species which are qualifying interests of the SAC (e.g. otter). Direct negative impacts on biodiversity during the operational phase of a new permanent outfall pipe at Ferry Point are not envisaged (however, for discussion of potential indirect impacts to water quality see also the section on Water, below).

## **Water**

The construction of a new outfall pipe at Ferry Point in the Blackwater Estuary has the potential to cause temporary negative effects on water quality, groundwater quality (via. EPA Register of Protected Areas such as Drinking Waters - S.I. No. 278/2007 - European Communities (Drinking Water) (No. 2) Regulations 2007, Bathing Water - S.I. No. 79/2008 - Bathing Water Quality Regulations 2008 and S.I. No. 351/2011 - Bathing Water Quality (Amendment) Regulations 2011, Shellfish - S.I. No. 464/2009 - European Communities (Quality of Shellfish Waters) (Amendment) (No. 2) Regulations 2009 and Nutrient Sensitive Areas in accordance with the Urban Waste Water Treatment (UWWT) Directive 91/271/EEC on Urban Waste Water Treatment and S.I. 254 / 2001, S.I. 440/2004 and S.I. 48/2010) during the construction phase. Also the construction phase would have potential to impact other sensitive receptors included within Youghal Bay i.e. designated bathing waters, classified production areas and designated aquaculture sites.

Marine modelling studies (AECOM Oct 2020; Attachment D.1.d submitted as part of the WwDL application) concluded that none of the scenarios modelled (i.e. both Dunn's Park and Ferry Point during current and future scenarios) indicate a degradation of the overall water quality of any of the receiving waterbodies, nor any degradation of the indicative quality of any Water Framework Directive supporting quality element for any of the water bodies.

## **Material Assets**

Due to the construction activities required to construct a new outfall pipe at Ferry Point, there is potential that such activities may interfere with the movements of boats (commercial and tourism) and other vessels within the Blackwater Estuary and Youghal Harbour. Construction activities may also impact on localised fishing activities such as drift net salmon fishing and sea angling.

The construction of a new permanent primary outfall pipe opposite Ferry Point will result in construction waste during the construction phase.

Youghal WwTP will continue to operate in its current format and capacity as per WwDL. It is anticipated that the new outfall at Ferry Point would operate in a similar manner to the existing temporary discharge point at Dunn's Park, and will discharge treated effluent in accordance with the ELVs of WwDL D0139-03 and will not have an effect on built services and waste during the operational phase.

## **Major Accidents & Disasters**

During the construction of a new outfall pipe at Ferry Point, and the nature of such a construction project within the Blackwater Estuary, the potential for the occurrence of a significant pollution event cannot be discounted. During its operational phase, Option 1 will not have any effect with regards to major accidents and disasters.



## Option 2 – Proposed use of the temporary discharge outfall, Dunn’s Park, as a permanent discharge outfall

Alternative two is the proposed use of the temporary discharge outfall, Dunn’s Park, as a permanent discharge outfall at Youghal WwTP as per Wastewater Discharge Licence Application (Reg. No. D0139-03) in Co. Cork.

AECOM completed marine modelling studies for the project;

- AECOM (2023) Youghal Wastewater Treatment Works Marine Modelling Study Addendum; and,
- AECOM (2020) Youghal Marine Modelling Study Modelling Report. Refer to Appendices 11.1 and 11.2 respectively (Refer to Appendix 11.1 to 11.6 for AECOM reports). All present within Volume 3 – Appendices (Atkins, 2023).

The proposed use of the temporary discharge outfall, Dunn’s Park, as a permanent discharge outfall was assessed in AECOM (2023) Marine Modelling Study and concluded *‘that the Youghal WwTP, operating at the design capacity of 16 000PE and discharging through the Dunns Park outfall, will not adversely impact:*

- *The current WFD status of the Lower Blackwater M Estuary or Youghal Harbour waterbodies;*
- *The bathing water quality at the beaches (Youghal Front Strand and Claycastle);*
- *The water quality of the Designated Shellfish Water (Ballymacoda), the Sea Fisheries Protection Authority Classified Production area in Youghal Bay or the aquaculture sites within Youghal Harbour and Youghal Bay.’*

Dunn’s Park as a permanent discharge outfall would be sufficient and would be the preferable option due to the fact that there would be no need to carry out construction works for a new outfall. There will be no changes required to the existing infrastructure to facilitate the project, therefore no demolition, construction or decommissioning phases will occur.

There are no changes to existing operational plant items, buildings or operational hours within the existing WwTP, hence no changes to the operational phase of the WwTP and Dunn’s Park outfall pipe will occur.

As the Dunn’s Park outfall has been found to be meeting the relevant environmental standards and due to the results of the Marine Modelling Study, UÉ propose to use Dunn’s Park discharge outfall as the permanent outfall for discharges of treated wastewater. This is the preferred option from an environmental perspective, which has been assessed in the EIAR.

[Refer to Table 1 for comparison of the ‘Do Nothing’ Scenario, Option 1 and Option 2 with respect to potential impacts during the construction and operational phase.](#)

Table 1: Comparison of the 'Do Nothing' Scenario, Option 1 and Option 2 with respect to potential impacts during the construction and operational phase.

Environmental Topics	Potential Construction Impacts			Potential Operation Impacts		
	Do Nothing	Option 1	Option 2	Do Nothing	Option 1	Option 2
Landscape & Visual	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Air Quality and Odour and Climate	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Noise & Vibration	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Land & Soils	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traffic	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural Heritage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population and Human Health	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biodiversity	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Material Assets	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Major Accidents & Disasters	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## **2. Clarify the main reasons for selecting the chosen option over the ‘do nothing’ scenario**

The main reason for choosing option 2 over the do nothing scenario relates to ensuring WWDL compliance. The WWDL (reg. No, D0139-01) envisaged that the use of Dunn's Park would only be temporary. In order to ensure that UÉ complies with its legal obligations, UÉ is seeking the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall.

## **3. Provide an update of the description of the ‘do nothing’ scenario with its specific characteristics.**

# **Youghal EIAR. Volume 2, Chapter 2, Section 2.3.2**

## **Consideration of Reasonable Alternatives**

### **‘Do Nothing’ Scenario**

There are no construction impacts associated with the “Do nothing” Scenario as there is no construction phase associated with this scenario.

The ‘do nothing’ scenario is the continuation of the existing baseline i.e. discharge of treated effluent from Dunn's Park as a temporary discharge outfall and as assessed in the EIAR (Atkins, 2023). As detailed in Sections 1.1 and 1.2 [of the EIAR - Volume 2 (Atkins, 2023)], treated wastewater from Youghal WwTP is currently discharged into the Blackwater estuary via the temporary discharge outfall at Dunn's Park. The purpose of this WWDL application is to regularise the status of this outfall from temporary to permanent. During the do nothing scenario, Youghal WwTP will continue to operate in its current format and capacity. Under WwDL D0139-01, granted by the EPA on 13<sup>th</sup> of June 2012, the discharge outfall at Dunn's Park is a temporary discharge outfall. The do-nothing scenario does not encompass the making of the temporary discharge outfall at Dunn's Park into a permanent discharge outfall for Youghal agglomeration. Environmental effects of doing nothing have been assessed as part of the EIAR-Volume 2 (Atkins, 2023) and the outcome for all environmental topics are summarised below.

### **Landscape & Visual**

The ‘do nothing’ scenario is what is currently occurring onsite, that is the continuation of the WwTP in its current format and capacity and the use of Dunn's Park outfall as a temporary discharge outfall. The significance of the do-nothing effect would be neutral and long-term duration for landscape and visual receptors.

### **Air Quality and Odour and Climate**

In this scenario, the existing discharge outfall would remain temporary and the WwTP will continue to operate in its current format and capacity. This scenario does not involve any new works since it relates only to continuing the existing temporary discharge outfall. The existing monitoring occurring onsite as part of the existing WwDL licence (Reg No. D0139-03) at the WwTP results in a non-odorous final effluent at the discharge point. As there would be no changes, there would be no change in terms of environmental impact in relation to air quality, odour, and climate.

### **Noise and Vibration**

In the ‘do nothing’ scenario, the current operations of the Dunn's Park discharge outfall will continue to operate as a temporary discharge point. The prevailing noise environment as measured, will remain unchanged.

### **Land & Soils**

There would be no difference in the ‘do nothing’ scenario, i.e. the existing baseline; discharge treated effluent from Dunn's Park as a temporary discharge outfall and Youghal WwTP will continue to operate in its current format and capacity.

Youghal WwTP is currently using the Dunn's Park discharge outfall as a temporary discharge location.

There will be no changes associated with the 'do nothing' scenario, for the current operation phase or WwTP process of the WwTP hence there will be no changes to the discharge at Dunn's Park and therefore there will be no effects with regards to the land, soils and geology for the 'do nothing' scenario. The 'do nothing' scenario will not have any effect on land, soils and geology.

### **Traffic**

There would be no difference in the 'do nothing' scenario, i.e. the existing baseline; discharge treated effluent from Dunn's Park as a temporary discharge outfall and Youghal WwTP will continue to operate in its current format and capacity. The project will remain as is and will not have any effect on traffic.

### **Cultural Heritage**

The 'do nothing' scenario is continuation of the existing baseline, i.e. discharging treated effluent from Dunn's Park as a temporary discharge outfall with the ongoing operation of the WwTP and would result in no likely effects on the cultural heritage resource.

### **Population and Human Health**

There would be no difference in the 'do nothing' scenario, i.e. the existing baseline; discharge treated effluent from Dunn's Park as a temporary discharge outfall and Youghal WwTP will continue to operate in its current format and capacity. The project will remain as is and will not have any effect on population and human health.

There will be no changes to the 'do nothing' operation phase, existing operational plant items or process of the WwTP hence there will be no changes to the discharge at Dunn's Park discharge outfall.

The likely significant operational effects on human health were assessed within the Chapter 9 of the EIAR – Volume 2 (Atkins, 2023), which are the same as the do nothing scenario, from different environmental assessments as follows:

- AECOM marine modelling studies: AECOM (2023) Youghal Wastewater Treatment Works Marine Modelling Study Addendum (Refer to Appendix 11.1) and AECOM (2020) Youghal Marine Modelling Study Modelling Report (Refer to Appendix 11.2). All present within Volume 3 - Appendices (Atkins, 2023).

As a result of the marine modelling studies there are no potential likely significant effects on human health associated with the operation phase of the 'do-nothing' scenario. As a result of the above assessments and that there are no valid source-pathway-receptor linkages. The above assessment (AECOM, 2023) confirms there is no significant effects on the receptors; 'Based on the findings above it is concluded that the Youghal WwTP, operating at the design capacity of 16 000PE and discharging through the Dunn's Park outfall, will not adversely impact.

- The current WFD status of the Lower Blackwater M Estuary or Youghal Harbour waterbodies.
- The bathing water quality at the beaches (Youghal Front Strand and Claycastle).
- The water quality of the Designated Shellfish Water (Ballymacoda), the SPFA Classified Production area in Youghal Bay or the aquaculture sites within Youghal Harbour and Youghal Bay' (AECOM, 2023).

### **Biodiversity**

As noted, there are no physical changes occurring with Dunn's Park temporary discharge outfall and there are no changes required to the existing infrastructure to facilitate the project, therefore no demolition, construction or decommissioning phases will occur (this is described in full in Section 2 of the EIAR). In the absence of the project, the site of the WwTP, Dunn's Park outfall, the access road and the public landscaped environs of the road are likely to be managed in the same way as at present. Apart from further maturation of landscape trees little change in terrestrial habitats is therefore envisaged in the short to medium term.

## Water

If the project is not undertaken the baseline water environment would remain unchanged. The 'do-nothing' scenario would result in likely neutral effects with regards to hydrology and hydrogeology.

In terms of surface water /transitional water flows and groundwater resources, no significant effects are likely to arise from the 'do-nothing' scenario based on the following considerations:

- The WwTP, which has been fully operational since 2018, is consented and licenced. Dunn's Park discharge outfall currently operates on a temporary basis, in accordance with the relevant environmental management and monitoring requirements of the wastewater licence. This will remain the same during the 'do nothing' scenario. The project will remain as is and will not have any likely significant effects on water.

## Material Assets

There would be no difference in the 'do nothing' scenario, i.e. the current baseline; discharge treated effluent from Dunn's Park as a temporary discharge outfall and Youghal WwTP will continue to operate in its current format and capacity. The project will remain as is and will not have any effect on built services and waste. The WwTP will continue to discharge treated effluent via the Dunn's Park as per the WwDL. *There will be no changes to the existing built services / utilities as part of the 'do nothing' scenario operation phase of the project. There will be no likely significant effects regarding built services during the operational phase of the 'do nothing scenario'.*

## Major Accidents & Disasters

There would be no difference in the 'do nothing' scenario as the project will not have any effect with regards to major accidents and disasters.

*No major accidents and disasters are anticipated. Also, the operation phase of the project under the 'do nothing' scenario will remain operational in its current format and capacity under the existing WwDL.*

**4. In addition to the above please also provide an updated non-technical summary to reflect the information provided in your reply.**

# Youghal EIAR. Volume 1, Section 2 (Non-Technical Summary) – Additional Text

## Consideration of Alternatives <sup>1</sup>

Potential alternatives to the project have been considered within this Response and are summarised in Chapter 2 of Volume 2 – Environmental Impact Assessment Report (EIAR) (Atkins, 2023) of the submission.

The 'Do Nothing' Scenario considered is the continuation of the existing baseline i.e. discharge of treated effluent from Dunn's Park as a temporary discharge outfall. As detailed in Chapter 1 of this EIAR, treated wastewater from Youghal WwTP is discharged into the Blackwater estuary via the temporary discharge outfall at Dunn's Park. During the 'Do Nothing' Scenario Youghal WwTP will continue to operate in its current format and capacity.

Option 1 considered the construction of a new permanent primary outfall pipe emerging into a deep trench at Ferry Point in the Blackwater Estuary as an alternative. This alternative involves a

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<sup>1</sup> Please note this text has been included within the NTS – Volume 2 in section 2 - Consideration of Alternatives as per of the RFI response received by EPA and will be submitted with this document.

construction phase that has associated environmental impacts, and as such Option 1 is the less favourable option due to construction impacts associated with the new permanent outfall pipe at Ferry Point.

Option 2 considered using the temporary discharge outfall at Dunn's Park as a permanent discharge outfall. Marine modelling studies carried out by AECOM (2020; 2023), presented in Volume 3 – Appendices, show that the practice of discharging effluent from Dunn's Park outfall meets the relevant environmental standards. The AECOM (2023) report states that the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall was assessed in AECOM (2023) Marine Modelling Study and concluded 'that the Youghal WwTP, operating at the design capacity of 16 000PE and discharging through the Dunnes Park outfall, will not adversely impact:

- The current WFD status of the Lower Blackwater M Estuary or Youghal Harbour waterbodies;
- The bathing water quality at the beaches (Youghal Front Strand and Claycastle);
- The water quality of the Designated Shellfish Water (Ballymacoda), the Sea Fisheries Protection Authority Classified Production area in Youghal Bay or the aquaculture sites within Youghal Harbour and Youghal Bay.

Also due to the fact that this Option (Option 2) does not involve any construction activities, Dunn's Park outfall as the permanent outfall for Youghal WwTP is the preferred option from an environmental perspective. The main reason for choosing option 2 over the do nothing scenario relates to ensuring WWDL compliance. The WWDL (reg. No, D0139-01) envisaged that the use of Dunn's Park would only be temporary. In order to ensure that UÉ complies with its legal obligations, UÉ is seeking the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall.

As discharge from the Dunn's Park outfall has been found to meet the relevant environmental standards, UÉ propose to use Dunn's Park discharge outfall as the permanent outfall for discharges of treated wastewater, and this preferred option has been assessed in the EIAR submitted to the EPA on 31<sup>st</sup> of August 2023.

## **Appendix 2: Updated Volume 1: Non-Technical Summary**

# Youghal Wastewater Discharge Licence (Reg. No. D0139-03)

Environmental Impact Assessment Report  
Volume 1 – Non-Technical Summary

Uisce Éireann

May 2024





# Notice

This document and its contents have been prepared and are intended solely as information for Uisce Éireann and use in relation to the proposed use of the temporary discharge outfall, Dunn’s Park, as a permanent discharge outfall location at Youghal Wastewater Treatment Plant under Discharge Licence (Reg. No. D0139-03).

WS Atkins Ireland Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 27 pages including the cover.

## Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 0	Final	JL	JL	KL/DL	DL	31/07/2023
Rev 1*	Final EPA Response	JL	JL	KL/DL		10/05/2024

Rev 1 \* : Section 2 - Consideration of Alternatives within the NTS – Volume 2 has been updated to address the RFI response received by EPA on the 5<sup>th</sup> of April 2024.

## Client signoff

Client	Uisce Éireann
Project	The proposed use of the temporary discharge outfall, Dunn’s Park, as a permanent discharge outfall location at Youghal Wastewater Treatment Plant under Discharge Licence (Reg. No. D0139-03).
Job number	5204549
Client signature / date	

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# 1. Introduction & Methodology

Uisce Éireann (UÉ) are applying to the Environmental Protection Agency (EPA) for consent for the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall at Youghal Wastewater Treatment Plant (WwTP) under Wastewater Discharge Licence (WwDL) Reg. No. D0139-03<sup>1</sup> in Co. Cork in accordance with Regulation 17 of the Waste Water Discharge (Authorisation) Regulations 2007, as amended.

This non-technical summary presents a general overview of the project and an assessment of all associated potential environmental impacts. Refer also to the Environmental Impact Assessment Report (EIAR) submitted as part of submission. The EIAR is presented in three volumes as follows;

**Volume 1** - Non-Technical Summary (this document);

**Volume 2**- EIAR; and

**Volume 3**- EIAR Appendices.

## Introduction

The proposed use of Dunn's Park discharge outfall as a permanent discharge outfall is hereafter also referred to as 'the Site', or the 'project. The Dunn's Park discharge outfall is currently operational as a temporary discharge location from Youghal's WwTP under discharge licence Reg No. D0139-01<sup>2</sup>. The existing outfall at Dunn's Park, discharges treated effluent into the Lower Blackwater M<sup>3</sup> Estuary / Youghal Harbour.

The operational phase of the project will involve continued operation of the Dunn's Park discharge outfall from Youghal's WwTP. There are no changes to existing operational plant items, buildings or operational hours within the existing WwTP. The Environmental Impact Assessment Report (EIAR) has been prepared based on the fact that the design capacity of 16,000 population equivalent (P.E) will not change.

There are no physical changes occurring with Dunn's Park discharge outfall and there are no changes required to the existing infrastructure to facilitate the project, therefore no demolition, construction or decommissioning phases will occur.

The licence review / EIAR is for the existing design capacity of 16,000 P.E. Dunn's Park discharge outfall has capacity to meet the maximum design discharge from 16,000 P.E. The collected load in 2021 was 11,338 P.E. as per UÉ 2021 Annual Environmental Report.

The site is located ca. 1.3km north of the town centre, in an area called the Mudlands. The site is bounded to the north by mudlands and greenfields, to the east by mudlands and the Lower Blackwater Estuary and to the south and west by mudlands, greenfields and residential properties. The site is primarily zoned as 'YL-GC-06 (Green Conservation)' in the Cork County Development Plan 2022-2028, which states that:

*'This area, consisting predominantly of woodland and agricultural land, forms an important visual part of the setting to Youghal particularly when seen from the north. The site forms part of a significant ecological green infrastructure corridor adjoining the estuary and supports wetland habitats including salt marshes, reed beds, marshes and lagoons. The existing pattern of land uses will remain largely unchanged. Parts of this area are important for overwintering wetland birds associated with the estuary. There may be opportunities for biodiversity enhancement of this area which should be encouraged'* (Cork County Council (CCC), 2022).

A small section of the project site is zoned as 'Existing residential/mixed residential and other uses'. Section 18.3.5 of the Plan states that 'These areas generally have a primary or strong residential component but which also provide for non-residential uses which protect and improve the primary use of these areas' (CCC, 2022).

## Background

Prior to the commissioning of the WwTP, wastewater from Youghal was untreated, and was discharged through a primary outfall located at Dunn's Park, which was constructed at some point in the 1970s. There were also two secondary outfalls, six storm water overflows and one emergency overflow.

In 2001, Youghal Urban District Council (UDC) prepared a "Main Drainage Scheme" (UDC Scheme), which proposed construction of the WwTP to treat wastewater from Youghal. The UDC Scheme envisaged that the primary outfall of treated effluent from the WwTP into the Blackwater estuary would be via a new outfall pipe emerging into a deep trench at Ferry Point. The UDC Scheme also intended that the existing outfalls at Dunn's Park, Paxes Lane, Foxhole and The Strand would remain as stormwater overflows or emergency overflows (in other words, those outfalls would only emit discharges on an intermittent basis).

<sup>1</sup> Applied for on the 18/06/2021 (<https://epawebapp.epa.ie/terminalfour/wwda/wwda-view.jsp?regno=D0139-03>)

<sup>2</sup> WwDL Reg No. D0139-02 has been withdrawn

<sup>3</sup> M denotes Munster

An Bord Pleanála certified that the UDC Scheme would not have significant adverse effects on the environment on 20<sup>th</sup> of March 2002 and was granted consent.

In 2008, prior to commencement of construction of the then-proposed WwTP, CCC applied to the EPA for a WwDL. The WwDL application outlined the following:

- Discharges of untreated wastewater at Dunn's Park would continue until the WwTP was commissioned;
- On commissioning of the WwTP, the primary outfall for discharges of treated effluent would be relocated to Ferry Point; and
- The remaining outfalls were to be rationalised.

The EPA granted the WwDL (Reg No. D0139-01) on the 13th of June 2012, with conditions. The conditions provided that discharges of untreated wastewater could continue from Dunn's Park until 31<sup>st</sup> December 2015. Following that point, the primary outfall for discharges of treated wastewater was to be relocated to Ferry Point. The WwDL presupposed that UÉ would commission both the WwTP and the new Ferry Point outfall at the same time. Construction of the WwTP was completed in November 2017 and commissioned on 8<sup>th</sup> of December 2017. Dunn's Park then became the primary discharge point for treated effluent from the WwTP, pending commissioning of the Ferry Point outfall. Ferry Point outfall has not been constructed.

### Environmental Impact Assessment Report (EIAR)

This EIAR has been prepared in accordance with European Union (Environmental Impact Assessment Directive (2011/92/EU as amended by 2014/52/EU) and European Union (Planning and Development) (Environmental Impact Assessment) Regulations and with due regard to the following EIAR guidance;

- Environmental Protection Agency (EPA) 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports', published in 2022;
- EPA 'Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)', published in September 2003;
- EPA 'Guidelines on the information to be contained in Environmental Impact Statements', published in 2002,
- European Commission (EC) 'Environmental Impact Assessment of Projects Guidance on Scoping (Directive 2011/92/EU as amended by 2014/52/EU)', published in 2017;
- EC 'Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU)', published in 2017; and,
- Department of Housing, Local Government and Heritage (DoHPLG) 'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment', published in August 2018.

Additionally, discipline specific best practice guidance has been consulted by each specialist for each of the topics (Population & Human Health; Biodiversity; Landscape and Visual; Air Quality, Odour & Climate; Noise & Vibration; Traffic; Land, Soils & Geology; Water; Cultural Heritage; and, Material Assets) during the preparation of the EIAR.

Within the main body of the EIAR (Volume 2), Chapter 1 sets out the introduction and methodology, Chapter 2 describes the project and identifies the information required in an EIAR.

The environmental topics where there is potential for significant effects to arise or if topics or subtopics are scoped out are addressed in Chapters 3 to 12 as follows;

- Chapter 3 Landscape and Visual;
- Chapter 4 Air Quality, Odour & Climate;
- Chapter 5 Noise & Vibration;
- Chapter 6 Land, Soils & Geology;
- Chapter 7 Traffic;
- Chapter 8 Cultural Heritage;
- Chapter 9 Population and Human Health;
- Chapter 10 Biodiversity;
- Chapter 11 Water; and,
- Chapter 12 Material Assets.

Cumulative Impacts for all relevant disciplines are addressed in Chapter 13 (Volume 2 – EIAR), Interactions between disciplines are addressed in Chapter 14 (Volume 2 – EIAR) and the Schedule of Environmental Commitments are presented within Chapter 15 of the EIAR (refer to Chapter 15, Volume 2 – EIAR).

The EIAR has been prepared by competent experts. As part of the assessment process, an environmental scoping exercise was carried out in accordance with Regulation 17C of the European Union (Waste Water Discharge) Regulations 2007 to 2020. The purpose of the exercise was to define the scope of the EIAR. UÉ requested the EPA to provide its opinion in writing on the scope and level of detail of the information required to be included in the EIAR. The EIA Scoping Report was issued to the EPA, who circulated the EIA scoping report to relevant statutory organisations as part of the assessment process, as detailed further in Section 2.5 within the EIAR (Volume 2).

It is concluded that the operation of the project does not pose a risk with regard to potential radiation effects, as no existing plant / equipment on site contains or emits radiation. Therefore, potential radiation effects do not warrant consideration within this EIAR.

There are no changes required to the existing infrastructure to facilitate the project, therefore no demolition, construction or decommissioning phases will occur. There are no changes to existing operational plant items, buildings or operational hours within the existing WwTP, hence there are no changes to the operational phase of the WwTP and Dunn's Park outfall pipe.

All relevant comments from the various consultees and the EPA (received 02/02/2022) have been fully addressed as required within the EIAR (Volume 2).

## 2. Project Description

### Details of Project

The project is for the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall at Youghal WwTP under Discharge Licence (Reg. No. D0139-03) in Co. Cork.

There are no physical changes occurring with Dunn's Park discharge outfall and there are no changes required to the existing infrastructure to facilitate the project, therefore no demolition, construction or decommissioning phases will occur. The existing WwDL (D0139-01) relates to the maximum design capacity of 16,000 population equivalent (P.E) which will not be altered or changed as part of this EIAR.

The operational phase of the project will involve continued operation of the Dunn's Park discharge outfall from Youghal's WwTP. There are no changes to existing operational plant items, buildings or operational hours within the existing WwTP, hence no changes to the operational phase of the WwTP and Dunn's Park outfall pipe will occur.

Refer to Figure 2-1 for the Youghal Agglomeration Boundary. Refer to Figure 2-2 for the outline of Youghal Wastewater Treatment Plant and Dunn's Park discharge outfall. The selected study area for the project depends on each environmental topic. Different subject matter experts may require a wider study area depending on their assessment / walkovers, to ensure a robust assessment for their particular environmental topic.

### Description of Baseline Scenario

The baseline scenario including a description of the relevant aspects of the current receiving environment has been considered and included in the EIAR through the collection and collation of baseline data including analytical data where relevant (noise levels). A detailed description of the current receiving environment is presented in relevant sections for each environmental topic within the EIAR (Volume 2).

### Consideration of Alternatives

*This section has been updated to address the RFI response received by the EPA on the 5<sup>th</sup> of April 2024.*

Potential alternatives to the project have been considered at length within this submission and are summarised in Volume 2 – EIAR Chapter 2 of the submission.

The 'Do Nothing' Scenario considered is the continuation of the existing baseline i.e. discharge of treated effluent from Dunn's Park as a temporary discharge outfall. As detailed in Chapter 1 of the EIAR – Volume 2, treated wastewater from Youghal WwTP is discharged into the Blackwater estuary via the temporary discharge outfall at Dunn's Park. During the 'Do Nothing' Scenario Youghal WwTP will continue to operate in its current format and capacity.

Option 1 considered the construction of a new permanent primary outfall pipe emerging into a deep trench at Ferry Point in the Blackwater Estuary as an alternative. This alternative involves a construction phase that has associated environmental impacts, and as such Option 1 is the less favourable option due to construction impacts associated with the new permanent outfall pipe at Ferry Point.

Option 2 considered using the temporary discharge outfall at Dunn's Park as a permanent discharge outfall. Marine modelling studies carried out by AECOM (2020; 2023), presented in Volume 3 – Appendices, show that the practice of discharging effluent from Dunn's Park outfall meets the relevant environmental standards. The AECOM (2023) report states that the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall was assessed in AECOM (2023) Marine Modelling Study and concluded 'that the Youghal WwTP, operating at the design capacity of 16 000PE and discharging through the Dunnes Park outfall, will not adversely impact:

- The current WFD status of the Lower Blackwater M Estuary or Youghal Harbour waterbodies;
- The bathing water quality at the beaches (Youghal Front Strand and Claycastle);
- The water quality of the Designated Shellfish Water (Ballymacoda), the Sea Fisheries Protection Authority Classified Production area in Youghal Bay or the aquaculture sites within Youghal Harbour and Youghal Bay.

Also due to the fact that this Option (Option 2) does not involve any construction activities, Dunn's Park outfall as the permanent outfall for Youghal WwTP is the preferred option from an environmental perspective. The main reason for choosing option 2 over the do nothing scenario relates to ensuring WWDL compliance. The WWDL (reg. No, D0139-01) envisaged that the use of Dunn's Park would only be temporary. In order to ensure that UÉ complies with its legal obligations, UÉ is seeking the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall.

As discharge from the Dunn's Park outfall has been found to meet the relevant environmental standards, UÉ propose to use Dunn's Park discharge outfall as the permanent outfall for discharges of treated wastewater, and this preferred option has been assessed in the EIAR submitted to the EPA on 31st of August 2023.

### Consideration of Cumulative Effects with other Projects

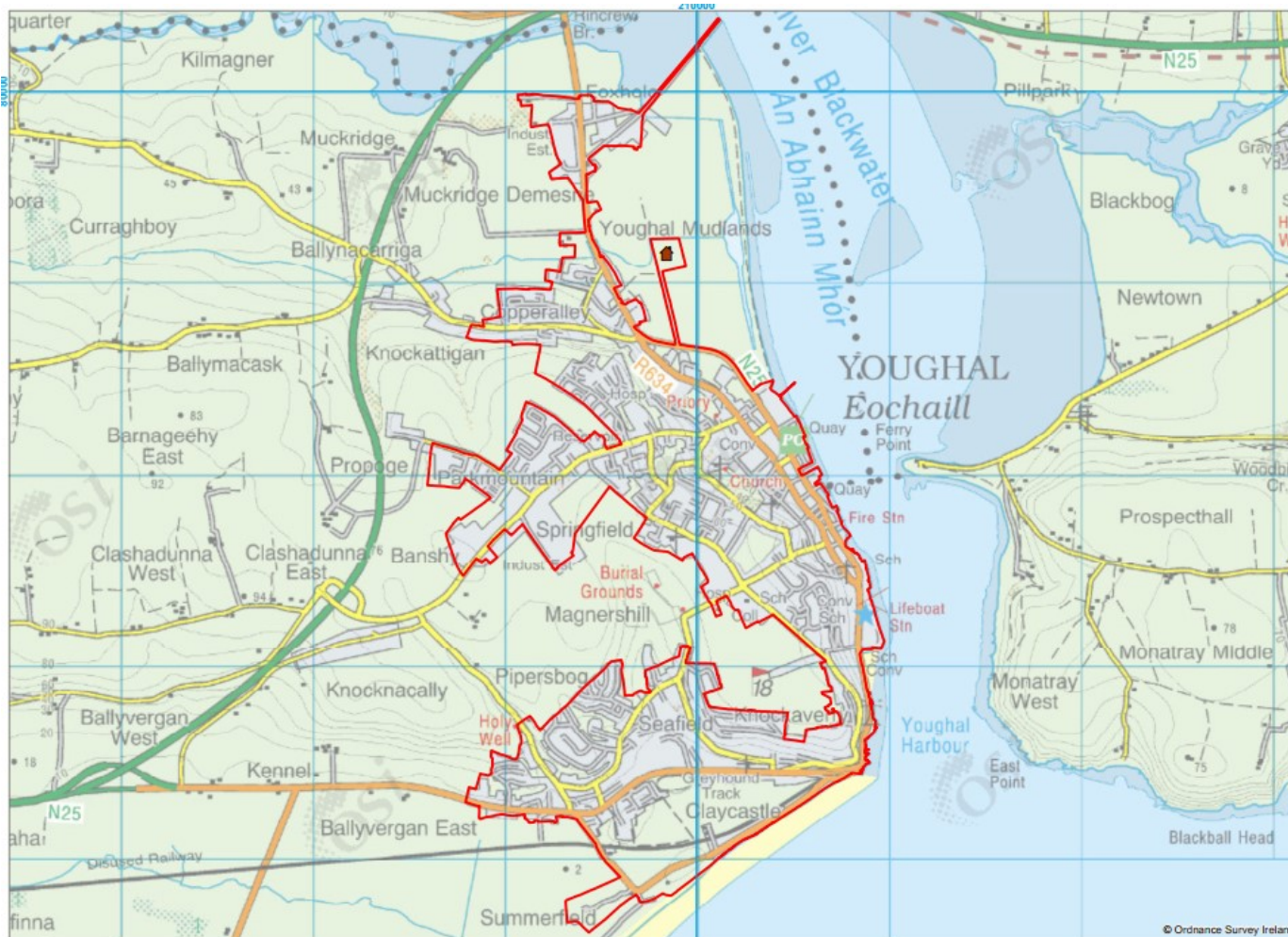
Consideration of cumulative effects with other projects were undertaken. All relevant developments in the immediate environs of the project, which have been approved or operational, have been reviewed in terms of potential cumulative environmental impacts that may arise with the project.

Cumulative impacts were identified by each specialist as part of their respective assessments (refer to Chapter 13 of Volume 2 - EIAR) and considered further as part of the EIAR. No significant cumulative effects arising from the project are anticipated.

### Risk of Major Accidents and/or Disasters

The potential risk posed by a major accident and/or disaster has been considered. Based on the location and nature of the project to such risk, and the unlikely potential occurrence of such an incident, the overall risk is considered to be low.





**Legend**  
 WWTP (IG 209846E 79157N)  
 Agglomeration Boundary

0 250 500 Meters	
Coordinate System: TM65 Irish Grid Projection: Transverse Mercator	
Scale:	1:20,000 @ A3
Revision No.:	1
Drawing No.:	1
Drawn By:	E.Laurinaviciute
Checked By:	P.Keegan
Approved By:	S.Flanagan
Drawn Date:	18/05/2022
Checked Date:	18/05/2022
Approved Date:	18/05/2022

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### Youghal D0139 - 01 Agglomeration Boundary

Figure 2-1 – Youghal Agglomeration Boundary





Figure 2.2 – Location of Dunn's Park Discharge Outfall

## 3. Landscape and Visual

This section summarises the effects of the project on landscape and visual receptors, and the significance of the effects identified. The extent of the study area extends to 500m from the centre of the outfall location as it enters the River Blackwater Estuary.

### Receiving Environment –Landscape

The Study Area lies within an area defined by the Draft Landscape Strategy as ‘Youghal Bay’, of landscape character type 2: Broad Bay Coast.

The Study Area straddles the coastline extending both inland and towards the centre of the Lower Blackwater M Estuary. On the landward side, the area is predominantly urban and highly varied in character and quality, incorporating the northern fringe of Youghal including central urban waterfront, a small industrial estate, mid-twentieth century suburb, a retail park and open countryside. The immediate environs of the development project areas are dominated by industrial features including the concrete seawall, security fencing and hard standing. The foreshore is comprised of a shallow shingle beach sloping to a sandy shelf. The discharge pipe crosses this beach perpendicular to the shoreline, sloping gradually into the water.

The site and Study Area lie within a ‘High Value Landscape’ as designated by the County Cork development plan. This is derived from the Draft Landscape Strategy 2007.

Immediately south of the site, the Youghal Conservation Area encompasses the town centre and the shoreline. The development is sufficiently distant from the Architectural Conservation Area (ACA), that it does not affect the setting of the ACA.

Within the County Development Plan, a designation of stretches of road as ‘Scenic Routes’ is defined. These are routes from which the views are considered to be worthy of protection from inappropriate development. The nearest of these to the site lie 1.25km to the north-west of the site and 2.25km from the project. Given that there will be no changes to the WwTP and the small scale of the area where the outfall is visible as it enters the estuary, any visual effects upon this scenic route are judged to be negligible to non-existent.

### Landscape Effects

Since the project is already in place, no construction activities are required. Hence there would be no construction related landscape and visual effects from the project.

The effect of the project is to retain the existing outfall pipeline for permanent use. As the project already is an element of the local landscape character, there would be no change to existing landscape character or landscape elements as a result of the project. The area where the outfall pipeline is visible already includes infrastructure including the concrete seawall, security fencing, warehousing and industrial machinery. It is therefore judged that the local landscape has **low** sensitivity to the project as it is already an element characteristic of its location.

The geographical extent over which the outfall pipe is perceptible will not change and stay limited to the area where it enters the estuary and the shoreline route near the immediate setting of the outfall. Therefore, the magnitude of change to landscape character is judged to be **no change**.

The combination of low sensitivity and no change magnitude suggests the significance of the effects on landscape character within the study area during the operational phase is judged to be **neutral** and **long term**.

### Receiving Environment - Visual

The only other element of the project which is visible includes the section of outfall pipe that is visible as it enters the River Lower Blackwater M Estuary and the length of this pipe that is visible up to its greatest extent at low tide. Sections of pipe that are underground or below the water level at low tide would not lead to any visual effects. The extent of visibility is restricted to the shoreline route running north from Youghal, with the outfall pipe being partially visible except at high tide.

The visual receptors identified include people in boats on the adjacent estuary, and people (both residents, visitors and outdoor workers) walking along the shoreline route north from Youghal including, Green’s Quay and the coastal path at Dunn’s Park.

Following desktop and field survey, 4 viewpoints were selected to represent the experience of different types of visual receptor. The viewpoints chosen do not cover every view but have been selected to represent the different users from a range of directions and distances from the site.

### Visual Effects

Since the project is already in place, no construction activities are required. Hence there would be no construction related landscape and visual effects from the project.

The significance of the visual effect of the operation phase of the project was judged as neutral from all 4 viewpoints.

## 4. Quality, Odour and Climate

The potential air quality, odour and climate effects on the surrounding environment that require consideration for a project of this type includes two distinct stages, the construction phase and the operational phase.

The WwTP is located in Youghal Co. Cork ca.1.3 km north from the centre of town and the nearest private residence is located 170m west to southwest of the site. The study area includes all areas that could potentially be affected by the emissions from the project.

The dominant influences on air quality in the area are emissions from traffic. Other sources such as commercial energy and heating sources, and domestic heating also influence air quality. The main substances which are of interest in terms of existing air quality are sulphur dioxide, nitrogen oxides (nitric oxide, NO and nitrogen dioxide NO<sub>2</sub>, collectively referred to as NO<sub>x</sub>), fine particulate matter including PM<sub>10</sub> and PM<sub>2.5</sub> which could originate from combustion sources, traffic and odour from existing site activities, and the nearby EPA licenced facilities in the area. Carbon monoxide is also potentially of interest, and benzene may also be of interest from traffic sources.

### Construction Phase Effects

There is no demolition, construction or decommissioning works associated with the project so there are therefore no construction phase effects.

### Operation Phase Effects

There will be no change in the nature or quantity of emissions as a result of the project

The operational phase activities will have a not significant impact on local air quality and will be long-term in duration.

### Air Quality and Climate Effects

There are negligible levels of emissions of greenhouse gases such as carbon dioxide, nitrous oxide and methane associated with the project and the low traffic levels associated with the project.

The emissions associated with the project are considered imperceptible, their effect on climate can also be regarded as imperceptible

### Odour Effects

There will be no change to the characteristics of the emissions from any stage of the treatment process as a result of the project. Therefore, there is no change in odour effect predicted as a result of the project. The impact of the project will be neutral, imperceptible and long term.

### Cumulative Effect Assessment

The most relevant nearby sites are the Waste Transfer Station (Licence Reg W0211-02) and Youghal Landfill(Licence Reg W0068-03). These sites are located north of the site and have the potential to emit odour. These sites are mainly downwind of the WwTP and at a distance which is unlikely to lead to measurable cumulative impacts.

There will be no significant adverse air quality, climate, or odour impacts on the environment as a result of the project or in conjunction with other local developments that are planned for the area.

### Mitigation Measures

The project is for the proposed use of Dunn's Park as a permanent discharge location outfall. The project does not involve any new works since it relates only to continuing the existing discharge outfall. The existing monitoring occurring onsite as part of the existing WwDL licence (Reg No. D0139-01) at the WwTP demonstrates a non-odorous final effluent at the discharge point, thereby demonstrating that any existing mitigation measures are effective.

### Residual Effects

The comprehensive mitigation and management existing at the WwTP will ensure that there are no significant residual effects. The residual effects of the project will be neutral, imperceptible and long term.

## 5. Noise & Vibration

Chapter 5 assesses the potential noise and vibration effects associated with the proposed use of temporary discharge outfall, Dunn's Park, as a permanent discharge outfall from Youghal WwTP in Co. Cork. The study has been undertaken using the following methodology:

- A review of relevant guidance and standards has been undertaken to identify appropriate noise and vibration criteria relevant to the existing facility to assess against best practice guidance;
- An environmental noise survey was undertaken to characterise the prevailing noise environment at the closest noise sensitive locations (NSLs) to the existing WwTP and Dunn's Park discharge outfall to establish the contribution, if any, of the existing operation to the ambient noise environment;
- An assessment of operational noise levels against the appropriate identified criteria and existing noise levels has been undertaken; and,
- An assessment of the potential noise and vibration impacts of the continued operations has been undertaken alongside any potential cumulative impacts with surrounding planned or permitted developments in place.

### Receiving Environment

The existing environment surrounding the Youghal WwTP and Dunn's Park discharge outfall is semi-urban in nature comprising a mixture of local and national roads, residential areas and commercial and industrial facilities. The prevailing noise environment was surveyed adjacent to the WwTP facility and Dunn's Park discharge outfall and in proximity to NSLs in the surrounding environment. There was no audible noise contribution from the WwTP facility at the nearest NSLs. There was no audible noise associated with Dunn's Park discharge outfall at the adjacent measurement location. The noise environment was noted to be dominated by road traffic from the surrounding road network and environmental sources including birdsong and leaf rustle. The operation of the WwTP and the discharge outfall, therefore, do not contribute to any notable noise levels to the NSLs in their vicinity and comply with standard guidelines that would typically apply for noise in their surrounding environments.

### Potential Effects

#### Construction Phase

There is no demolition, construction or decommission phases associated with the proposed project. Youghal WwTP is currently using the Dunn's Park discharge outfall as a temporary discharge location. Therefore there are no potential noise or vibration effects in this case as there is no construction taking place.

#### Operational Phase

The operational phase of the project will involve continued operation of the Dunn's Park discharge outfall from Youghal's WwTP. There are no changes to existing operational plant items, buildings or operational hours within the existing WwTP, hence no changes to the noise environment from the existing WwTP facility will occur.

Operational noise levels associated with the existing WwTP and Dunn's Park discharge outfall do not contribute to the prevailing noise environment at the closest NSLs. Operational noise levels associated with the existing WwTP and Dunn's Park discharge are well below noise limits values that would be typically applied to similar licenced facilities.

In summary, there is no change to the noise environment associated with the project (i.e. proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall), hence the effect of continued operation when compared to existing conditions is neutral, imperceptible and long term.



## 6. Land, Soils and Geology

### Receiving Environment

This chapter describes the type of land, soils and geology likely to be encountered beneath and in the general area of the project. The project entails the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall location.

Land use at the Site has generally been transformed over the years from vacant area of slob lands and regular fields, where the lands was reclaimed in the 19<sup>th</sup> century to agricultural land.

The topography of the surrounding area generally falls from west to east, towards the Blackwater Estuary / Youghal Harbour. The topography of the site ranges between 0m and 5m above ordnance datum (mOD) (OSI, 2023)<sup>4</sup>.

According to the GSI public data viewer (GSI, 2023), the primary superficial / quaternary sediments underlying the vicinity of the Site include marine beach sands (Mbs) in the north and urban (made ground) in the south. (GSI, 2023).

### Construction Land, Soils & Geology Effects

Youghal WwTP is currently using the Dunn's Park discharge outfall as a temporary discharge location. There are no demolition, construction, or decommissioning phases as part of the project, hence there is no proposed works, no land take or ground excavation occurring. Therefore there are no associated effects.

### Operational Land, Soils & Geology Effects

The project will have a neutral effect on land as no land take is required for the project. There will be no change in overall use of the WwTP lands. There is no evidence of soil contamination at the project. There will be no effects with regards to land (including land take), soils or geology during the operational phase, based on the nature, location and scale of the project.

The project is for the use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall. There will be no changes to the current operation phase or WwTP process of the WwTP hence there will be no changes to the discharge at Dunn's Park and therefore there will be no effects with regards to the land, soils and geology predicted. Hence effects are neutral, imperceptible and long-term

### Conclusion

There are no predicted effects on the land, soils and geology, hence no mitigation measures are required.

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<sup>4</sup> <https://webapps.geohive.ie/mapviewer/index.html>

## 7. Traffic

### Receiving Environment

The project is the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall. There is no demolition, construction or decommission phases associated with the project. Youghal WwTP is currently using the Dunn's Park discharge outfall as a temporary discharge location.

Access to the existing WwTP is provided off the R634. This access will be retained for the project. The cross-section and access point are shown in Plate 7.1 below. The section of R634 road between the access point to WwTP and the outfall pipe location is approximately 750 meters in length.

The receiving environment was reviewed, and it was found that the existing plant traffic was as follows:

- Sludge Truck – 1 truck per week, which will attribute to 2 round trips per week;
- Non-sludge Truck - 1 truck per week, which will attribute to 2 round trips per week; and,
- Employee Trips – 1 employee per day which will attribute to 2 trips per day.

### Construction Effects

As a result of there being no construction phase, no effects are expected on the local road network.

### Operational Effects

As the operation of the plant would not change as a result of the project, the anticipated impact on the operation phase is anticipated to be neutral, imperceptible and long-term.

### Conclusion

There are no predicted effects on the traffic, as a result, no mitigation measures or monitoring are required.

## 8. Cultural Heritage

This chapter presents an assessment of the proposed use of the temporary discharge outfall Dunn's Park (SW000) as a permanent discharge outfall on the cultural heritage resource. Youghal WwTP is currently using the existing outfall as a temporary discharge location and there will be no demolition, construction or decommissioning phases associated with the project.

The assessment was based on a desktop study of the cultural heritage environment within a study area that encompasses the project location and the lands extending for 50m from its boundary and this was followed by a site inspection of the project location and its environs. Based on the results of these studies the chapter then presents an assessment of predicted effects and conclusions in relation to the need for any mitigation measures.

The project is located within the townland of Youghal Mudlands in the northern outskirts of Youghal town and at its nearest point is ca. 150m outside the extent of the medieval walled town. It is contained within a former area of slob lands which was reclaimed from the western side of the harbour during the middle of the 19th century and was then developed as an area of vacant agricultural grassland during subsequent decades.

There are no recorded archaeological sites located within the boundary of the project, which is also outside the Zone of Archaeological Potential around the historic core of Youghal town. The nearest recorded archaeological site to the project is a 19<sup>th</sup> century gasworks (CO067-031----) located 120m to the south of the section of the outfall route extending along the R634 road. The site of a Dominican Friary (CO067-030002-) is located 180m to the west of the nearest section of the outfall route and this location also contains the former site of a church (CO067-061----) and an existing graveyard (CO067-030001-).

A review of the National Monuments Service Wreck Viewer revealed that there are no recorded shipwrecks located within the environs of the Dunn's Park discharge outfall. A review of the Database of Irish Excavation Reports revealed that it contains no records of any archaeological investigations associated with the construction of the WwTP or discharge outfall. The Database contains two entries describing archaeological investigations within the environs of the project and neither of these revealed nothing of archaeological significance. In addition, a review of the National Museum of Ireland's Topographical File archive revealed that it does not contain any records for the discovery of archaeological objects within the townland of Youghal Mudlands.

The project is located outside the Youghal Architectural Conservation Area as mapped in the County Cork Development Plan 2022-2028. The Record of Protected Structures published in this development plan lists one example within the study area, and this comprises a boundary wall constructed in 1845 to delimit the east side of the reclaimed slob lands (RPS ref. 2728). The wall is also listed in the National Inventory of Architectural Heritage (NIAH ref. 20823004) which assigns it a regional ranking. This wall remains extant in the waterfront area to the north of the existing outfall. The detail on the first edition 6-inch OS map (1842) shows the project location as part of a vacant area of slob lands and no structures are shown within its boundary. The detail on the 25-edition OS map (published 1905) shows the area occupied by regular, vacant fields following the completion of the 19th century reclamation works.

It is concluded that the proposed use of the temporary discharge outfall, Dunn's Park, as a permanent discharge outfall will have a neutral, imperceptible, long-term effect on the cultural heritage resource and, therefore, no mitigation measures are required.



## 9. Population and Human Health

### Receiving Environment

This chapter assesses the likely significant effects of the project on the Population and Human Health setting in the general area of Dunn's Park discharge outfall at Youghal WwTP in Co. Cork.

The site is located ca. 1.3km north of the town centre, in an area called the Mudlands. The site is bounded to the north by mudlands and greenfields, to the east by mudlands and the Lower Blackwater Estuary and to the south and west by mudlands, greenfields and residential properties. The site is primarily zoned as 'YL-GC-06 (Green Conservation)' in the Cork County Development Plan 2022-2028. A small section of the project site is zoned as 'Existing residential/mixed residential and other uses' (CCC, 2022).

Given the nature of the project it is considered the key study areas are the 'Local Area' (comprised of Youghal Rural (Cork) and Youghal Urban (Cork) EDs and the County Area (consisting of Cork County Council). There has been a consistently high level of population growth within the state and County Cork over this period, with this growth anticipated to continue in the future. There has also been significant population growth between 2011 and 2016 in Youghal Urban (Cork) with a growth of 11%, and a significant decrease (-74%) in population growth in the Youghal Rural (Cork) between 2011 and 2016.

### Construction Effects

There are no changes required to the existing infrastructure to facilitate the project, therefore no demolition, construction or decommissioning phases will occur. Therefore there are no associated effects.

### Operation Effects

The existing WwTP is an established use, as is the existing Dunn's Park temporary discharge outfall.

The potential likely significant operational effects on human health were assessed from different environmental assessment, as follows:

- Chapter 4 – Air Quality, Odour and Climate;
- Chapter 5 – Noise and Vibration;
- Chapter 6 – Soils, Geology and Land;
- Chapter 11 – Water; and,
- AECOM (2023) Youghal Wastewater Treatment Works Marine Modelling Study Addendum (Refer to Appendix 11.1).

The operational phase of the project will involve continued operation of the Dunn's Park discharge outfall from Youghal's WwTP. There are no changes to existing operational plant items, buildings or operational hours within the existing WwTP. The effect is neutral, imperceptible, and long term on land use, age profile, economic profile and tourism and amenities.

There are no potential likely significant effects on human health associated with the operation phase. As a result of the above assessments and that there are no valid source-pathway-receptor linkages. As the above assessment (AECOM, 2023) confirm there is no significant effects on the receptors; *'Based on the findings above it is concluded that the Youghal WwTP, operating at the design capacity of 16 000PE and discharging through the Dunn's Park outfall, will not adversely impact.*

- *The current WFD status of the Lower Blackwater M Estuary or Youghal Harbour waterbodies.*
- *The bathing water quality at the beaches (Youghal Front Strand and Claycastle).*
- *The water quality of the Designated Shellfish Water (Ballymacoda), the SPFA Classified Production area in Youghal Bay or the aquaculture sites within Youghal Harbour and Youghal Bay' (AECOM, 2023).*

### Conclusion

There are no required mitigation or monitoring measures associated with the project. There will be no residual effects with regards to Population and Human Health.

## 10. Biodiversity

This biodiversity chapter identifies and evaluates potential effects of the proposed permanent use of the Dunn's Park discharge outfall on non-European protected sites, habitats, species, and ecosystems. It considers impacts to ecological receptors and considered whether measures are required to offset or reduce any identified impacts. A Natura Impact Statement (NIS) has been prepared by Uisce Éireann (2023) for the project. Refer to Volume 3 - Appendix 10.1.

Dunn's Park outfall is located within the Blackwater River (Cork/Waterford) SAC (002170), the Blackwater Estuary SPA (004028), while land-based aspects of the project (such as the WwTP, pipes etc.) are not; these elements range in distance of 0m to 415m from the boundaries of aforementioned European sites. Dunn's Park outfall pipe is within the Blackwater River and Estuary pNHA (000072); the balance of the project is not within the pNHA.

No ecological features of regional, national or European importance will be impacted by the project. The lands within the project are dominated by habitats of low ecological value, such as built land (BL3), amenity grassland (GA2), and areas of recolonizing bare ground (ED2/ED3). No rare plant species were recorded within the project area. No invasive species listed on the 3<sup>rd</sup> Schedule of Natural Habitats Regulations, 2011 (SI 477 of 2011) were recorded within the project area; nor were there any signs of protected mammal species, such as Badger (*Meles meles*).

There are no watercourses on site; the Muckridge Stream is located north of the WwTP. This along with a number of drains which cross under the access road to the WwTP ultimately discharge to the lagoon to the east, (this is within Blackwater River (Cork/Waterford) SAC). However, no works are proposed to any of these watercourses, nor will there be any alteration to the existing pattern of surface water drainage from the WwTP or from the access road.

There are no changes required to the existing infrastructure to facilitate the project, therefore no clearance of vegetation, no demolition, construction, or decommissioning phases will occur. While groups such as bats were considered in the desktop assessment, the need for a targeted bat survey (or indeed a breeding bird survey) was therefore scoped out as there is no pathway by which such groups might be affected by permanent use of the Dunn's Park discharge outfall. Wintering shorebirds are considered in the accompanying NIS. Refer to Volume 3 - Appendix 10.1.

The potential impacts associated with WwTP discharges is related to Biological Oxygen Demand (BOD), nutrient and bacteriological loading; these will not impact upon terrestrial habitats or species. A model of the discharge based on these parameters was carried out by AECOM (2023) on behalf of Uisce Éireann. The model found that the discharge would not adversely impact on the Water Framework Directive status, bathing water quality or aquaculture sites within Youghal Harbour or Youghal Bay. As such there will be no impact on marine mammals or on estuarine habitats or species as there is no predicted impact on water quality (see EIAR Volume 2 - Chapter 11 - Water Chapter). Potential impacts on qualifying interests of European sites are considered in the accompanying NIS (Uisce Éireann, 2023). No mitigation measures for biodiversity are required.

# 11. Water

This chapter describes the existing surface water and groundwater setting likely to be encountered within the vicinity of the project. The project comprises the use of Dunn's Park discharge outfall as the primary outfall for Youghal WwTP, on a permanent basis. Potential impacts on hydrology (i.e. surface water) and hydrogeology (i.e. groundwater) have been assessed in accordance with relevant best practice guidance. In addition, a Marine Modelling Study (AECOM, 2019 - 2023) has been prepared with the aim of assessing the discharges of treated wastewater from the Youghal WwTP to the tidal River Blackwater. A flood risk assessment has also been undertaken for the project; however no unacceptable risk of flooding from or to the project has been identified.

The site comprises the Youghal WwTP (operational from 2018), greenfield lands on the edge of Youghal estuary. The topography of the site ranges between 0m and 5m above ordnance datum (mOD). The site is generally bounded by greenfield lands, used primarily for grazing, and is immediately bounded by Muckridge Stream, and a minor field drain. The nearest designated European Sites are: Blackwater River (Cork / Waterford) SAC (Ref: 002170); Blackwater Estuary SPA (Ref: 004028); and, Blackwater River and Estuary pNHA (Ref: 000072). Dunn's Park discharge outfalls into the Blackwater River and Estuary, and directly into these designated European Sites. there are 4no. EPA licenced facilities within 5km of the Site. The main potential contamination source offsite is Youghal Landfill Facility, located ca. 1.5km north (and upstream) of Dunn's Park outfall pipe.

The River Muckridge flows through the northern region of the site into the Lower Blackwater Estuary/Youghal Harbour, which flows into Youghal Bay. The East Ballyvergan river is located ca. 200m south of the site and discharges into Youghal Harbour ca. 550m south west of this point. There are no audited geological heritage sites within 500m of the site. The River Muckridge has been assigned a 'moderate' river water quality status by the EPA for the 2016 to 2021 monitoring period, while the status of the East Ballyvergan river is assigned as 'good' for the same monitoring period. The Lower Blackwater Estuary/Youghal Harbour waterbody is classified as having 'moderate' transitional waterbody status. Youghal Bay, the coastal waterbody south of site has been assigned a 'moderate' water quality status for the same period.

The EPA maintains a record of locations and water quality values collected for the National Water Monitoring by the EPA and Local Authorities. A review of available surface water quality data has been undertaken for two key sample locations as follows:

- EPA Monitoring Station: TW31003144BR2012 – located upstream of Dunn's Park discharge point; and,
- EPA Monitoring Station: TW31003144BR2013 - located downstream of Dunn's Park discharge point.

For the purposes of the baseline assessment a review of key surface water parameters (Ammonia, BOD and Orthophosphate) for a six year period (2016 – 2022) was undertaken.

Accounting for seasonal changes and natural variation of the water quality in Youghal Bay transitional waters, no significant effects on receiving water quality at the upstream monitoring location, with respect to Ammonia and BOD, were observed as a result of discharge via. Dunn's Park discharge point (which commenced in 2018). A general increasing (fluctuating), trend in average annual ortho-phosphate (as P) concentrations is noted at the upstream monitoring location. However the source is unlikely to be Dunn's Park discharge. Rather it is likely to be due to an identified offsite contamination source, Youghal landfill.

No significant effects on receiving water quality at the downstream monitoring location, were observed as a result of the ongoing operation of discharge via. Dunn's Park discharge point. There was no observed net negative effect on baseline water quality downstream of Dunn's Park discharge point, since the WwTP commenced operations in 2018 throughout the monitoring period to 2022.

Groundwater vulnerability is an indication of how easily the aquifer can become contaminated by human activity. It is dependent on the thickness and permeability of the overlying soils and depth to the water table. Groundwater vulnerability (in the bedrock aquifer) beneath the site ranges between 'High(H)' to 'Moderate(M)'. The vulnerability within the Youghal Agglomeration is predominantly 'High(H)' to 'Extreme(E)' with some areas of 'Rock at or Near Surface'.

The GSI has devised a system for classifying bedrock aquifers and gravel aquifers in Ireland based on the size and hydrogeological characteristics of these aquifers. The bedrock aquifer beneath the site is generally classified as Poor (which is generally unproductive except for local zone), with the northern portion underlain by a Locally Important Karstified bedrock aquifer. Average recharge of the locally important bedrock aquifer beneath the site ranges between ca. 100 to 400 mm/yr.

The soil deposits underlying the site comprise soft thinly laminated organic silts and very silty clays with frequent thin sand layers and layers of partially decomposed organic material overlying dense gravel. Based on site specific data, these dense gravels were encountered at depths of 9.2m and 14m beneath the site, and depth increases towards the harbour. The gravel layer is saturated, with groundwater encountered within these deposits, rising to ground level during the historic site investigation. Groundwater is likely to be encountered at the same depth as the gravel deposits beneath the site i.e. at depths of ca. 9mbgl and deeper. Groundwater flow is likely to follow topography in an easterly direction before discharging to Youghal Estuary / Harbour. The GSI maintains a record of groundwater abstractions consisting of wells and springs, in addition to designated drinking water protection zones (referred to as Source Protection Areas). Based on the GSI database, there are no public water supply or group water scheme abstraction points, or source protection areas, beneath or adjacent to the site. Regional groundwater quality status (2016 to 2021) is classified under the WFD as 'Good' beneath the site.

There are no demolition, construction or decommissioning phases associated with the project. Therefore there are no associated effects. During the operational phase of the project, there could be a potential impact on receiving surface water / transitional water quality, which could result in the following effects on identified potential receptors:

- Surface waters:
  - The River Muckridge located adjacent to the site;
  - The East Ballyvergan river, located downstream of the site.
- Bathing Waters (coastal waters):
  - Youghal Front Strand Beach, located downstream of the site;
  - Youghal Claycastle located downstream of the site,
  - Redbarn located downstream of the site.
- Shellfish Waters:
  - Ballymacoda Bay.
  - Nutrient Sensitive Waters:
  - Lower Blackwater M Estuary / Youghal Harbour transitional waters.
- Designated European Sites:
  - Blackwater River (Cork / Waterford) SAC (Ref: 002170);
  - Blackwater Estuary SPA (Ref: (004028); and,
  - Blackwater River and Estuary pNHA (Ref: 000072).

The potential impact from the UÉ discharge location at Dunn's Park has been evaluated at the design capacity of the Youghal WwTP. The modelling assessment (AECOM, 2023) has been prepared specifically to assess key potential impacts, from SWOs (including emergency overflows) on sensitive receptors. The modelling assessment (AECOM, 2023) concluded that the Youghal WwTP, operating at the design capacity of 16,000PE and discharging through the Dunn's Park outfall, will not have a significant effect on:

- The current Water Framework Directive status of the Lower Blackwater M Estuary or Youghal Harbour waterbodies.
- The bathing water quality at the beaches (Youghal Front Strand and Claycastle).
- The water quality of the Designated Shellfish Water (Ballymacoda), the SPFA Classified Production area in Youghal Bay or the aquaculture sites within Youghal Harbour and Youghal Bay.

The conclusions from the detailed modelling report are verified by monitoring data for key indicator parameters at monitoring locations upstream and downstream of the site. Accordingly likely effects (with respect to water quality impacts) to key identified receptors will be not significant.

In summary, the project will not result in any negative effects to the existing hydrogeological regime of the area. The residual effect to surface water / transitional water quality resulting from the use of the Dunn's Park discharge outfall as the primary outfall, on a permanent basis, will be negative, not significant and long-term.

Effects (with respect to water quality impacts) are likely to be not significant, and long-term, with regards to the following identified receptors;

- The River Muckridge or the East Ballyvergan river;
- Lower Blackwater M Estuary and Youghal Harbour transitional waterbodies;
- Identified Bathing waters at Youghal Front Strand Beach, Youghal Claycastle and Redbarn;
- Identified Shellfish Waters at Ballymacoda Bay, the SPFA Classified Production area in Youghal Bay; or the aquaculture sites within Youghal Harbour and Youghal Bay; and,
- Designated European Sites: Blackwater River (Cork / Waterford) SAC (Ref: 002170); Blackwater Estuary SPA (Ref: (004028); and Blackwater River and Estuary pNHA (Ref: 000072).

Therefore, no significant negative effects are likely to occur within the receiving water environment arising from the project during the operational phase. The project will not be likely to cause a deterioration in surface / transitional / coastal water or groundwater status or compromise the ability of any identified waterbodies to comply with the objectives of the Water Framework Directive.

No significant effects to receiving surface waters / transitional / coastal waters or groundwater are likely as a result of the project.

No mitigation measures associated with the operational phase of the project are required. Standard measures / monitoring requirements will be adhered to during the operational phase.

## 12. Material Assets

### Receiving Environment

According to relevant EPA guidance (EPA, 2022) the following topics warrant consideration under material assets:

- Built Services;
- Roads and Traffic; and
- Waste Management.

Roads and traffic have been assessed separately as part of this EIAR. Refer to Chapter 7 – Traffic. Therefore, this chapter identifies describes and assesses the likely significant effects on material assets serving the project specifically in relation to existing and proposed built services (i.e., foul sewerage, surface water drainage, water supply, gas, electricity, and telecommunications utilities), and waste management; both of which are assessed separately within this section.

There are no changes required to the existing infrastructure to facilitate the project, therefore no demolition, construction or decommissioning phases will occur. On this basis, there are no potential effects of the existing built services and waste management in the vicinity associated with any construction phase and hence this phase has been scoped out of further assessment.

### Built Services

#### Construction Effects

Youghal WwTP is currently using the Dunn's Park discharge outfall as a temporary discharge location. There are no demolition, construction or decommissioning phases as part of the project and characteristics of the project are as existing, therefore no changes are required to the existing built services / utilities to facilitate the project. Therefore there are no associated effects.

#### Operational Effects

There will be no changes to the existing built services / utilities as part of the operation phase of the project. Hence the effect is neutral, imperceptible and long term. There will be no likely significant effects regarding built services during the operational phase.

### Waste

#### Construction Effects

Youghal WwTP is currently using the Dunn's Park discharge outfall as a temporary discharge location. There are no demolition, construction or decommissioning phases as part of the project, hence there is no proposed works, and no waste will be generated. Therefore there are no associated effects.

#### Operation Effects

Youghal WwTP has a design capacity of 16,000 P.E and Dunn's Park discharge outfall has capacity to meet the maximum design discharge of 16,000 P.E. There are ca. 1-2 vehicle movement per week for sludge and 1 vehicle movement per week for non-sludge and one operator per day. This equates to 1 to 2 vehicles per week accessing the site and one car per day entering and exiting the site during the operation phase. There will be no changes to the design or process of the current WwTP or Dunn's Park outfall pipe. The project is currently discharging the final treated effluent at Dunn's Park discharge outfall which is currently operational as a temporary discharge location. This application is seeking consent to make the discharge outfall, Dunn's Park, permanent for the final effluent at the current location; (210464E 78504N).

Currently during the operational phase the treated effluent is discharging via Dunn's Park discharge outfall to the Blackwater Estuary, which gives rise to waste. There will be no changes to the existing WwTP process, operations and/or discharge hence there will be no change to the discharge at Dunn's Park.

The site is currently operating as per the requirements of the existing Wastewater Discharge Licence (EPA Ref: D0139-01) and will continue to operate to the conditions of the reviewed licence. The existing infrastructure within the WwTP and the existing Dunn's Park outfall infrastructure have already been constructed and are currently operating and are maintained in accordance with all UÉ requirements and standard best practice guidelines.

There are no changes to the current operations of the site, hence the effect is neutral, imperceptible and long term. There will be no likely significant effects regarding waste during the operational phase.

No mitigation measures or monitoring for material assets are required.



## 13. Cumulative Impacts

This chapter assesses the potential for the project to act in combination with committed developments, consented projects, granted / approved developments, and projects applied for relevant consents, and licensed and permitted projects within the vicinity to result in cumulative impacts on the environment.

A summary of all committed development in the immediate environs of the project, which have been approved by CCC and an Bord Pleanála (ABP) within the last 5 years have been reviewed as part of the preparation of this EIAR. The majority of these developments have already been constructed or are of small scale in nature (i.e. extension works, or property retention works) or are considered to be a reasonable distance from the project and do not warrant further consideration as part of this assessment.

EPA licenced facilities within 5km of the project have been reviewed as part of the preparation of this EIAR.

A review has also been carried out of any relevant discharge licences and aquaculture licences (applied for relevant consents, permits and / or licences, and licensed and permitted projects).

Based on a review of planning records, EPA licenced facilities, relevant discharge licences, aquaculture licences and applying for consent licences a list of committed developments has been compiled (and is presented in Chapter 13, Volume 2 EIAR) which require further consideration in relation to potential cumulative effects with the project, as part of this assessment.

In summary no likely significant effects have been identified as a result of potential cumulative effects between effects identified in the technical chapters of the EIAR and other committed developments.

Furthermore, in all cases such interactions are unlikely to occur.

No significant cumulative effects are likely to arise from the project.

# 14. Interactions

This section describes interactions between effects on various environmental factors. A summary matrix showing interdependencies between these environmental attributes is presented below for the project.

	Chapter 3 – Landscape and Visual		Chapter 4 – Air Quality, Odour and Climate		Chapter 5 – Noise and Vibration		Chapter 6 – Land, Soil and Geology		Chapter 7 - Traffic		Chapter 8 - Cultural Heritage		Chapter 9 – Population and Human Health		Chapter 10 - Biodiversity		Chapter 11 - Water		Chapter 12 - Material Assets		
	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	Con.	Op.	
Chapter 3 – Landscape and Visual			x	x	x	x	x	x	x	x	x	✓	x	x	x	✓	x	x	x	x	
Chapter 4 – Air Quality, Odour and Climate					x	x	x	x	x	✓	x	x	x	✓	x	✓	x	x	x	x	
Chapter 5 – Noise and Vibration	x	x	x	x			x	x	x	✓	x	x	x	✓	x	✓	x	x	x	x	
Chapter 6 – Land, Soil and Geology	x	x	x	x	x	x			x	x	x	x	x	✓	x	x	x	✓	x	x	
Chapter 7 - Traffic	x	x	x	✓	x	✓	x	x			x	x	x	✓	x	x	x	x	x	x	
Chapter 8 - Cultural Heritage	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	
Chapter 9 – Population and Human Health	x	x	x	✓	x	✓	x	✓	x	✓	x	x			x	x	x	✓	x	✓	
Chapter 10 - Biodiversity	x	✓	x	✓	x	✓	x	x	x	x	x	x	x	x			x	✓	x	x	
Chapter 11 - Water	x	x	x	x	x	x	x	✓	x	x	x	x	x	✓	x	✓			x	x	
Chapter 12 - Material Assets	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			

All potential interactions have been addressed as required throughout the EIAR. During each stage of the assessment contributors have liaised with each other (where relevant) to ensure that all such potential interactions have been addressed.

The various interactions between environmental topics considered within the EIAR are further discussed in Chapter 14, Volume 2 – EIAR.



## 15. Schedule of Environmental Commitments

A schedule of environmental commitments has been prepared, for ease of reference and clarity, and to facilitate enforcement of all environmental mitigation and monitoring measures during the operation phase.

These are presented in Chapter 15, Volume 2 - EIAR.

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