Planning and Environmental Consultants

# Otter Derogation Licence Supporting Document

## Dromcollogher Wastewater Treatment Plant, Co. Limerick

# DOCUMENT DETAILS

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# 1. INTRODUCTION

This report provides information in support of an application for a derogation under Regulation 54 & 4A of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended. This application is specifically for:

- The potential temporary disturbance of a known (non-natal) resting place (holt) of otter (*Lutra lutra*).

This document provides the necessary information to assess the application, in line with guidance provided by the NPWS and the European Commission.

## 1.1 Objective of the Proposed Works

The above derogation is required to facilitate the construction of a new outfall headwall location on the River Deel, which is located approximately 60m upstream of a recorded otter holt on the banks of the River Deel.

## 1.2 Statement of Authority

This derogation license application has been prepared by Emily Fair (B.Sc., M.Sc.). Emily is a Project Ecologist with MKO who has over 4 years' experience in ecological assessment and has extensive experience in ecological consultancy and has undertaken numerous assessments covering a wide range of projects including wastewater treatment plants, wind farms, forestry operations, road and rail infrastructure and housing developments.

A dedicated otter survey was undertaken by Ecologists Neansaí O'Donovan and Lisa Buckley (B.Sc. Env). Follow up targeted Otter surveys were undertaken by Ecologist Neansaí O'Donovan and Kailan Mitchell (B.Sc. Env) in 2023. Further targeted Otter surveys in 2025 were undertaken by Ecologists Caitrin Farren (BSc.), Neansaí O'Donovan, Ryan McGee (BSc.), Mark Whelan (BSc.) and Emily Fair (B.Sc., M.Sc.).

This report has been reviewed by Rachel Walsh (B.Sc. Env, MCIEEM). Rachel has extensive experience in professional ecological consultancy and has undertaken Appropriate Assessments and Ecological Impact Assessments for a wide range of projects including renewable energy and wastewater infrastructure.

# 2. BACKGROUND

## 2.1 Proposed Activity

The proposed activity relates to the construction of a new outfall headwall on the River Deel to facilitate the upgrades of the Dromcollogher WwTP, Co. Limerick. It is proposed to move the existing outfall (which is located on the Ahavarragh Stream) to the River Deel via a 6.5km long rising main and to install a new precast concrete headwall located at the new outfall location on the southwest bank of the River Deel (River Deel (Deel (Newcastlewest)_060)).

All treated final effluent from the Proposed Development will flow to the pumping station to be discharged at the proposed new outfall location, 6.5km northwest from the existing WwTP via a 200mm HDPE pipe.

## 2.2 Location

The proposed upgrades to the Dromcollogher WwTP will be located to the northwest of Dromcollogher Village (Grid Reference: R 37925 21564). The outfall of the existing WwTP is currently located on the Ahavarragh Stream, adjacent to the WwTP.

The proposed new outfall location is located on the River Deel (Grid Reference: R 36011 27000)

## 2.3 Ownership

The land adjoining the proposed new headwall location is in the ownership of Uisce Éireann.

## 2.4 Reason for Activity

The Dromcollogher, Co. Limerick agglomeration (Reg No. D0316-01), which is served by a predominantly combined gravity fed sewer network within the town of Dromcollogher, was originally constructed in the 1940s and is currently served by a combined sewer network conveying flows to the existing Dromcollogher WwTP, prior to being discharged into an outfall location adjacent to the current WwTP on the Ahavarragh Stream. The existing infrastructure no longer provides sufficient treatment capacity for the current and future populations expected in the area. According to the 2023 and 2024 Annual Environmental Report (AER) for Dromcollogher, the WwTP discharge was not compliant with the ELV's set in the wastewater discharge licence for both consecutive years, which is having an observable impact on the water quality of the Ahavarragh Stream.

It is proposed that a new WwTP will be constructed within a greenfield site directly behind the existing WwTP. A 6.5km outfall pipeline route will be constructed, which will lead to a newly constructed headwall on the River Deel (Deel (Newcastlewest)_050) (Grid Reference: R 36005 26958).

The Proposed Development seeks to provide Dromcollogher with a new WwTP and a new outfall pipe to divert effluent to the River Deel (Deel (Newcastlewest)_050), a larger receiving waterbody. The points below outline a mix of needs, drivers, objectives and additional benefits of the project, including:

- Better health and integrity of the environment;
- Improve the water quality of the Ahavarragh Stream;
- Provide a more suitable outfall location on a larger waterbody (River Deel), which will have higher river flow rates and therefore a higher effluent dispersion capability;
- Facilitate growth and development in the area;

- Ensure compliance with national and EU regulations relating to the treatment of wastewater (Including the Water Framework Directive (WFD), Surface Water Regulations (2001))

This project aims to allow for the provision of a new WwTP, the decommissioning of the existing site and to provide treatment of the final effluent from the Dromcollogher Agglomeration to standards required by the Urban Wastewater Treatment Directive (UWWTD). The Proposed Development will comprise the construction of a wastewater treatment plant to provide treatment capacity for a Population Equivalent (PE) of 1,350 at 10 years, and 1,550 at 30 years.

This location for the new proposed outfall headwall has been chosen due to the significantly increased dilution capacity of the River Deel in comparison to the existing situation on the Ahavarragh Stream. Additionally, the outfall pipeline route from the upgraded plant to the new outfall headwall will be constructed almost entirely within the public road network, following the R522, L7027 and the L1306, which will prevent any losses of potentially significant ecologically sensitive habitats.

## 2.4.1 Needs and Objectives of the WwTP Upgrades

### 2.4.1.1 National Policy Context

The proposed project objectives are in line with National Government policy, in particular with fulfilling the needs for improved upgraded wastewater infrastructure in order to provide serviced for the future housing needs of the country. This is seen as a priority for a number of national policy frameworks.

The 'Activating Supply' section of the *Delivering Homes, Building Communities 2025-2030,* includes the following:

> *'Delivering infrastructure – such as water, wastewater, electricity capacity and roads – is essential to supporting new housing developments.'*

As part of the National Development Plan, Priority Action No. 1.11 states the following:

> *'Government will bring forward measures for developers to deliver new standalone wastewater treatment plants to bolster the service provided by UÉ to support increased levels of housing.'*

Finally, as part of Project Ireland 2040 - National Planning Framework, one of the *'Key future growth enablers'* for Limerick includes:

> *'Ensuring that water supply and waste-water needs are met by new national projects to enhance Limerick's water supply and increase waste water treatment capacity'.*

As evidenced in the national policies outlined above, it is clear that delivering upgraded and fit-for-purpose wastewater infrastructure in order to provide sufficient services for the increase in housing needs within Ireland is a key objective. The objectives of the proposed new Dromcollogher WwTP, inclusive of the associated new rising main and outfall are to service the agglomeration, which is anticipated to grow over the next number of years, while also complying with national and EU regulations relating to the treatment of wastewater. The project is in line with these Government policies.

### 2.4.1.2 Local Policy Context

The proposed project also falls in line with the relevant policy objectives of the Limerick County Development Plan 2022-2028. Within the Limerick County Development Plan, the WwTP upgrade in Dromcollogher is also specifically mentioned as a capital investment by UE (previously Irish Water).

**Objective IN 06: Water Services** states that it is an objective of the Council to:

> *a) Support Irish Water in the provision of water and wastewater infrastructure and services in accordance with the Service Level Agreement, until such time as the Agreement is terminated*
>
> *c) Liaise with Irish Water during the lifetime of the Plan to secure investment in the provision, extension and upgrading of the piped water distribution network and wastewater pipe network across Limerick City and County, to serve existing population and future population growth and sustain economic growth, in accordance with the requirements of the Core and Settlement Strategies*
>
> *e) Ensure that development proposals connecting to the public water and/or wastewater networks, now or in the future comply with Irish Water Standard Details and Codes of Practice. Where relevant, ensure developments comply with the EPA Code of Practice for Domestic Waste Water Treatment Systems 2021.*
>
> *f) Require future developments to connect to public water services and wastewater if available to the site. Combined water and wastewater systems will not be permitted. Consent to connect to Irish Water assets will be requested as part of the planning application process*
>
> *g) Have regard to Section 28 Guidelines – Draft Water Services Guidelines for Planning Authorities, DHPLG, 2018 and any subsequent guidelines when carrying out the forward planning and development management functions of the Planning Authority.*
>
> **Policy IN P1 Strategic Infrastructure:** *'It is a policy of the Council to Secure investment in the necessary infrastructure such as water services etc. Which will allow Limerick to grow and realise its full potential.'*

This policy is broadly supportive of the proposal as the additional wastewater capacity will facilitate the growth Dromcollogher into the future.

> **Objective IN O8 Public Waste Water:** *'It is an objective of the Council to ensure adequate and appropriate wastewater infrastructure is available to cater for existing and proposed development'*

This policy is consistent with the required need for upgraded wastewater infrastructure in the area.

## 2.5 Planning History

The planning application Pl ref: 25/60698 was submitted on the 17/07/2025. A further information request (FIR) was received by Limerick County Council on the 09/09/2025.

The full description of the Proposed Development, as per the site notices, is as follows:

*PERMISSION for Uisce Éireann intends to apply for a 10-year planning permission to construct a new wastewater treatment plant (WwTP) at Coolaboy, Dromcollogher, Co. Limerick. The Proposed Development will comprise the construction of a new WwTP to provide treatment capacity for a population equivalent (PE) of 1,350 (10 years) and 1,550 (30 years). The wastewater will be treated and discharged via an outfall pipe into the River Deel at a location approximately 6.5 kilometres to the northwest of the WwTP. The outfall pipe will be located primarily in public roads in the townlands of Coolaboy, Mundellihy, Ballinlongig, Cloonmore and Tulligmacthomas. The existing WwTP will be decommissioned and demolished upon completion of the Proposed Development. The Proposed Development will comprise: i) Development of a new preliminary wastewater treatment plant including infrastructure such as bypass channels and screens; grit and fats, oils, greases (FOG) removal plant; storm water overflow tank; sludge drying reed beds; flash mixer chamber; return liquor pumping*

*station facilities; caustic and ferric dosing storge tanks; flow to full treatment (FFT) pumping station; final settlement tank flow split chamber; 2 no. final clarifiers; sludge draw off chamber (return-activated sludge and waste-activated sludge pumping station); static mixer; wash water pumping station; tertiary disk filter; and final effluent pumping station. ii) Development of an ESB sub-station, control building, and fuel tank. iii) Provision of approx. 54m of new gravity sewer to direct flows to the new WwTP. This will replace an existing combined sewer overflow which will be decommissioned after the process switchover. iv) Provision of adequate site lighting, access gates, access stairs, walkways, car parking and electric charging facilities, and site boundary hedging and fencing. v) Provision of photovoltaic (PV) panels on the site of the existing WwTP following its decommissioning. vi) Provision of site drainage infrastructure including a hydrocarbon interceptor, construction of outfall pipe along public roads, and headwall in Tulligmacthomas. vii) Realignment and widening of existing site entrance, including provision of a new access road into the site and a bridge within the site. viii) All hard and soft landscaping throughout the site, and all associated and ancillary site works. The Proposed Development will be accompanied by a Natura Impact Statement (NIS).*

Prior to the planning submission for Pl ref: 25/60698, a review of the Limerick City & County Council online planning system indicates that there has been no prior planning history on the subject site. The original wastewater treatment plant was constructed by Limerick County Council in the 2000's as exempted development, before the creation of Uisce Éireann.

# 3. PROPOSED WORKS

The proposed development will consist of the upgrading of the Dromcollogher WwTP, which will comprise of: preliminary treatment, biological treatment, tertiary treatment, imported sludge screening and storage, and sludge dewatering facilities. All of these described works will be carried out approximately 6.5km from a proposed new outfall headwall, northwest of the town of Dromcollogher. Treated effluent will be discharged into a final effluent outfall flow measurement chamber which will convey flows to the new proposed new pre-cast outfall headwall on the River Deel, approximately 6.5km northwest of the Dromcollogher WwTP.

The recorded otter holt is located on the River Deel, approximately 60m downstream of the proposed new outfall headwall on the south/southwest bank of the River Deel, downstream of the 'Broken Bridge'. The majority of the works described above are over 6.5km from the proposed new outfall headwall, and will therefore not result in any potential disturbance effects to otter for the duration of the works.

The placement of a pre-cast outfall headwall approx. 60m upstream of the known holt location is expected to take approximately 4-5 days in total to complete. The outfall structure will stop at the riverbank and will not extend into the river By taking a precautionary approach, there is potential that the placement of the headwall on the riverbank of the River Deel may result in a temporary, short-term disturbance to otter for the duration of the works (4-5 days).

# 4. ECOLOGICAL SURVEYS AND SITE ASSESSMENT

## 4.1 Pre-existing Information

The National Biodiversity Data Centre (NBDC) was searched for records of otter for the hectad pertaining to the Proposed Development (R32).

The NBDC maps recorded 8 records of otter *(Lutra lutra)* within R32 in 2015. Otter is protected under Annex II and IV of the EU Habitats Directive, as well as protected under the Wildlife Act.

The ecological reports undertaken by MKO to inform the previous planning application (Pl. Ref. No. 25/60698) were reviewed as part of the 2025 assessment.

## 4.2 Status of species in local/regional area

There are no threats and pressures for otter *(Lutra lutra)* in the Article 17 Report (NPWS, 2018). In Ireland, otter have an overall favourable conservation status, and the trend in conservation status is listed as 'improving'.

The otter population is considered to be stable and none of the threats or pressures identified is considered likely to impact significantly on the species. Overall, the species is assessed as 'Favourable', and the overall trend is demonstrating an on--going increase.

## 4.3 Survey Objective

The objectives of the initial otter surveys carried out on the 9th of December 2022 on the River Deel were to search for any evidence of otter, including holts, couches, slides, spraints, prints and feeding remains along the River Deel, upstream and downstream of the proposed outfall location.

Following the initial holt identification, the dedicated infrared camera monitoring surveys in 2023 and 2025 were conducted to determine activity levels of the holt, and to determine whether the holt was actively used as a breeding natal holt.

## 4.4 Description of Survey Area

The proposed outfall is located within the River Deel, just south of the 'Broken Bridge'. Adjacent habitat to the proposed location of the headwall is categorized as **dry meadows and grassy verges (GS2).** This habitat consists of Creeping thistle *(Cirsium arvense),* Meadow buttercup *(Ranunculus acris)*, Broadleaf dock *(Ranunculus obtusifolius)*, Nettle *(Urtica dioica)*, White clover *(Trifolium repens)* and Creeping bent *(Agrostis stolonifera)*. The River Deel itself is categorized as a **depositing/lowland river (FW2).**

At the proposed new outfall headwall location, the average river depth across the river is approximately 0.7m, bank height 2m and bank full height 4m. The wet width across the river on the day of assessment is 10.5m, bank full width 14.3m. The channel has been modified; at present, it would not reach its floodplains. At either side of the bridge are storm drains which feed directly into the river. Directly under the bridge lies a layer of concrete, the predominant substrate of the river is boulder, cobble and gravel, further downstream approx. 100m a finer, muddy sediment occurs along the banks.

Riparian habitat along the bank at the proposed outfall location predominantly consists of Bramble *(Rubus fruticosus agg.),* Ivy (*Hedera hibernica*), Willow (*Salix spp.*), and Ferns such as Common polypody (*Polypodium vulgare)* and Hart's-tongue (*Asplenium scolopendrium*). Within the immediate location of the proposed outfall headwall, there are no hedgerows or treelines, however further upstream and downstream these linear features line the riverbank along both sides.

## 4.5 Survey Methodology

A targeted Otter survey was undertaken 150m upstream and downstream from the proposed outfall location, as per TII (2009) guidelines *Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes* and TII (2009) *Guidelines for the Treatment of Otter During Construction of National Road Schemes* on the 9th of December 2022. Follow-up otter surveys were conducted on the 1st of March and 15th of March 2023.

A potential Otter holt observed approximately 60m downstream from the outfall location on the south/southwest bank of the River Deel, downstream of the 'Broken Bridge', initiated the deployment of an infrared motion sensor camera at the potential holt location and secured approximately 1-meter-high facing downwards at the holt. The camera trap was left out at the site from the 1st of March to the 15th of March 2023, when it was then collected, and the footage was analysed.

Additional otter surveys covering approximately 150m upstream and 150m downstream of the proposed new outfall location were undertaken on the 8th of October 2025 as well as on the 24th of October 2025. An infrared motion sensor camera was also placed at the previously identified holt on the 8th of October 2025 and collected on the 24th of October 2025. Following the collection of the camera on the 24th of October, the footage was analysed to determine activity levels at the identified holt.

## 4.6 Survey Results

Otter activity in the form of spraint (territorial marking) on rock was noted in the River Deel (Deel (Newcastlewest)_060) downstream from the proposed outfall location on December 9th, 2022. The weather conditions on this day were as follows: Dry and frosty, temperatures averaging -5 degrees Celsius. The river was shallow in areas and was calm. There was little to no rainfall in the days preceding the survey.

The evidence of Otter activity (spraint recorded) initiated a targeted otter survey which was undertaken 150m upstream and 150m downstream from the proposed outfall location.

A potential otter holt was recorded approximately 60m downstream from the proposed outfall location on the south/southwest banks of the River Deel, downstream of the 'Broken Bridge'. An infrared motion sensor camera was deployed on March 1st, 2023, at the potential holt location and secured approximately 1-meter-high facing downwards at the holt. The weather conditions on this day (were dry with patches of light drizzle, with temperatures averaging 7 degrees Celsius. The river was high in areas but still relatively calm. There were scattered showers in the days preceding the survey.

The holt was revisited two weeks later for camera collection on March 15th, 2023. The weather conditions on this day had heavy rain, with temperatures averaging 9 degrees Celsius. The river was high in areas, with strong and fast flows.

On each occasion (1st and 15th of May), fresh spraint was observed directly outside the otter holt. The footage indicated that the location is active with Otter.

Further camera monitoring was undertaken in 2025. An infrared motion sensor camera was deployed at the holt and secured approximately 1-meter-high facing downwards at the holt for a period of approximately 2 weeks, between October 8th and October 24th, 2025. During the deployment and

collection of the camera, otter surveys were undertaken both upstream and downstream of the holt and the proposed outfall location to look for any further signs of otter. Upon reviewing the collected camera trap footage, otter was briefly recorded on one occasion outside of the holt during the 2-week camera deployment. Fresh spraint was recorded on one occasion outside of the holt during this two-week period.

Additionally, a number of potential slides were noted downstream of the holt along the riverbanks, confirming that the River Deel within the vicinity upstream and downstream of the proposed outfall is regularly utilised by otter.

Otters tend to select a breeding site that is protected from disturbance, away from flooding and close to a good food supply. Holts and couches used by breeding females are often located within secluded areas away from a main river or waterbody[1]. NIEA (2011) [2] notes that breeding sites are typically located within reed beds, young conifer plantation, deciduous woodland, extensive scrub or ponds and lakes.

Typically, natal dens do not display the standard characteristics of a non-natal holt, such as spraint markings in order to keep the holt conspicuous and hidden.[3] In most cases there will be little evidence that these holts are being used, as females with newly born cubs do not usually spraint at their entrances. According to the Nature Conservation Advice in Relation to Otters[4], otter cubs are usually born away from the main river in secluded areas, and the mother will be very secretive, taking care not to leave signs of her presence in the area.

According to NIEA (2011)[4], field signs to look out for in recognizing a natal den include the following:

- Heavily utilized paths from watercourse into dense vegetation cover
- Bedding material within the structure (grass, ferns, reeds)
- A latrine within 2m of the holt – however, this is not always the case – sometimes the female will excrete in the water to ensure that there are no signs of occupation near the natal den
- A cub playing area
- Different sized prints in and out of the holt

Additionally, bedding collection (i.e. seeing otters pulling vegetation into the natal den) is behaviour that is often associated with a natal den[5].

A natal den typically has good vegetation cover, providing a safe area for cubs as well as protection from predators. A natal holt is typically free from disturbance to provide a secure area for the cubs to play[6] as well as being well hidden, usually far from other otter traffic to avoid altercations[7].

The existing otter holt is located on the River Deel within proximity of the L1306 road. Across the river on the right-hand bank is an industrial yard, and to the west of the holt is a large-scale agricultural farm. The holt is located within an area that is likely already subject to some level of disturbance as a result of road traffic and industry within the area.

The holt is located directly on the main river body of the River Deel. While the holt location has some degree of overhanging scrub and tree branches, the overhanging vegetation is setback from the holt by approximately 2-3 feet from the holt entrance, leaving the holt entrance fully exposed. While direct

[1] *TII. (2009) Guidelines for the treatment of otters prior to the construction of national road schemes.*
[2] *NIEA (2011). Otters and Development. Northern Ireland Environment Agency*
[3] *Acer Ecology (2015) Eurasian Otter – Things you Otter Know.*
[4] *The Highways Agency. (2001). Nature Conservation Advice in Relation to Otters. The Scottish executive development department. Available at: https://cieem.net/wp-content/uploads/2019/07/ha8199.pdf*
[5] *Findlay et al. (2022). An evidence-based approach to identifying resting sites of Eurasian otter Lutra lutra from camera-trap and field-sign data. Wildlife Biology.*
[6] *Dalton et al. (2022). A Study of Otter in Cork City and the Cork Harbour Area. Cork Nature Network*
[7] *The Otter In Ireland. (2009). National Parks and Wildlife Services (NPWS)*

river access is present from the holt, there is no immediate vegetation cover to protect the holt entrance from predation.

It should be noted that during each period of camera trap monitoring undertaken at the known otter holt location (2023 and 2025), fresh spraint was recorded outside of the holt entrance. During this period of footage collection, there was no evidence of bedding being used within the holt or being pulled into the holt itself. Furthermore, throughout both periods of camera footage taken at the holt, there was no footage recorded of any cubs. Based on the camera footage recorded at the known holt location in both 2023 and 2025, only one adult otter was briefly recorded.

The recorded otter holt is approximately 60cm above the waterline at the time of the camera trap survey undertaken in 2023. During the surveys undertaken in 2025 which followed heavy rainfall, the water levels were closer to the holt entrance. Therefore, there is a possibility that during adverse weather events the holt may occasionally be prone to inundation by flooding, making this location sub-optimal for breeding otter.

Taking into account the literature review above of typical otter breeding behaviours and natal holt characteristics, it has been concluded that there was no evidence of breeding activity at the holt location during the periods of camera trapping in 2023 and 2025.

## 4.7 Population size and class assessment

The population size recorded to date at the holt location on the River Deel has been one singular otter. This was determined during camera monitoring in 2023 and 2025. There has been no evidence of the holt being utilised regularly or for breeding during any of the camera monitoring periods.

Based on the information identified within the desk study, and during dedicated surveys undertaken, the holt is likely utilised by otters on occasion. As such, otter have been identified as of Local Importance (Higher Value).

# 5. EVIDENCE TO SUPPORT THE DEROGATION TESTS

The NPWS document, *Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland* - National Parks and Wildlife Service Guidance Series 1 (2021), was reviewed before undertaking this derogation application.

Article 16 of the Habitats Directive sets out three pre-conditions, all of which must be met before a derogation from the requirements of Article 12 or Article 13 of the Directive can be granted. These preconditions are also set out in Regulation 54 of the Regulations.

The preconditions are:

1. A reason(s) listed in Regulation 54 (a)-(e) applies
2. No satisfactory alternatives exist
3. Derogation would not be detrimental to the maintenance of a population(s) at a favourable conservation status.

It is believed that the pre-conditions for granting a derogation licence have been met, as follows:

## 5.1 Test 1 – Reasons for Seeking Derogation

Regulation 54(2) (a)–(e) states that a derogation licence may be granted for any of the reasons listed (a) to (e). We are of the opinion that the following reason applies:

> (c) In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment

The recorded otter holt is located on the River Deel, approximately 60m downstream of the proposed new outfall headwall. The holt will be entirely retained and there will be no works within proximity of the holt location. The placement of a pre-cast outfall headwall approx. 60m upstream of the known holt location is expected to take approximately 4-5 days in total to complete. The placement of the headwall will be temporary, short-term works and therefore the derogation for potential temporary disturbance is sought on a precautionary basis.

The existing infrastructure at the Dromcollogher WwTP does not provide the sufficient level of treatment or capacity to serve the current and future populations. In addition, the location of the current outfall on the Ahavarraga Stream does not provide sufficient dilution capacity for the population equivalent (PE) expected in the future within the agglomeration.

Additionally, as outlined in Section 2.4.1.1 and 2.4.1.2, the existing WwTP and outfall arrangement are not currently in line with National Government policies and local area plans, and the proposed upgrades are therefore required in order to facilitate compliance the strategic policy objectives within these plans and policies.

Therefore, in the interest of public health and water quality in line with the Water Framework Directive (WFD) and the Surface Water Regulations (2001), the outfall location must be moved to a location with a higher dispersal and dilution rate in order to provide sufficient treatment to the current and future predicted effluent quantities. The choice for the location of the outfall is further explained below in Test 2.

## 5.2 Test 2 – There is no Satisfactory Alternative

The current Dromcollogher WwTP is discharging treated effluent to the Ahavarraga Stream through an outfall pipe adjacent to the WwTP. The existing infrastructure at the Dromcollogher WwTP does not provide the sufficient level of treatment or capacity to serve the current and future populations. Previous inspection and CCTV surveys indicated that large areas of the existing combined sewer are structurally inadequate, hence, not operating properly. Therefore, upgrades are required to ensure that effluent is properly treated before being discharged into the watercourse.

The Ahavarraga Steam is no longer a viable option for an outfall due to the low dilution factor and tight Emission Limit Values (ELVs) associated with this stream. A Waste Assimilative Capacity (WAC) assessment was carried out for both the current and the proposed outfall location, and it was determined that continuing to discharge effluent into the Ahavarraga stream is unfeasible from a technical and water quality point of view, as it is not possible to treat effluent to the standards required by the Water Framework Directive (WFD) and the Surface Water Regulations (2001). The WAC assessment also determined that the current discharge is exceeding 'Good Status' Environmental Quality Standard (EQS) within the Ahavarraga Stream.

The location of the proposed outfall was selected based on a number of criteria, including but not limited to the accessibility of the proposed location and the limited requirement for access infrastructure (paths, lighting, for example) as well as the limited vegetation growth and absence of trees along the riparian corridor at the proposed location. An outfall location selection report has been provided as Appendix 1 with further detail provided on the outfall location selection.

If the outfall were to remain in its current position, water quality in the Ahavarragh Stream would likely deteriorate due to increasing nutrient loads as a result of the WwTP not being capable of treating the effluent to the required standards. It is likely that the receiving and downstream waterbodies would fail to meet the requirements of Surface Water Regulations and Water Framework Directive with increasing population loads in the future.

As outlined in Section 2.4, one of the drivers and objectives of the project is to ensure compliance with national and EU regulations relating to the treatment of wastewater (including the Water Framework Directive (WFD), Surface Water Regulations (2001)) while allowing for population growth within the agglomeration in the future. Retaining the outfall at its current location would mean the WwTP would be non-compliant with these EU regulations. Additionally, this alternative solution would not meet the objective of improving the water quality of the Ahavarragh Stream if it were to be retained on the Ahavarragh Stream.

A number of outfall locations were considered, however the River Deel was chosen given that this river has high flow rates and a larger dilution capacity, therefore the proposed ELV requirements will be less stringent, while still allowing the WwTP to operate within 'Good Status' EQS, even with an increased population equivalent (PE) in the future. In addition, this outfall location allows for the proposed outfall pipeline to be built entirely along the existing public road network, which prevents the need for invasive construction works or in-stream works at water crossing points.

A location for the proposed outfall was considered 150m downstream of the known otter holt location. Moving the location of the proposed outfall further downstream would result in the need for longer stretches of pipework, as well as more construction activities within private lands for which there are no existing landowner agreements. Additionally, a topographical survey of the adjoining field and riverbanks was undertaken. The consideration of the downstream location of the proposed outfall location has steep riverbanks and dense vegetation which would inhibit the outfall from being safely placed on the riverbank of the River Deel. Additionally, this location would not permit safe access to the river for maintenance works at the outfall or safe access to the riverbank for monitoring. Relocating the headwall further downstream would compromise the ability to safely and consistently undertake monitoring both upstream and downstream of the proposed new outfall location.

A location for the proposed outfall was considered 150m upstream of the known otter holt location. If the proposed new outfall were to be moved 150m upstream of the existing holt, this would necessitate additional access infrastructure, including pathway formation, fencing, and likely lighting requirements. The riverbank location approximately 150m upstream of the holt has existing dense vegetation growth and trees present. If this location were considered, tree removal would be necessary; not only at the outfall location but also for river access to safely facilitate sampling monitoring. This would likely result in the modification of the riparian corridor, resulting in habitat fragmentation, and permanent barriers to wildlife movement at this location as a result of habitat loss and fencing requirements. As a result, it is likely that this would represent a greater ecological impact in relation to riparian habitat loss, than at the current outfall proposal. Relocating the headwall further upstream would compromise the ability to safely and consistently undertake monitoring both upstream and downstream of the proposed new outfall location.

An objective of this project is to provide a more suitable outfall location on a larger waterbody (River Deel), which will have higher river flow rates and therefore a higher effluent dispersion capability. Additionally, the outfall pipeline route from the upgraded plant to the new outfall headwall will be constructed almost entirely within the public road network, following the R522, L7027 and the L1306, which will prevent any losses of potentially significant ecologically sensitive habitats outside of the public road network. If an alternative location at a different position was selected on the River Deel, it is likely that these alternative locations would requirement the loss of roadside verge habitat, linear habitat loss, riparian vegetation/riverbank habitat loss or other ecologically sensitive habitats. Additionally, the River Deel is the only river within a feasible range of the existing outfall to support the dilution requirements of the WwTP.

It is also noted that there are currently no established water quality monitoring points in proximity to the proposed outfall location. The proposed headwall location has been selected to allow for the establishment and maintenance of appropriate future monitoring points both upstream and downstream of the new discharge location, in line with best practice and regulatory requirements.

Given that a key objective of this project is to ensure compliance with water quality policies and for better health and integrity of the local environment, selecting an alternate would be contrary to this key objective of the project if monitoring stations could not be established upstream and downstream of the proposed outfall location. Furthermore, as detailed above, to facilitate safe river access for monitoring, additional riparian vegetation/tree loss would be required at either alternative location (150 upstream and downstream of the known holt location).

Taking into account of the receiving waterbody, compliance with ELVs, ecological considerations, operational safety, future monitoring requirements, and construction duration, the proposed headwall location is considered to represent the only practical and feasible option. No alternative location has been identified that would deliver a reduced overall impact on the wider receiving environment.

## 5.3 Test 3 – Favourable Conservation Status

### 5.3.1 Conservation Status Assessment

*Annex IV species must be maintained at Favourable Conservation Status or restored to favourable status if this is not the case at present. The net result of granting a derogation licence must be neutral or positive for the species in question.*

According to the Article 17 Report (NPWS, 2018), the otter population of Ireland is considered to be stable and none of the threats or pressures identified is considered likely to impact significantly on the species. Overall, the species is assessed as 'Favourable', and the overall trend is demonstrating an on--going increase.

Based on the camera trap footage taken between the 1st and the 15th of March 2023 as well as between October 8th to the October 24th, 2025, it was determined that the identified otter holt approximately 60m downstream of the proposed outfall location is an active, non-breeding holt. The below listed mitigation measures will be in place to minimise the potential temporary disturbance to otters. Provided that the works are carried out in accordance with the design, best practice and mitigation that is described within this report, significant effects on otters are not anticipated at any geographic scale.

### 5.3.2 Mitigation Measures

All works will be carried out in line with TII's *Guidelines for the treatment of otters prior to the construction of national road schemes (2009).*

The proposed new outfall headwall will be located approximately 60m from the known otter holt location, therefore no works will be required any closer than 60m away from the holt location. All construction works (placement of a pre-cast headwall) will be temporary in nature, with the entirety of the outfall construction lasting approximately 4-5 days. The mitigation measures provided below are prescribed on a precautionary basis, given that there has been no evidence that the holt is used for breeding to date and the works (placing the outfall on the riverbank) will be short-term and temporary in nature.

Channin P (2003)[8] provides a literary review with regard to anthropogenic disturbance and refers to several reports which have found that disturbance is not detrimental to Otters (Jefferies (1987), (Durbin, 1993), (Green & Green, 1997). The report also describes successful breeding in towns, under ferry terminals and under the jetties of one of Europe's largest oil and gas terminals at Sullom Voe in North Scotland.

Irish Wildlife Manual No. 23 (National Otter Survey of Ireland 2004/2005) found no significant relationship between disturbance and otter occurrence. In addition, no significant difference in otter presence was found between sites with and without recreational activity. It also states, "the lowest percentage occurrence was found at the sites with the lowest recorded disturbance". Irish Wildlife Manual No. 76 (National Otter Survey of Ireland 2010/2012) notes that the occurrence of Otter was unaffected by perceived levels of disturbance at the survey sites. It also notes that there is little published evidence demonstrating any consistent relationship between Otter occurrence and human disturbance (Mason & Macdonald 1986, Delibes et al. 1991; Bailey & Rochford, 2006).

Based on the above review of scientific literature and given that the proposed construction works will be undertaken with mitigation according to TII guidelines, no significant effect with regard to disturbance of otter is predicted.

- All works will be carried out in line with TII's Guidelines for the treatment of otters prior to the construction of national road schemes (2009).
- Fence off a construction exclusion zone of 50m from the known location of the otter holt. There will be no wheeled or tracked vehicles (of any kind) within this 50m exclusion zone as there is no requirement for works anywhere but the location of the proposed headwall (60m from the holt location).
- Limit working hours to daylight hours only, which will remove the need for external lighting to be used for the construction of the headwall. This will avoid the most active otter times at dusk and dawn.
- Otters are naturally inquisitive animals and are likely to investigate a construction site. All machinery that is left on-site overnight will be temporarily fenced off or cordoned off to which could cause harm to otters.

[8] *Chanin P (2003). Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10. English Nature, Peterborough*

# 6. MONITORING THE IMPACTS OF THE DEROGATIONS

Monitoring is proposed during and following the proposed works:

- A pre-commencement construction otter survey will be carried out by a suitably qualified Ecologist to assess the known holt location and to confirm that at the time of construction, the holt is still not being used as a natal holt. This will be carried out in advance of any potentially disturbing works at the proposed outfall headwall (no more than 10-12 months in advance of construction) to ensure that there will be sufficient time to allow actions to be undertaken to protect otter populations prior to the commencement of construction.
- If, during the pre-commencement otter survey, it is determined that the holt is being used as a natal holt at the time of construction, the NPWS will be notified and works within 150m of the holt will be stopped until further consultation with NPWS and further mitigation implemented, as required.
- An updated otter survey will be carried out by a suitably qualified ecologist post-construction of the outfall headwall, including an in-stream survey and further camera monitoring to inform the license return.

# APPENDIX 1

***DROMCOLLOGHER OUTFALL LOCATION REPORT***

# DROMCOLLOGHER WWTP

## OUTFALL LOCTION REPORT

DROMCOLLOGHER CO. LIMERICK

IRISH WATER PROJECT

APRIL 2023

Doran CONSULTING

DELIVERING ENGINEERING EXCELLENCE

| Job no | Prepared by | Checked by | Approved by | Status | Issued to | No of copies | Date |
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| 221002 | JMcQ | JRM | | Final | EPS | PO1 | April |

# Contents:

# 1.0 Introduction

Doran Consulting have been appointed by EPS to provide Engineering and Technical consultancy services for this Irish Water project, known as Dromcollogher Wastewater Treatment Plant (WwTP) Upgrade Scheme.

The Irish Water Project Brief has identified the need for capital investment to improve the treatment capabilities and capacity to achieve compliance with current and future regulatory standards, mainly in relation to amended ELVS in the EPA Wastewater Discharge Licence (WWDL).

Treatment plant upgrades are required for the Dromcollogher WwTP in order to achieve both UWWD standards and WWDL ELVs for current and future flows and loadings to the plant. The current WwTP is designed for 400PE and experiences extreme hydraulic overloading which will get worse with population growth and planned development within the catchment. The aged infrastructure is declining and incapable in terms of operation and sizing. The following forms the scope of the upgrades:

- A new Wastewater Treatment plant (WwTP) on a new site to deal with current/ future load capacities treating final effluent to the standard required by the UWWTD.
- Flows of treated effluent to be conveyed to a new outfall location. Discharged into the River Deel.
- The current treatment works to be decommissioned upon completion of the upgrades and the site to be recovered.

## 2.0 ELV Constraints

The WAC assessment was carried out and the ELVs calculated for both the existing discharge to the Ahavarragh Stream and to a proposed new at the River Deel which has a greater flow and so a greater dilution factor.

Given the proposed ELVs for the two discharge locations, which are summarised in the table below, the River Deel is the preferred location. The lower ELVs for the Ahavarraga Stream will require additional investment to achieve and will be more difficult to provide a process guarantee for the plant. Discharging to the River Deel will require pumping however this additional requirement may be offset by the less restrictive consent and the increased likelihood of obtaining a process guarantee for the plant.

| Parameter | Mean Background Concentration (mg/L) | River Flow ($m^3/d$) | WwTP Discharge Flow* ($m^3/d$) | Predicted Downstream Concentration (mg/L) | Calculated ELV's (mg/L) | Proposed ELV's (mg/L) | Current Plant Discharge*** * (mg/L) |
|---|---|---|---|---|---|---|---|
| **BOD** | 1.83 | 1,728 | 449 | 1.65 | 11.61 | 11 | 3.5 |
| **BOD**** | 0.26 | 1,728 | 449 | 1.65 | 30.58 | | |
| **COD** | | | | | Current Limit | 125.0 | 125.0 |
| **SS** | | | | | Current Limit | 30.0 | 30.0 |
| **Ammonia** | 0.074 | 1,728 | 449 | 0.105 | 0.63 | 0.6 | 0.2 |
| **Ammonia** ** | 0.008 | 1,728 | 449 | 0.105 | 1.75 | | |
| **Ortho-P** | 0.087 | 1,728 | 449 | 0.056 | *** | 0.9 | 0.1 |
| **Ortho-P**** | 0.005 | 1,728 | 449 | 0.056 | 0.92 | | |

*Table 1: Emission Limit Values for Primary Discharge at Dromcollogher WwTP*

** WwTP discharge flow taken as 1.25 * DWF as requested by Irish Water.*

*** "Notional Clean" approach – assuming a theoretically clean river upstream of the discharge point, values of one fifth of the mean values for "High" status rivers in the Surface Waters Regulations are adopted as upstream concentrations.*

**** Cannot be determined as background concentration already exceeds EQS.*

*****Current discharge is to the Ahavarragh Stream, the proposed discharge is to the River Deel which has a significantly higher dilution factor*

## 3.0 Proposed Outfall Location:

The WAC analysis concluded that the achieving the required ELVs for discharging treated effluent into the Ahavarragh stream is unfeasible from a technical point of view. The ammonia and phosphorus limits are extremely tight, making it difficult to guarantee the limits are not exceeded. Due to this, discharging the treated effluent to an alternative outfall location with a higher dilution factor is recommended. The River Deel has been selected as the alternative watercourse as it's possible to achieve relaxed ELVs due to higher river flows. The proposed outfall point is located approximately 5.8km northwest (as the crow flies) of the existing discharge at Priests Bridge. It is anticipated that the headwall of the outfall will be located to the south of the bridge at co-ordinates X(Easting): 136004, Y(Northing): 126966.


*Figure: New Discharge Location*

This location has been selected on a number of merits.

- The discharge network can follow public roads the entirety of the route, making it easier from a planning perspective as it will not be routed through private lands.
- The outfall location falls on an existing river crossing, this is suitable from a constructability perspective.
- Due to the pumping main being contained within the extents of road corridors the ecological impact will be greatly reduced.
- The selected outfall does not fall within any water abstraction zones; hence the downstream quality of the nearest clean water zone will not be affected.

Otters and a number of other red and orange level endangered species including; Mink (third schedule invasive species), Grey Wagtail Bird (red conservation status), Swan Mussel (red conservation status), and Kingfisher Bird (orange conservation status), were discovered downstream of the anticipated headwall. The proposed outfall location identified remains the ideal location this is for a number of reasons.

- The proposed outfall construction will be at a sufficient distance to the location of the listed species. The effluent will therefore be sufficiently diluted before it reaches the otters and other species downstream of the outfall location, resulting in low risk of impacting or disturbing their habitats/holts.
- A Site and Route selection report concluded that there are no other feasible watercourses to discharge the treated effluent. The existing outfall at the plant does not have the required dilution factor to meet the stringent ELVs, the River Deel offers more achievable limits.
- Further downstream of the proposed outfall (north of the bridge) there is a construction risk due to very steep banks and dense shrubbery.
- The endangered species are present further downstream of the location of otters so relocating the outfall will significantly push the discharge location downstream leading to more pipework, longer trenches and further encroaching on private lands and increasing potential impact to the local ecology.