



SECTION A: NON-TECHNICAL SUMMARY

A.1.1: Non-Technical Summary

A.1.2: Map 1 - Area of Interest

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ATTACHMENT A.1.1 NON-TECHNICAL SUMMARY

1. Introduction

Dripsey is a settlement located approximately 19 km west of Cork City and 1 km north of the River Lee at the Inniscarra Lake Reservoir. The settlement consists of three nodes of development namely; Model Village, Upper Dripsey and Lower Dripsey but only the Model Village is serviced by a public sewer. The current population equivalent (p.e.) is 420.

Following a Waste Water Discharge Authorisation examination by the EPA on 28th June 2021, it was recommended that a Waste Water Discharge Authorisation (WWDA) application was prepared and submitted to the EPA for determination. It was considered that the current WWDA, D0426-01, does not satisfy the environmental requirements of the WWDA Regulations as amended, and that a WWDA review was required.

The Dripsey WwTW upgrade project involved the design and construction of a new WwTP and outfall pipeline to serve the agglomeration of Dripsey (Model Village) and remedial network upgrade works to ensure compliance with the Waste Water Discharge Licence (WWDL)- Licence Register Number: D0426-01, issued by the EPA in accordance with the Waste Water Discharge (Authorisation) Regulations (S.I. No. 684 of 2007) (now S.I. No. 214 of 2020) on the 30th July 2012.

Construction of the new Dripsey WwTP was completed in November 2021 and the plant is scheduled to be fully commissioned in Q1 2022. The remedial network upgrade works have been completed.

Refer to **Attachment A.1.2** for the area of interest and **Attachment B.2.1** for a map of the Dripsey agglomeration.

2. Description of the waste water discharges from the waste water works serving the agglomeration

Discharge Scenario as per D0426-01

Primary Discharge (currently SW001):

Treated effluent was discharged directly to the Dripsey River at NGR 148607E, 074817N via a 100mm outlet pipe.

Secondary Discharges:

There were no secondary discharge points associated with the waste water works.

Storm Water Overflows:

There were no Storm Water Overflows associated with the waste water works.

Emergency Overflows:

There were no Emergency Overflows associated with the waste water works.

Proposed Discharges as per Subject Matter of Licence Review

New Primary Discharge (SW001):

The new primary discharge from the new WwTP will discharge to the Dripsey River at 148611E, 074819N via a 450mm outlet pipe. This new outfall is located ca. 4.5m from SW001 under D0426-01.

Storm Water Overflows from WwTP (SW002 & SW003)

There will be 2 no. SWOs from the new WwTP.

SW002 - Flows to the works greater than Formula A will overflow through an overflow sewer that connects to the main primary outfall pipe to the Dripsey River. Whenever the flow exceeds Formula A it will rise and pass through the overflow screen before entering the overflow pipe to the Dripsey River at NGR 148611E, 074819N. Retained screenings will fall back into the overflow chamber for delivery forward to preliminary treatment.

SW003 - A high level storm water overflow from the storm tank discharges via gravity towards the outfall and combines with the treated effluent downstream of the sampling location before being discharged to the Dripsey River at NGR 148611E, 074819N.

Both overflows have been designed in compliance with the definition of 'Storm Water Overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended and the criteria as set out in the DoEHLG 'Procedures and Criteria in Relation to Storm Water Overflows', 1995.

Emergency Overflows

There are no emergency overflows from the agglomeration.

The outlet flows from the WwTP will be measured, recorded, logged, and trended on the SCADA system.

Refer to **Attachment B.2.2: Map 4** and **Map 5** for the location of the proposed discharges (*i.e.*, SW001, SW002 and SW003)

3. Description of the wastewater works and associated waste water treatment plant

Works as per D0426-01

The works consisted of a gravity combined sewer which collected wastewater from the agglomeration. The effluent arises mainly from domestic sources. There are no IPC or Waste licensed activities discharging to the agglomeration or to the Dripsey River upstream or downstream of the agglomeration.

The wastewater treatment plant (WwTP), located at NGR 148619E, 074844N, was built in the early 1990s with a design of 600 p.e. and originally consisted of a septic tank. This was upgraded with treatment consisting of a primary settlement tank and a rotating biological contactor (RBC) plus a final settling tank.

Treated effluent discharged directly to the Dripsey River at NGR 148607E, 074817N which is a tributary of the River Lee that flows into Cork Harbour.

The treatment plant was in very poor condition and is currently hydraulically overloaded with infiltration causing a 'washing out' of the existing works.

There were no storm water/emergency overflows or pumping stations in the system.

Works as per Subject Matter of Licence Review

WwTP & Outfall

The new Waste Water Treatment Plant, located at NGR 148619E, 074844N with a design capacity of 600 p.e, will provide secondary treatment to waste water generated within the Dripsey agglomeration.

The new WwTP consists of the following of:

- Inlet Works
 - *Package Screening and Grit Removal Unit*
 - *Flow Measurement*
 - *Storm Overflow*
- 2 no. Storm Holding Tanks
- Primary Treatment from 2 No. Upflow PSTs
- Secondary Treatment from 2 No. RBCs
- Secondary Settlement by 2 No. Upflow FSTs
- Chemical Dosing for Phosphorus Removal
- Picket Fence Thickener including Sludge Storage
- New discharge outfall (*This new outfall is located ca. 4.5m from SW001 under D0426-01*).

The design of the WwTP is for Formula A to the inlet works, peak flows (FFT) to treatment of 3 times the dry weather flow (DWF), and sludge treatment.

The design effluent standards (as per D0426-01) are provided in **Table A.1.1** below:

Table A.1.1 – Design effluent standards (as per D0426-01)

Parameter	Design Standard/ELVs
Temp	25°C Max
pH	6.0 – 9.0
BOD	25mg/l
COD	125mg/l
Suspended Solids	35mg/l
Total Ammonia (as N)	10mg/l
Ortho-P (as P)	5mg/l

Remedial Network Upgrade Works

The existing foul gravity network was upgraded as part of the Project. Additionally, the existing surface water network which previously discharged into the foul network has been diverted away from the foul network.

A new collector sewer was constructed. This sewer replaced an existing undersized combined sewer. The existing surface water system was diverted from the existing foul sewer network to a previously completed section of surface sewer *via* a 600mm sewer.

4. Description of the features and measures, if any, envisaged to avoid, prevent, or reduce and, if possible, offset the significant adverse effects on the environment

Irish Water are committed to ensuring that water services infrastructure operates in a manner that supports the achievement of the water body objectives under the Water Framework Directive, and their obligations under the Birds and Habitats Directives.

The proposed WwTP upgrade has been designed to cater for a hydraulic and biological load of 600 p.e. Secondary treatment with P removal is provided to ensure that the treated effluent discharge does not have a significant adverse effect on the receiving aquatic environment, and that all relevant legislative requirements are complied with.

The ELVs as listed above give effect to the principle of the Combined Approach as defined in Waste Water Discharge (Authorisation) Regulations, 2007 to 2020 in that they accommodate the Urban Waste Water Regulations and the relevant status of the receiving waterbody, the Dripsey River (Dripsey_020) (see **Attachment D.2.1**: Impact Assessment Report and **Attachment D.2.3**: Waste Assimilative Capacity (WAC)).

The SWOs will operate in compliance with the definition of 'Storm Water Overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended and the criteria as set out in the DoEHLG 'Procedures and Criteria in Relation to Storm Water Overflows', 1995.

The remedial network upgrade works which have been completed will mitigate the risk of hydraulic impact to the WwTP; will mitigate the risk of dilution of biological load damaging the WwTP process; will retain additional reserve storage capacity in foul network and will reduce overflows from the stormwater overflows.

Refer also to **Section C.2** for further details of the proposed robust measures to prevent any unintended discharges to the Dripsey River.

5. The proposed technology and other techniques for preventing or, where this is not possible, reducing discharges from the wastewater works

The WwTP has been designed, and will be operated, to ensure the primary discharge of treated effluent, and the activation of any Storm Water Overflows, do not cause a deterioration in the quality of the receiving water *i.e.*, Dripsey_020.

Refer to **Section C.2** for details of the proposed measures to prevent any unintended discharges to the Dripsey River.

6. Description of the receiving waterbody

Dripsey WwTP discharges to the Dripsey River (Dripsey_020). Dripsey_020 is within the Lee, Cork Harbour and Youghal Bay Catchment (Hydrometric Area 19). This catchment includes the area drained by the River Lee and all streams entering tidal water in Cork Harbour and Youghal Bay and between Knockaverry and Templebreedy Battery, Co. Cork, draining a total area of 2,153 km².

The draft 3rd cycle Catchment Report (2021) for this hydrometric area, determined that for river waterbodies excess nutrients remain the most prevalent issue, along with morphology, organic pollution, and hydrology. Pressures identified affecting the greatest number of waterbodies within Hydrometric Area 19 include hydromorphology, followed by agriculture, urban run-off, urban wastewater, domestic waste water, forestry, mines and quarries and industry. Dripsey WwTP is not listed as a significant pressure in At Risk

waterbodies in the 2nd or draft 3rd cycle catchment assessment. The Dripsey_020 is not listed as an area for action under the 3rd cycle. The WFD status of the Dripsey_020 is Good and At Risk. Significant pressures for the Dripsey_020 have been determined, within the draft 3rd cycle Catchment Report, as Hydromorphology (overgrazing).

The EPA undertake biological monitoring of the Dripsey River at various locations. Upstream of the WwTP at RS19D060300 (ca. 2.8 km upstream), the 2020 monitoring reported a Q value of 4-5 (High Status, Unpolluted). Downstream of the WwTP at RS19D060400 (ca. 1 km downstream), the 2020 monitoring also reported a Q value of 4-5.

Based on ambient monitoring results upstream and downstream of the current discharge for the period between January 2019 to June 2021, the mean concentration for BOD is within the mean EQSs for Good and High status. In terms of Ortho-P, the mean concentration meets the mean EQS for Good status upstream of the discharge, only. In terms of Ammonia, the mean concentration only meets the mean EQS for Good status downstream of the discharge.

It is worth noting that the Dripsey_020 waterbody trends (at Dripsey Br, downstream of the operational discharges) for Ortho-P and Total Ammonia for 2013-2018 are Downwards (decreasing concentrations). For 2013-2018, Ammonium and Ortho-P are noted as High status under the WFD.

The Dripsey River is not designated a salmonid waterbody however the Lee River which the Dripsey River flows into, ca. 1.5 km downstream, is designated Salmonid. The Dripsey River (below the agglomeration discharge point) has achieved Q4-5 (High) status from 2011 to 2020.

There are no designated shellfish waters or bathing waters in the downstream vicinity of the discharges.

There are 10 pNHAs and 1 NHA within 15 km of the WwTP, the closest of which is Glashgarriff River pNHA (ca. 5.25 km west of the agglomeration). No pathway exists by which the operational discharges could impact upon The Glashgarriff River pNHA as it is upstream of the agglomeration. The Lee Valley pNHA is located ca. 6.0 km downstream of the operational discharges at its closest point and comprises a diverse range of riparian semi-natural habitats. None of the habitats it is designated for (*i.e.*, wet broadleaved woodland, freshwater marsh, wet grassland, dry unimproved grassland) are highly sensitive to changes in water quality.

There are no European sites immediately downstream of the operational discharges. The nearest European site downstream is the Cork Harbour SPA which is located ca. 30 km downstream of the agglomeration. The Great Channel Island SAC is located ca. 34 km downstream. Due to the distance of these sites from the operational discharges and the large dilution capacity of the River Lee (of which the Dripsey River is a tributary) it is considered that there is no likelihood of significant effects from the operation discharges on the Qualifying Interests of these sites (including *ex-situ* species).

The nearest European sites to the agglomeration are The Gearagh SAC and The Gearagh SPA located ca. 26 km and 27 km upstream of the operational discharges on the River Lee (*i.e.*, upstream of the confluence with the River Dripsey). It is considered that no direct or indirect effects are likely on the species/habitats of The Gearagh SAC or The Gearagh SPA due to the sites distance upstream of the operational discharges.

7. Description of the likely significant effects of the discharges on the environment

The objective of the Dripsey WwTP upgrade project was to ensure compliance with the WWDL - Licence Register Number: D0426-01 issued by the EPA.

Based on the proposed effluent discharge standards (see **Table A.1.1** above) and the 2021 WAC calculations carried out for same (see **Attachment D.2.3**), and the design of the SWOs and the benefits of the network remedial upgrade works, it is considered that the operational discharges from the Dripsey agglomeration would have no real likelihood of significant effects on the receiving aquatic environment, alone or in combination with other plans and projects.

The effluent discharge standards have been set to ensure that the discharge from the Dripsey WwTP (i) contributes towards maintaining at least Good status of the Dripsey_020, (ii) contributes towards achieving its High WFD status Objective by 2027 in accordance with S.I. No. 77 of 2019 and (iii) to ultimately ensure that there is no environmental risk posed to the receiving water environment as a result of the discharge from the new WwTP.

8. Measures planned to monitor discharges into the environment

Effluent Monitoring:

It is proposed that effluent from Dripsey WwTP will be sampled and analysed (using the standard method of analysis) as follows:

Table A.1.4 – Proposed Effluent Monitoring Regime (as per per D0426-01)

Parameter	Units	Monitoring Frequency	Analysis Method/Technique
Flow	m ³ /s	Continuous	On-line flow meter with recorder
pH	pH Unit	Weekly	pH Meter and recorder
cBOD	mg/l	Bi-monthly	Standard Method
COD	mg/l	Bi-monthly	Standard Method
Suspended Solids	mg/l	Bi-monthly	Standard Method
Ammonia (as N)	mg/l	Bi-monthly	Standard Method
Ortho-Phosphate (as P)	mg/l	Bi-monthly	Standard Method
Visual Inspection	Descriptive	Weekly	Sample and examine for colour and odour

Ambient Monitoring:

It is proposed that ambient monitoring and analysis will continue to be carried out upstream and downstream of the primary discharge, in line with any new licence requirements.

The proposed monitoring locations and parameters to be monitored are tabled below:

Table A.1.5 – Proposed Ambient Monitoring Locations and Parameters

Monitoring Location					Name of Receiving Water
147700	E	075502	N	Upstream aSW1u	Dripsey_020
148775	E	073890	N	Downstream aSW1d	Dripsey_020

Table A.1.6 – Proposed Ambient Monitoring Regime (as per D0426-01)

Parameter	Units	Monitoring Frequency	Analysis method/Technique
pH	pH Unit	Quarterly	pH meter/electrode
BOD	mg/l	Quarterly	Standard Method
DO	% O2	Quarterly	Standard Method
DO	mg/l	Quarterly	Standard Method
Orthophosphate (as P)	mg/l	Quarterly	Standard Method
Ammonia	mg/l	Quarterly	Standard Method
Temperature	°C	Quarterly	Thermometer
Total Nitrogen	mg/l	Quarterly	Standard Method
Visual inspections	N/A	Weekly	Sample and examine for colour and odour

9. Hours during which the wastewater works is supervised or manned and days per week of this supervision

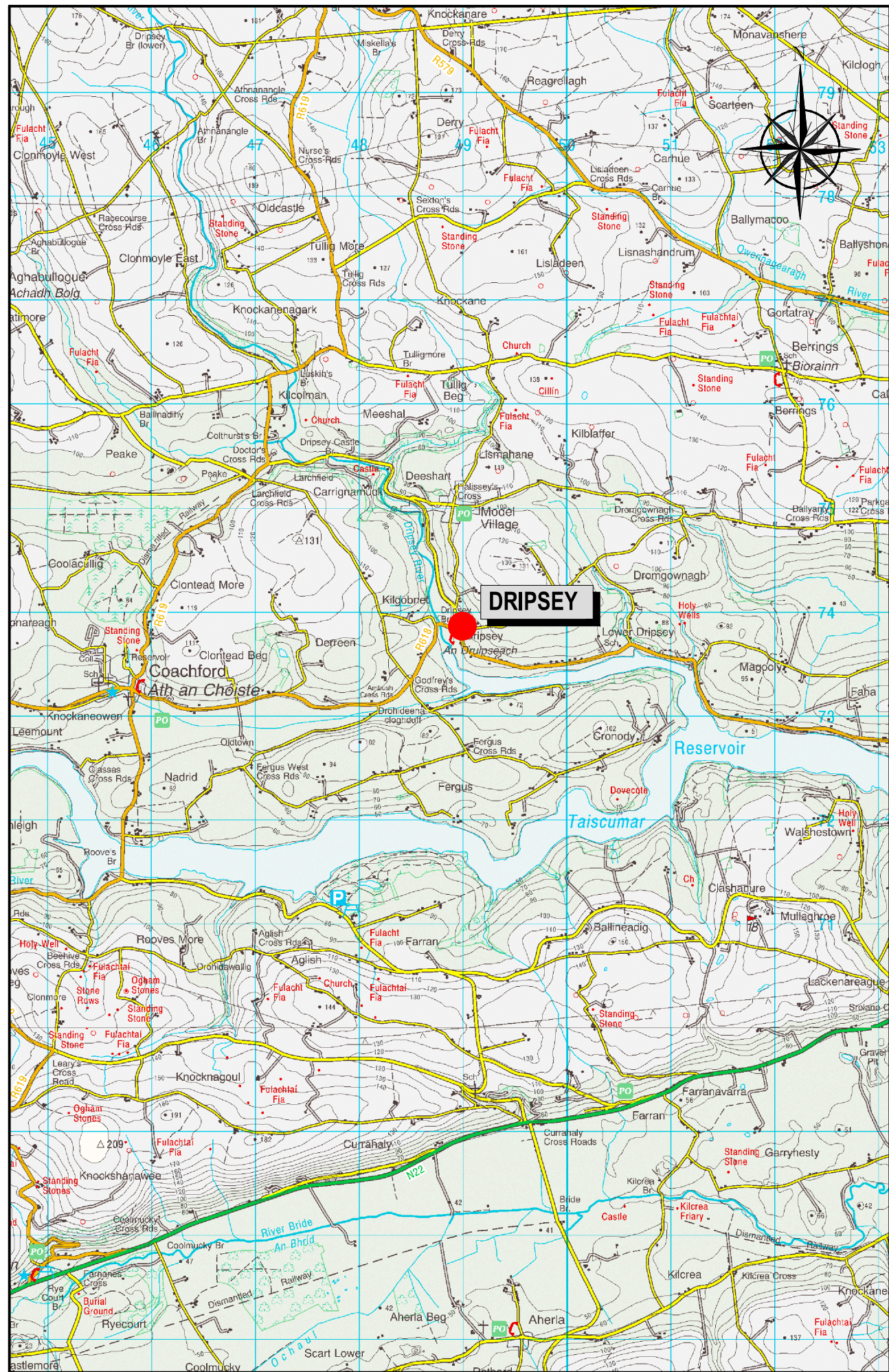
The WwTP runs automatically and is capable of being monitored remotely on a daily basis *via* the SCADA system. A dedicated curator will attend the site several times a week and the hours spent each day at the plant will vary depending on various factors or tasks *e.g.*, sampling, weather, breakdowns in plant or maintenance works required such as cleaning of the intake screens *etc.* There is a 24 hour call out response to alarms from the WwTP.

10. In the event of a review application, state the grounds for which this review application is being made

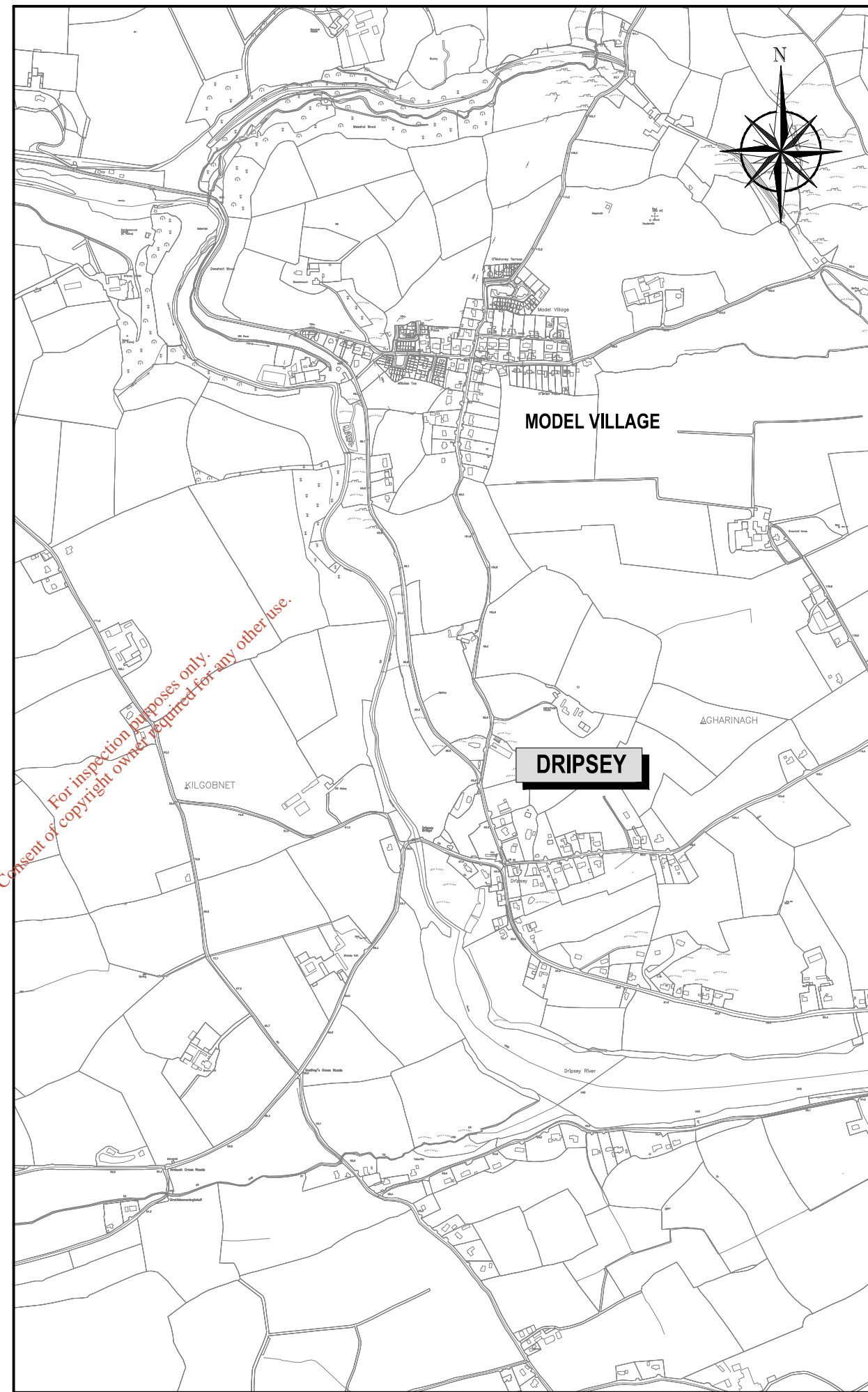
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DRIPSEY LOCATION MAP
SCALE 1:50,000



DRIPSEY LOCATION PLAN
SCALE 1:12,500

NOTES
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 24-26 Talbot Street,
 Dublin 1.
 Tel. 1890 278 278 Web. www.water.ie

PROJECT
**DRIPSEY
 WASTE WATER DISCHARGE
 LICENCE APPLICATION**

TITLE
**MAP 1
 AREA OF INTEREST**

SCALES	AS SHOWN	DRAWN D. Smithers	DATE 02.12.2021
CAD REFERENCE	ATTACHMENT	REV	
20893-NOD-WWDL-02	A.1.2	-	