ATTACHMENT B.8:

IMPROVEMENT PROGRAMME

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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.

The works, prior to the upgrade, consisted of a gravity combined sewer which collected the wastewater from 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 was 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 was currently hydraulically overloaded with infiltration causing a '*washing out'* of the existing works.

2. Key Improvement Works Element

The main objective of the Dripsey WwTW upgrade project was to design and construct a new WwTP and outfall pipeline to serve the agglomeration of Dripsey (Model Village) and remedial network upgrade works to ensure compliance with the 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) on the 30th July 2012 (now S.I. No. 214 of 2020).

<u>Remedial Network Upgrade Works</u>

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

The scope of works includes the following:

- 315m of 300 mm diameter concrete foul sewer;
- 125m of 375 mm diameter concrete foul sewer;
- 140m of 600mm diameter concrete surface water sewer.

A new collector sewer was constructed along O'Callaghan Place, through the existing community field, along the road to Dripsey and into the WwTP site *via* the existing access road. This sewer replaces the 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 laid in the community field.

These remedial network upgrade works have the following benefits to the agglomeration:

- Mitigate risk of hydraulic impact to the WwTP.
- Mitigate risk of dilution of biological load damaging WWTP process.
- Retain additional reserve storage capacity in foul network.
- Reduce overflows from the stormwater overflows.

WwTP

The 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 2No. RBCs
- Secondary Settlement by 2 No. Upflow FSTs
- Chemical Dosing for Phosphorus Removal
- Picket Fence Thickener including Sludge Storage.
- New discharge outfall

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, and sludge treatment.

The design flows and effluent standards (as per D0426-01) are provided below:

Parameter	Design Flow Rate
Dry Weather Flow (DWF)	135 m^3/d
Average Daily Flow (1.25DWF)	168.8 m^3/d
Flow to Full Treatment (FFT)	405 m^3/d
Formula A Flow	945 m^3/day

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

The 2 no. SWOs at the WwTP (*i.e.,* SW002 & SW003) 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.

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

The effluent discharge standards (*i.e.*, ELVs as per D0426-01), the design of the overflows, along with the positive residual effects from the remedial network upgrade works, will ensure that the operational discharges from the agglomeration (i) contribute towards maintaining at least Good status of the Dripsey_020, (ii) contribute towards achieving its High WFD status Objective by 2027 in accordance with the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 (S.I. No. 77 of 2019) and

(iii) will ensure that there is no environmental risk posed to the receiving water environment as a result of the discharges from the agglomeration.

3. Programme for Completion of Upgrade Works

The network upgrade works have been completed.

The new WwTP and outfall was completed in November 2021 and the plant is scheduled to be fully commissioned in Q1 2022.