



ATTACHMENT B.8: IMPROVEMENT PROGRAMME

ATTACHMENT B.8 IMPROVEMENT PROGRAMME

Schedule A & C Improvement Programme as per Midleton WWDL (D0056-01)

Specified Improvement Programmes: (under Schedule A and C of WWDL)	<p><u>D0056-01:</u> SIP:01: Increase Midleton WWTP capacity to 15,000 PE SIP:02: Infiltration programme SIP:03: Infiltration Programme – SW03 SIP:04: Infiltration programme – SW04 SIP:05¹: Upgrading of Storm Water Overflows to comply with the limits outlined in Schedule A.4 (Condition 5.6) - SW03 SIP:06¹: Upgrading of Storm Water Overflows to comply with the limits outlined in Schedule A.4 (Condition 5.6) - SW04</p>
Date for completion of Improvement Programme in the licence:	D0056SIP:01 – D0056SIP:06: 31 st December 2011
Has the date for completion expired? (Enter N, N/A or Y)	Y
Status of works: <i>e.g. (i) Not Started; (ii) At planning stage; (iii) Work ongoing on-site; (iv) Commissioning phase; (v) Completed; (vi) Delayed</i>	<p><u>D0056-01:</u> SIP:01: Works Completed SIP:02: Works Completed SIP:03: Works Completed SIP:04: Works Completed SIP:05: At Planning Stage SIP:06: At Planning Stage</p>
Uisce Éireann’s expected timeframe for completing the work	<p>D0056-SIP:05: 2029 D0056-SIP:06: 2029</p>

¹ This current licence review application does not relate to or include for any aspect of the Midleton Wastewater Network Upgrade Project which will address D0056-SIP:05 & 06. This Project is currently at the Pre-Feasibility Stages.

Schedule A & C Improvement Programme as per Carrigtwohill WWDL (D0044-01)

Specified Improvement Programmes: (under Schedule A and C of WWDL)	<p><u>D0044-01:</u> SIP:01: Installation of new WwTP to meet ELVs as specified in Schedule A SIP:02: Installation of storm water holding tank (SW003) SIP:03: Installation of storm water holding tank (SW004) SIP:04: Nutrient removal to meet ELVs as specified in Schedule A SIP:05: SW002 Primary Discharge Point to be discontinued</p>
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Date for completion of Improvement Programme in the licence:	D0044SIP:01 – D0044SIP:05: 31 st December 2016
Has the date for completion expired? (Enter N, N/A or Y)	Y
Status of works: <i>e.g. (i) Not Started; (ii) At planning stage; (iii) Work ongoing on-site; (iv) Commissioning phase; (v) Completed; (vi) Delayed</i>	<u>D0044-01:</u> SIP:01: Works Completed SIP:02: Works Completed SIP:03: Works Completed SIP:04: Works Completed SIP:05: Works Completed
Uisce Éireann’s expected timeframe for completing the work	Works Completed

B.8.1 Midleton Waste Water Load Diversion Project

The current Midleton WwTP is organically overloaded and does not have the capacity to cater for current loads in the Midleton agglomeration. In addition to this, there is a significant demand for housing development in Midleton and therefore wastewater upgrades are required to cater for future population and economic growth.

In order to relieve the overloading of Midleton WwTP and agglomeration, the Midleton Local Infrastructure Housing Activation Fund (LIHAF) Wastewater Project, which commenced construction in June 2022 (on the Water Rock pipeline to Carrigtwohill), will divert waste water loads from the Midleton agglomeration to the existing Carrigtwohill and Environs WwTP (Design p.e. 30,000). The current p.e. of the Carrigtwohill and Environs WwTP is 8,654 (Source: 2022 AER) meaning there is significant spare capacity to cater for these proposed diverted loads. This will involve the amalgamation of the Carrigtwohill and Environs agglomeration into the Midleton licence D0056-01, thereby leading to the surrender of Carrigtwohill licence D0044-01. The total design p.e. of 48,750 p.e. is a combination of the design p.e. for Midleton and Carrigtwohill WwTP (45,000 p.e.) and IE discharges (3,750 p.e.) downstream of the Midleton WwTP.

To cater for the above, two new Pumping Stations, one at Midleton North and one at Water Rock are required to be constructed. Along with the above the following new network infrastructure will be required to be:

- *ca.* 30m of underground pipeline to connect the existing foul network on the Mill Road to the new Midleton North Pumping Station;
- *ca.* 650m of underground pipeline to connect the new Midleton North Pumping Station to the new Water Rock Pumping Station;
- *ca.* 7km of underground pipeline to connect to the Water Rock Pumping Station to the existing foul sewer network in Carrigtwohill north of the N25 to the east of Fota Rock.

See below for further details on the Projects under which the above infrastructure will be constructed.

B.8.1.1 Midleton North Pumping Station and Network

On the 13th of February 2023, Uisce Éireann obtained a conditional grant of planning from Cork County Council (Planning Ref: 22/05032) for the Midleton North Pumping Station and Network. This was subsequently appealed to An Bord Pleanála (Planning Ref: ABP-316013-23). It is estimated that the Midleton North Pumping Station and Network Project will entail a 12-month construction programme from the date of commencement to completion. Timeframes for construction and commissioning are contingent on successful grant of planning.

The Pumping Station and Network will consist of:

1. A new Pumping Station with below ground wet well chambers, 2 no. above ground kiosks, vent stack (ca. 6.2m in height), telemetry pole (ca. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates to facilitate vehicular and pedestrian access.
2. The construction of a below ground pipeline (ca. 650m long) connecting the proposed wastewater Pumping Station to the previously approved Water-Rock Pumping Station.
3. The construction of ca. 30m of underground pipeline to connect the existing foul network on the Mill Road to the proposed foul Pumping Station.

The Midleton North Pumping Station which will be sized for future growth will draw an existing wastewater load (ca. 4,177 p.e) from the existing sewerage network system in Midleton and will divert this load to the Water Rock Pumping Station and onto Carrigtwohill WwTP for treatment. This will provide immediate relief at the Midleton WwTP.

There will be no storage, or SWO or EO at the new Midleton North Pumping Station. In the event that flows in the existing sewer exceed the pumping capacity of the Midleton North Pumping Station, surplus flows will return back into the Midleton network, *via* a bifurcation chamber, and ultimately back to the Midleton WwTP for treatment, as per the current treatment situation.

B.8.1.2 Water Rock Pumping Station

Part 8 planning approval for the Water Rock Pumping Station was obtained by Cork County Council in 2019. The planning approval was obtained as part of the Water Rock Urban Expansion Area (UEA) Infrastructure Works, which included several projects. The Water Rock Pumping Station will comprise of the following below and above ground features:

1. An inlet manhole.
2. Valve and meter chambers.
3. A wet well.
4. An emergency overflow storage tank.
5. A control building which will include welfare facilities for operatives.
6. Two kiosks (wet kiosk & control kiosk).
7. A galvanised steel decorative vent stack with protective grill.
8. Ground level chamber and manhole covers.

The Pumping Station will be located within a compound. A 2.4-metre-high green mesh fence will surround the pumping station with both vehicular and pedestrian access gates. An access road will be provided from the existing access road to the hardstanding storage area. This will allow for private off-road parking.

This Pumping Station will facilitate the development of the Water Rock UEA (ca. 7000 p.e.) and will relieve the current overloading of the Midleton WwTP by conveying the foul wastewater to the Carrigtwohill WwTP *via* the new 7km Water Rock pipeline.

At this Pumping Station, 24-hour emergency storage and a high-level connection to the Northern Relief sewer will be provided.

The construction of the Water Rock Pump Station is scheduled for completion in December 2023. However, it should be noted that the scheme cannot come into operation until such time as both pumps stations (Water Rock and Midleton North) are complete.

B.8.1.3 Water Rock Pipeline to Carrigtwohill

In April 2021, UÉ applied to Cork County Council for exempted development under Section 5 of the Planning and Development Act 2000 for the Proposed Water Rock Rising Main to Carrigtwohill, Co. Cork.

The proposed Water Rock to Carrigtwohill rising main will comprise of the following:

1. The construction of a new 450mm diameter foul pipe network of ca. 7km in length, and all associated ancillary works. The pipeline will connect the Water Rock Pumping Station previously consented by Cork County Council under S179 of the Planning and Development Act, 2000, to the existing foul sewer network in Carrigtwohill north of the N25 to the east of Fota Rock.
2. The proposed pipeline will cross under the Cork-Midleton railway line at Water Rock in Carrigtwohill through a new sleeve underneath the railway and enter the redline boundary of the permitted UEA Project. Within this boundary, it will travel west immediately parallel to the Rail Corridor until it reaches Castle Rock Avenue, the pipeline will then turn north and head along Castle Rock Avenue until it reaches the junction with the Carrigane Road.
3. The pipeline will exit the redline boundary of the Water Rock UEA at the junction between Castle Rock Avenue and the Carrigane Road and go west for ca. 2,800m along the Carrigane Road until it reaches Ballyadam where it enters private lands and continues west adjacent to the rail corridor for ca. 480m. At this point it will traverse the rail corridor for a second time through a new sleeve and head south through private lands until it re-enters onto the Carrigane Road at the junction with the Bog Road. The pipeline continues west for ca. 370m where it turns south through the new Elmbury Residential Development until it reaches the existing foul sewer network immediately north of the N25.
4. A development site that includes the Northern Point Business Park, Castle Rock Avenue, Carrigane Road, the Bog Road, Ballyadam Bridge, agricultural lands in Ballyadam adjacent to the rail corridor and Cork-Midleton railway line.
5. Two vent stacks will be installed in the verge adjacent to the pipe. These are considered as accessories to the pipe.

The new network is expected to be constructed by ca. December 2023 (dates subject to change).

B.8.2 Other Projects

B.8.2.1 Midleton Waste Water Network Upgrade Project

Midleton agglomeration is the subject of a ECJ ruling citing non-compliance with Article 3 of UWWTD, *i.e.*, SWO non-compliance. Uisce Éireann reports regularly to the EU on ECJ agglomerations and has committed that all works necessary to achieve network compliance in Midleton will be completed by Q4 2029.

Addressing Midleton network non-compliance is also on the EPA Priority Action List (PAL). This infringement notice relates to the collecting systems (sewers and pumping stations). Currently, the Midleton network does not have sufficient capacity to collect and retain wastewater, and therefore at times releases waste water into the environment before it can reach the WwTP.

The main aim of the Midleton Waste Water Networks Upgrade Project will be to reduce flood risk and ensure all SWOs meet DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows, 1995*', Uisce Éireann technical standards, and the EPA issued Waste Water Discharge Authorisation (WWDA). Furthermore, completion of the upgrade project will improve waste water treatment and therefore ensure Midleton is removed from the EPA PAL and will ensure compliance with EU treatment standards (Article 3 of UWWTD, *i.e.*, SWO non-compliance).

This Networks Project which is currently at the Long List Options Stage/Pre-Feasibility Stage.

B.8.2.2 Rathcoursey Tidal Holding Tank

Treated effluent from the Midleton WwTP discharges to the North Channel Great Island at Rathcoursey Point *via* a diffuser after passing through Rathcoursey Tidal Holding Tank. This Tidal Holding Tank is insufficient in size to manage the peak hydraulic loadings from the Midleton agglomeration. Uisce Éireann is currently examining options to provide additional storage capacity and limit the discharges from the tank to the periods as defined in the Foreshore Licence (FS 004170).