Amendments to Part 8 Consent for Hugh Lane Gallery

Drainage & Watermains Planning Report

Dublin City Council (DCC)

March 2024

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P01	19.03.2024	Part 8 Application	MO'D	Marc O'Dowd	Principal Engineer

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1. Introduction

1.1 Background

AECOM have been appointed on behalf of Dublin City Council (DCC) to prepare a drainage and watermains planning report in support of a planning application for the proposed alterations to an approved part 8 development at High Lane Gallery. This report will detail the existing and proposed drainage and watermain infrastructure for the proposed development.

1.2 Proposed Development

The proposed Part 8 application includes the provision of a new energy centre on the roof of the existing Hugh Lane Gallery (HLG), a connection between the existing HLG building and the proposed library building (a separate planning application) and the relocation of an existing block of toilets from ground floor level to basement level of the existing HLG building.

Refer to **Error! Reference source not found.** for site location.

Refer to Figure 2 and 3 for the layout of the existing toilet block to be removed and proposed new toilet blocks respectively. The proposals include the removal of 6 No. existing toilets, 1 No. existing through urinal and 7 No. existing wash hand basins. These will be replaced with 8 No. proposed toilets (2 No. at ground floor level) and 5 No. proposed wash hand basins (2 No. at ground floor level).

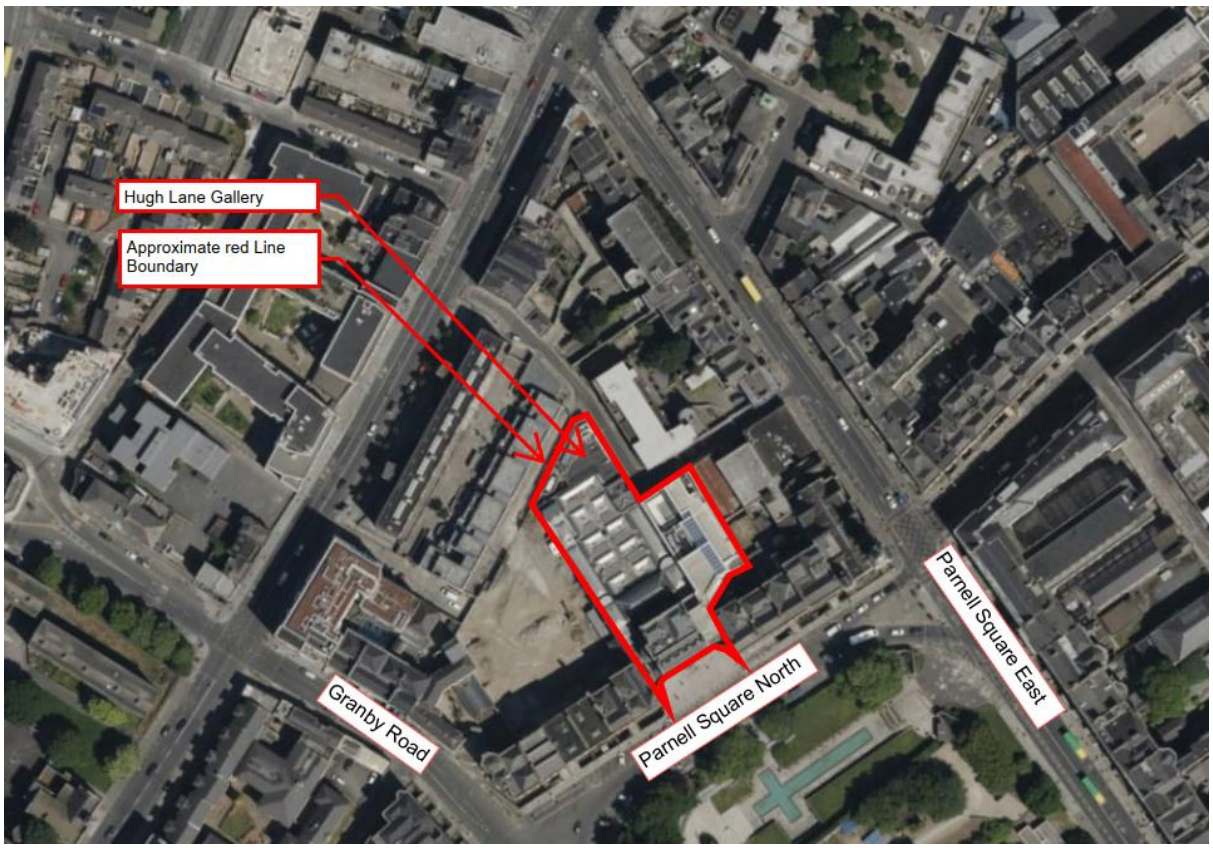


Figure 1. Site Location Map (Source: Bing Maps)

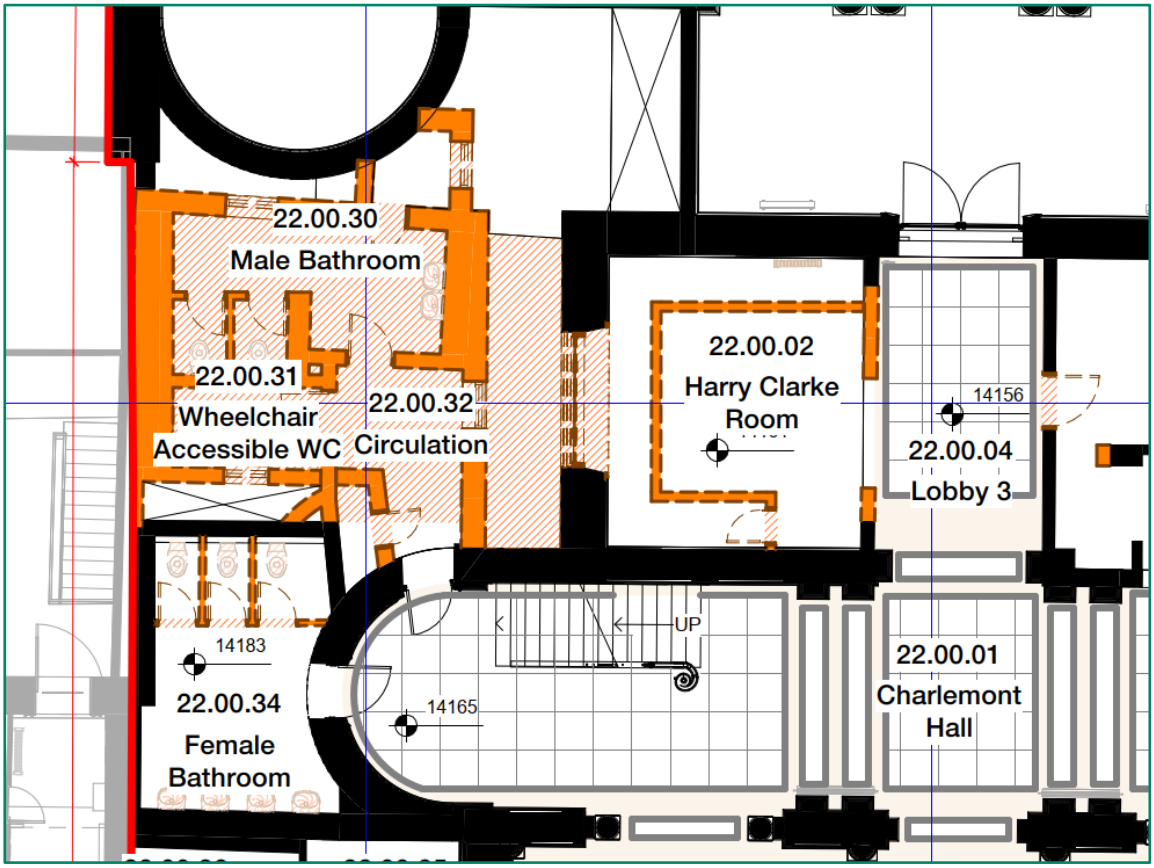


Figure 2. Existing Hugh Lane Gallery Toiler Block to be Removed (Shown in Orange, Source: Hawkins Brown Architects).

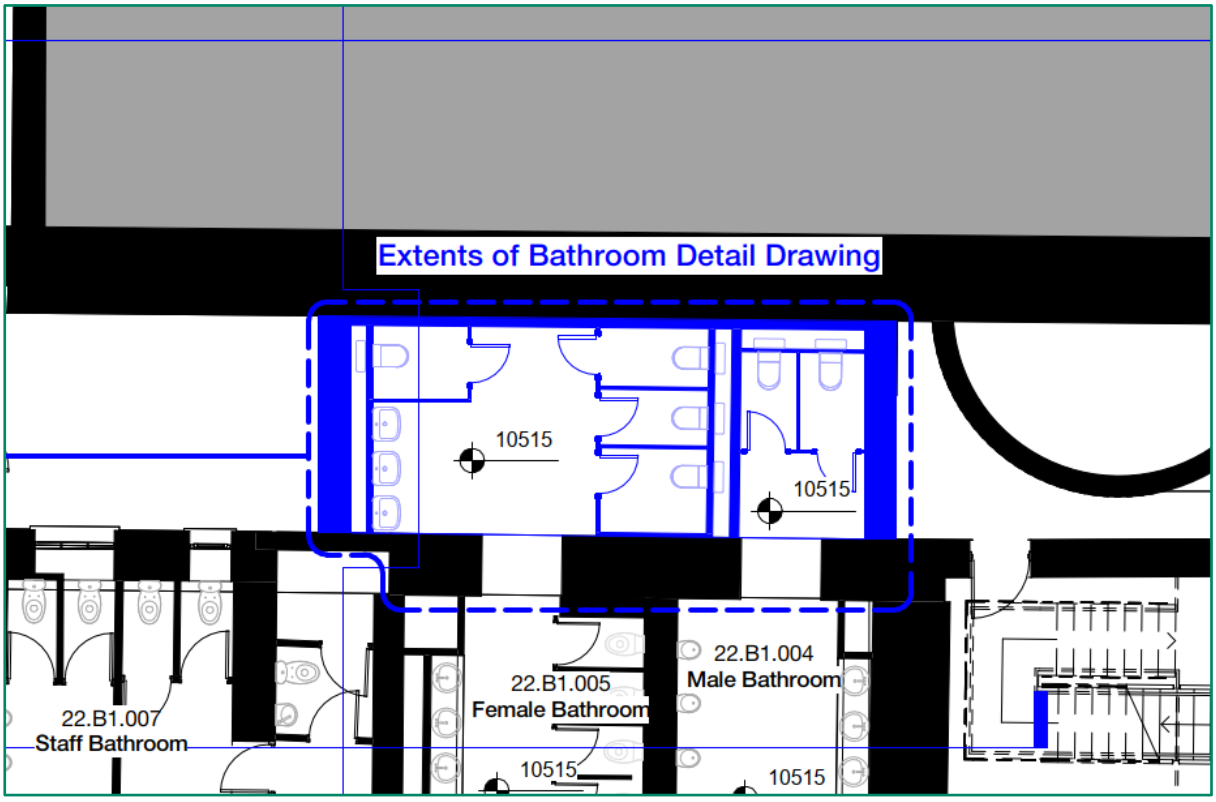


Figure 3. Proposed Hugh Lane Gallery Basement Toilet Block (shown in Blue, Source: Hawkins Brown Architects).

2. Surface Water Drainage

2.1 Existing Surface Water Drainage

Based on existing drainage records, refer to figure 2.1 below, there does not appear to be any existing surface water sewers located in the vicinity of the proposed site, but there are existing combined sewers. Therefore, based on the available record information, it appears that existing surface water runoff discharges to the existing combined sewer network.

The existing drainage systems on the site are mainly combined foul and surface water drains. There is an existing 2450 x 780 mm combined sewer along Parnell Square North to the south of the site, a 300 mm combined sewer on Bethesda Place and a 300 mm combined sewer on Frederick Lane North both to the north of the site. It is noted that several surface water road gullies are located along the north of the development and appear to discharge into the existing combined sewer.

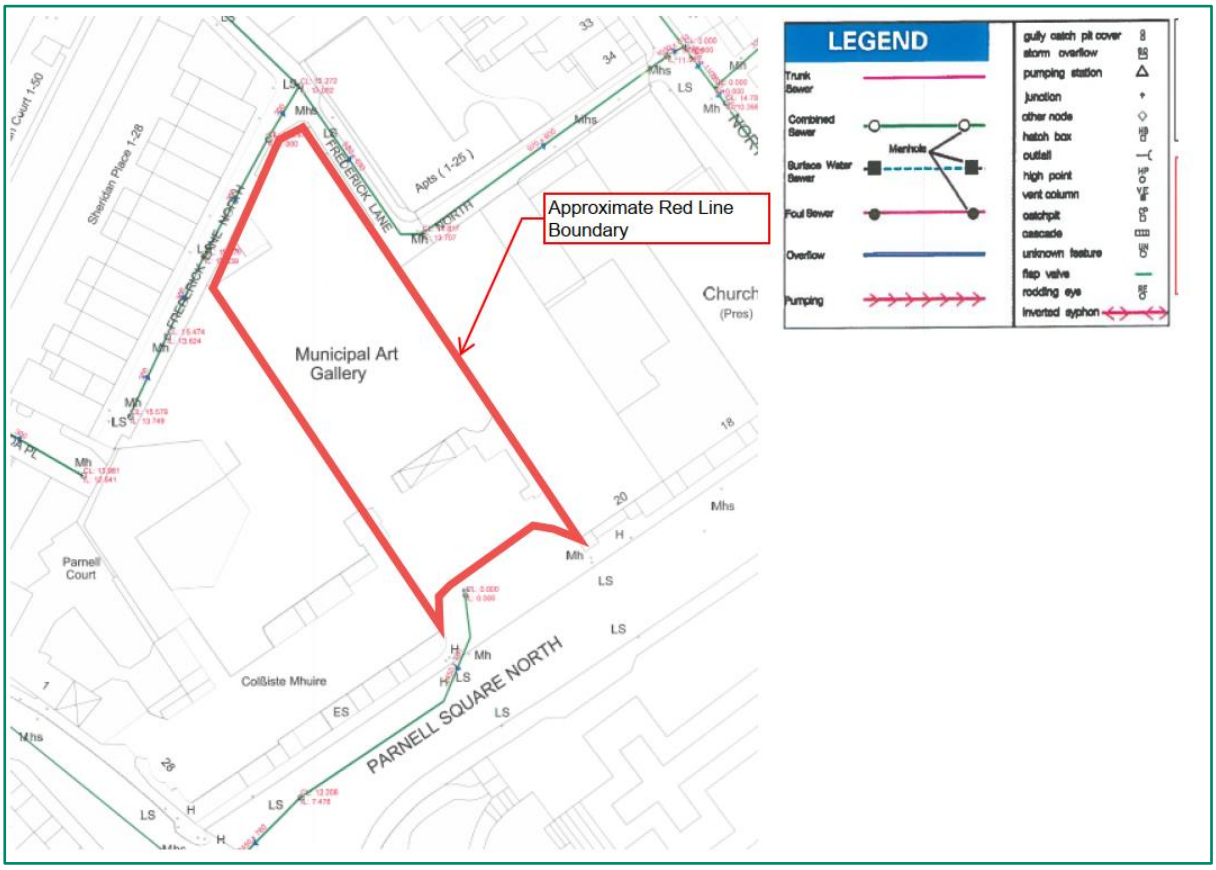


Figure 4. Existing Combined Sewers Network (Source: Irish Water)

2.1 Proposed Surface Water Drainage

The current proposals are not expected to have any impact on the existing surface water drainage of the Hugh Lane Gallery and it is expected that this will continue to operate as normal upon completion of the proposals.

3. Foul Water Drainage

3.1 Existing Foul Water Drainage

The existing networks are the same combined sewers as outlined in Section 2.1 of this report, which includes the existing 2450 x 780 mm combined sewer along Parnell Square North to the south of the site, a 300 mm combined sewer on Bethesda Place and a 300 mm combined sewer on Frederick Lane North both to the north of the site. Refer to Appendix A for the existing drainage records.

Based on a site visit undertaken on 16th February 2024, it has been observed that the existing toilet blocks within the basement of the existing Hugh Lane Gallery appear to be conveyed via an existing 150mm dia. gravity basement drainage network towards the existing brick arch sewer located within Parnell Square North (by gravity). The invert level of this outfall has been measured to be 9.79mOD, which discharges by gravity to the existing 2450mm × 780mm brick arch sewer located within Parnell Square North. Refer to Drg. PSL-ACM-XX-B1-DR-C-000503 for indicative existing drainage layout. The exact details of the existing basement drainage within the existing Hugh Lane Gallery basement are yet to be confirmed, including invert levels and pipe gradients.

Figure 5. Existing Drainage outfall Manhole within Hugh Lane Gallery Basement (Source: AECOM).

3.1 Proposed Foul Water Drainage

Foul drainage from the proposed toilet block are currently proposed to connect to the existing High Lane Gallery basement drainage network, which outfalls, by gravity to the existing Uisce Eireann combined sewer network located within Parnell Square North. It is not currently expected that any external drainage will be required to be upgraded as part of the current proposals.

Refer to Drg. PSL-ACM-XX-B1-DR-C-000503 for indicative proposed drainage layout. The exact details of the proposed connections are to be finalised at detailed design stage, upon review of further investigations and surveys of the existing basement drainage network.

It is proposed that all new manholes within the proposed basement are provided with triple hydraulically sealed manhole covers.

AECOM, in parallel with this Part 8 application, will submit a Pre-Connection Enquiry to Uisce Eireann for the proposals.

4. Water Supply

4.1 Existing Water Supply

Several Irish Water watermains are situated in the vicinity of the development, specifically a 250mm Ductile Iron main on Parnell Square North and a 125mm HPPE main on Frederick Lane North.

There is an existing water supply connection to the existing Hugh Lane Gallery, which is understood to be fed from the existing 250mm Ductile iron watermain located on Parnell Square North.

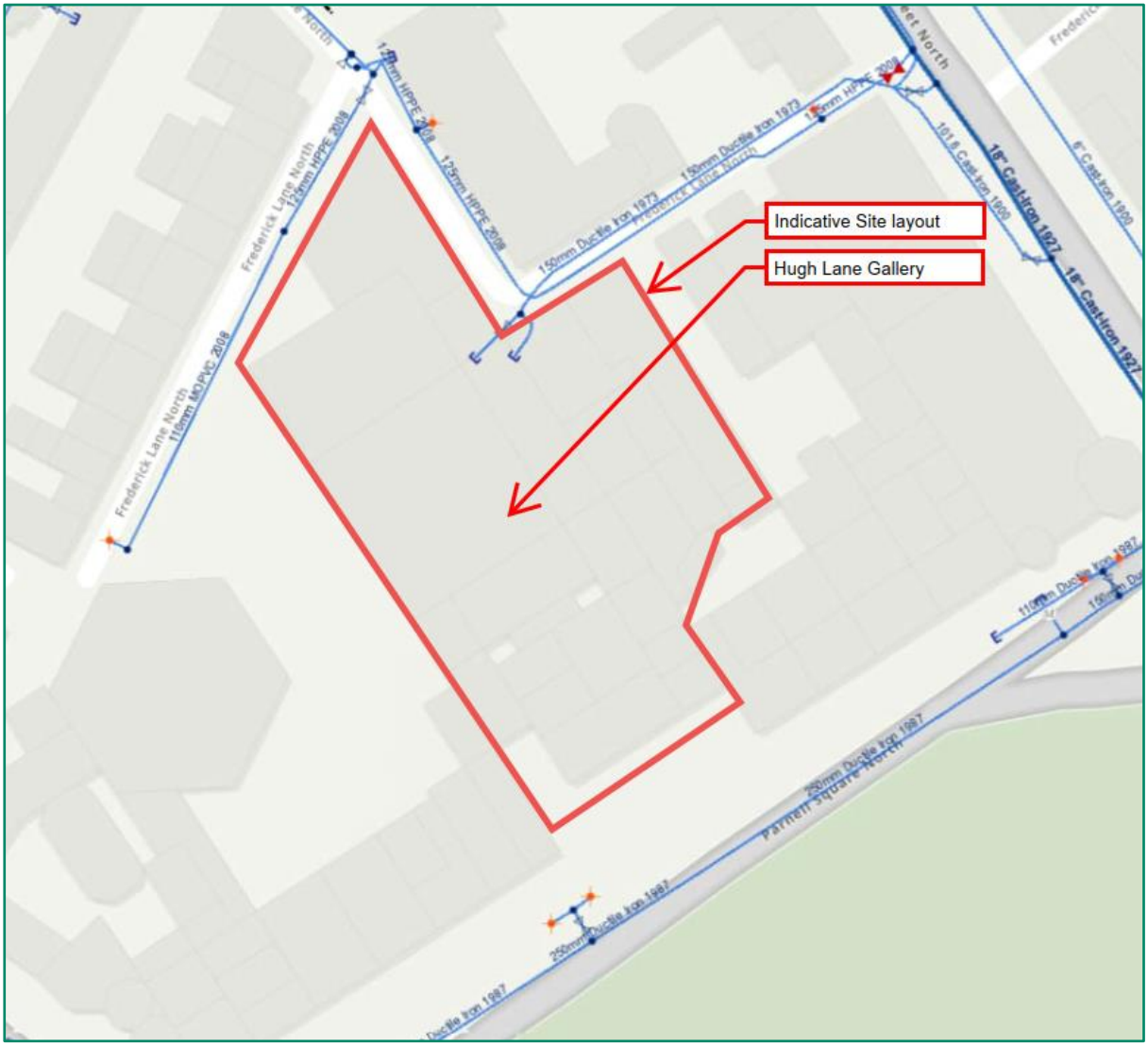


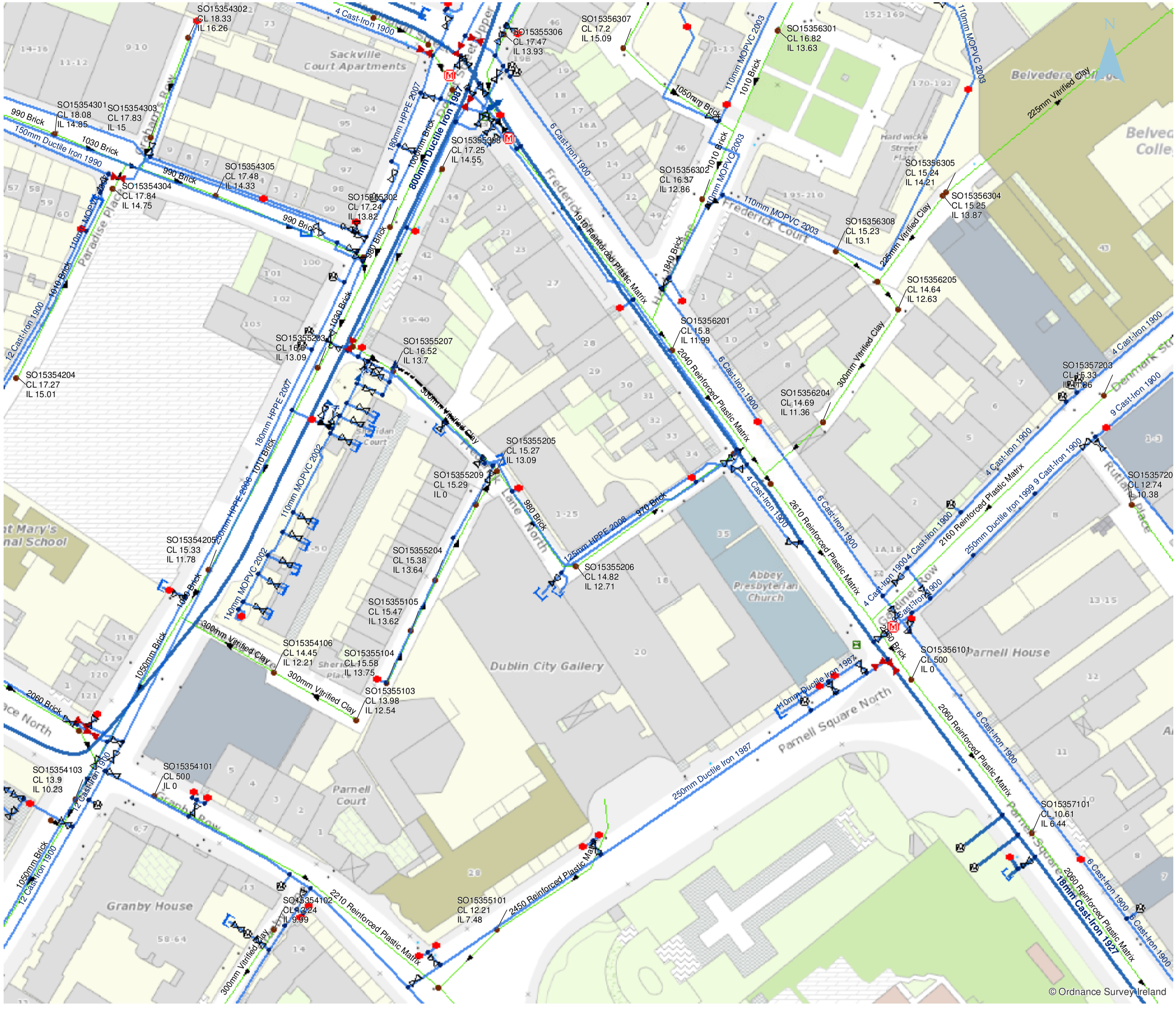
Figure 6. Existing Watermain Network (Source: Uisce Eireann).

4.2 Proposed Water Supply

It is not currently envisaged that any external upgrades will be required to the existing Hugh Lane Gallery water supply, as a result of the current proposals. The internal water supply connections between the existing Hugh Lane Gallery potable water supply pipework, will be designed at detailed design stage by a Mechanical Engineer as part of the Mechanical Engineering works for the proposals.

AECOM, in parallel with this Part 8 application, will submit a Pre-Connection Enquiry to Uisce Eireann for the proposals.

Appendix A – DCC Drainage Diversion and Watermain Records



UISCE ÉIREANN : IRISH WATER

Legend

- Boundary Meter
- Unknown Meter ; Other Meter
- Non-Return
- PRV
- Sluice Valve Open
- Sluice Valve Closed
- Sluice Valve Closed
- Double Air Control Valve

Water Hydrants

Hydrant Function

- Fire Hydrant
- Pump Stations
- Telemetry Kiosk
- Cap
- Other Fittings

Water Distribution Mains

Owned By

- Irish Water
- Irish Water
- Water Abandoned Lines

Sewer Manholes

Manhole Type

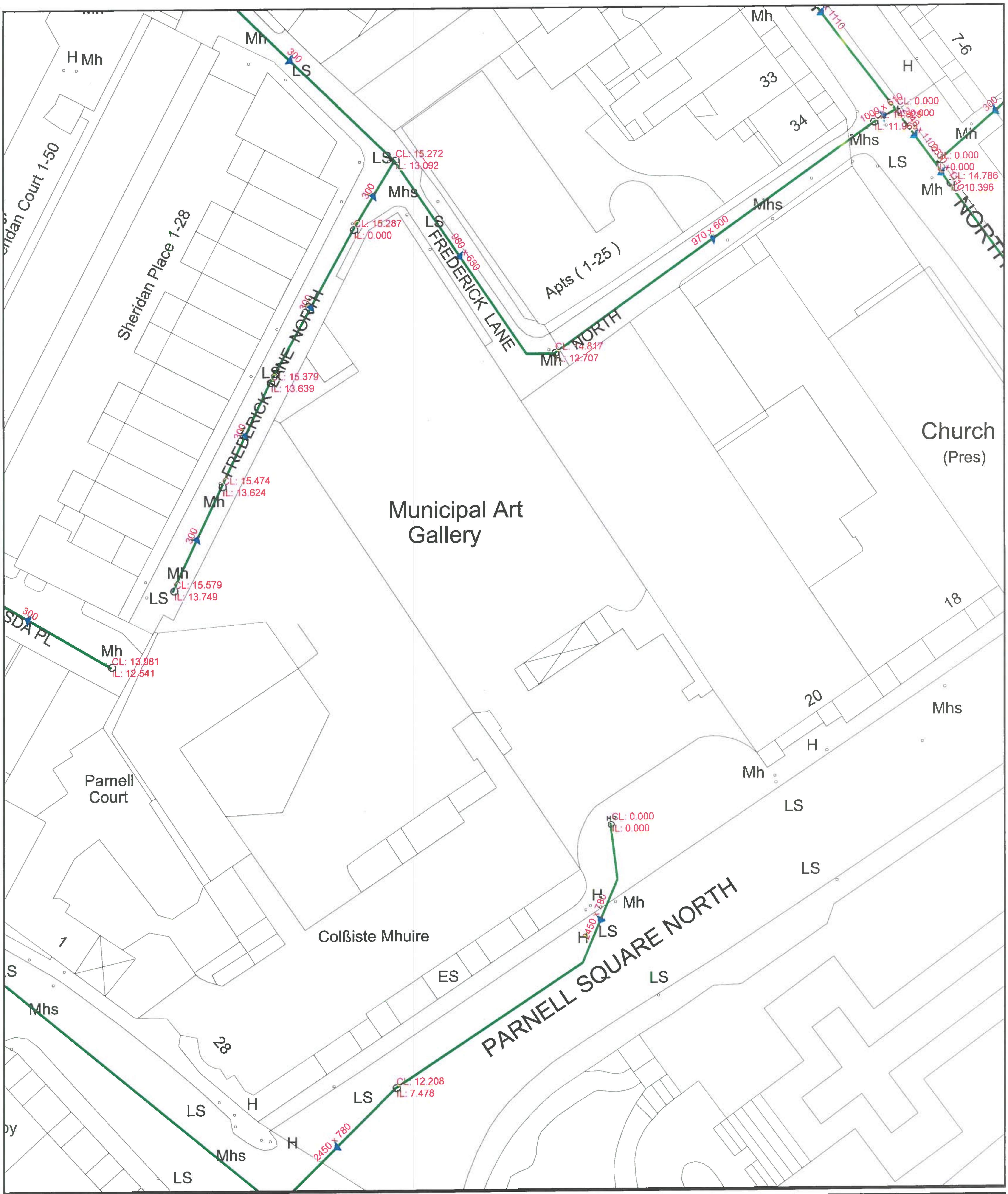
- Standard
- Gravity - Combined

1:1,000 at A3

Last edited: 13/03/2018

Metres

0 7.5 15 30



LEGEND

- Trunk Sewer
- Combined Sewer
- Manhole
- Surface Water Sewer
- Foul Sewer
- Overflow
- Pumping
- gully catch pit cover
- storm overflow
- pumping station
- junction
- other node
- hatch box
- outfall
- high point
- vent column
- catchpit
- cascade
- unknown feature
- flap valve
- rodding eye
- inverted syphon

Scale: 1: 500
Date: 19 Aug 2014

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WATER ASSET LEGEND

Design Potable Water
Design Raw Water
Construction Potable Water
Construction Raw Water
Decommissioned Water
Operational Potable Water
Operational Raw Water

Borehole Site
Boundary Box
Bulk Supply Point
Distribution Dosing Site
Gmd Water Supply Wks Simple Chemical
Pressure Monitor
Raw Water Reservoir Bankside
Raw Water Reservoir Impounding
Raw Water Reservoir Impounding Pumped
Raw Water Reservoir Pumped
River Bulk Transfer Works
Treated Water Balancing Tank
Treated Water Service Reservoir
Abstraction Pt Borehole
Abstraction Pt Draw Off
Raw Water Intake
Air Valve
Double Air Valve
Anode
Butterfly Valve
Pressure Reducing Valve
Pressure Sustaining Valve
Reflux Valve
Sluice Valve
Water Meter
Water Meter (Abstraction)
Water Meter (Revenue)
Water Meter (Treated Prdn)
Water Meter (Treated Storage)
Water Meter (Waste)
Water Meter (Bulk)
Water Meter (Distribution)
Access Point (Hatchbox)
Access Point (Pigging Point)
Access Point (Meter Pit)
Access Point (Cable Pit)
Washout
Washout Hydrant
Water Treatment Works (Surface)
Water Treatment Works (Ground)
Pump Station High Lift
Pump Station In Line Booster
Pump Station Raw Water Booster
Water Tower
End Cap
Fire Hydrant
Depot
Laboratory
Office
Pipe Bridge
River Monitoring Station
Workshop
Address Point Marker
Sensitive Address
Attribute Change Marker
Map Edge Connector

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