



UTILITY PLANNING REPORT

17-20 Merchant's Road Lower, Galway City

On behalf of Galway City Council

November 2021

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Project No.	Doc. No.	Rev.	Date	Prepared By	Checked By	Approved By	Status
21665	6007	A	23/11/2021	D Cagney	D Cotter	I Brosnan	Planning

MWP, Engineering and Environmental Consultants
Address: Park House, Bessboro Road, Blackrock, Cork, T12 X251
www.mwp.ie



1. Introduction

Malachy Walsh and Partners (MWP) were commissioned by Galway City Council (GCC) to provide a design for the civil utilities serving the site namely, stormwater, foul water, telecommunications, and water supply in connection with a planning application for proposed mixed use Development at Lower Merchant's Road, Galway City. This report outlines the engineering design proposals for the elements described above relating to the planning application.

2. Site Location

The site is located at 17-20 Merchant's Road Lower, Galway City as shown in Figure 2-1. The site is located at approximately 80m from the River Corrib to the west and east of the site. It currently consists of four number two-story terraced residential houses. These are currently in a derelict condition. Existing ground levels in the vicinity of the site vary from approximately 3.6mOD in the north to 3.4mOD in the south. The current finished ground floor levels on the existing dwellings are summarized in Table 2-1.

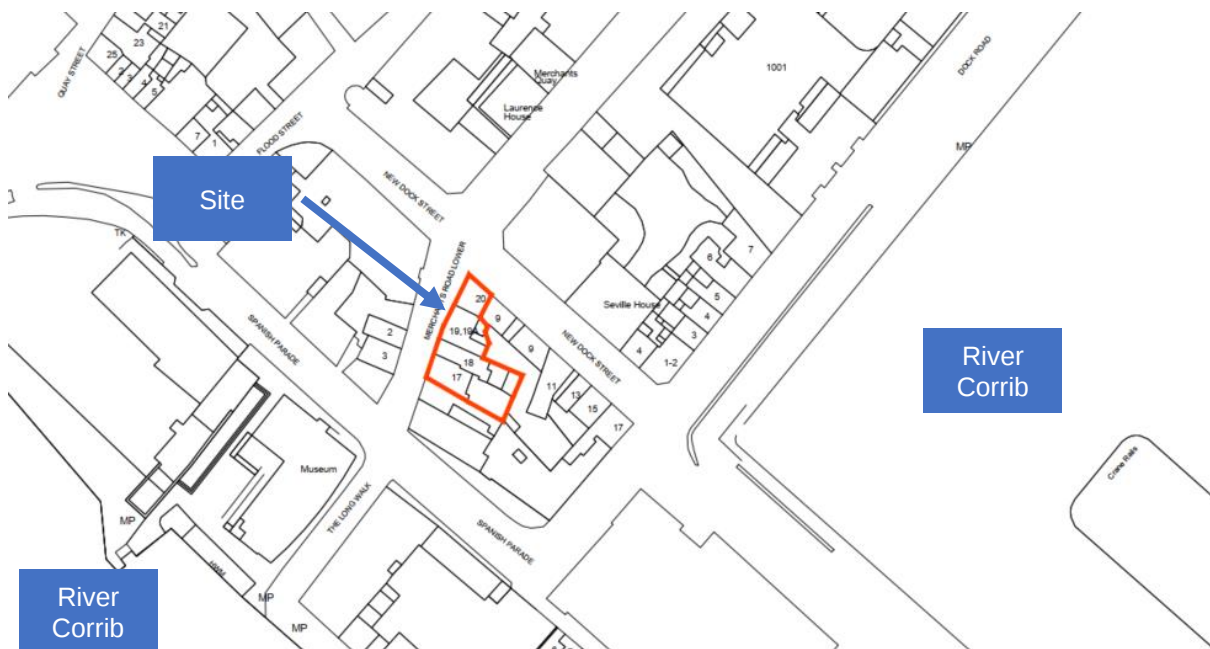


Figure 2-1: Site Location Map

Table 2-1: Existing Finished Floor Levels at Ground Floor

House No.	17	18	19	20
Existing Finished Floor Levels (mOD Malin)	3.49	3.49	3.52	3.52

The existing structures on the site are intended to be demolished to accommodate the new development. It is proposed to construct a multi-purpose structure containing social housing apartments, cafe, and a cultural centre on the site. The ground floor will contain the café and cultural centre along with a communal area to serve the

residential apartments on the upper floors. The proposed floor levels for the ground floor are summarized in Table 2-2.

Table 2-2: Proposed Finished Floor Levels at Ground Floor

Area	Cafe	Cultural Centre	Communal Area
Proposed Finished Floor Levels (mOD Malin)	3.65	3.75	3.45

3. Water Supply Proposals

A plan of the existing services present in the area is provided in Appendix A. There are 4 no, existing connections to the site but these are proposed to be replaced by the Works. There is an existing Cast Iron HDPE watermain in Lower Merchant's Road. Irish Water have issued a letter confirming that the connections for the development are feasible without an infrastructure upgrade by Irish Water. It is proposed to perform the new service connections to serve the existing development onto this existing water main along the route of the existing water supply connections. Refer to calculations in Appendix B for further information on predicted flow rates based on the Code of Practice by Irish Water. Detailed design will finalize these figures prior to construction. Proposed Layout is shown in Appendix C.

4. Foul Water

A plan of the existing Irish Water services present in the area is provided in Appendix A. A 225mm diameter combined sewer is shown to in Lower Merchant's Road. It is understood that the current properties drain into this sewer. Irish Water have issued a letter confirming that the connections for the development are feasible without an infrastructure upgrade by Irish Water. The foul water is proposed to discharge via a combined sewer drain connections into the existing sewer. Calculations with predicted flow rates are shown in Appendix B using the Code of Practice by Irish Water. These figures will be finalized at detailed design prior to construction. Proposed layout is shown in Appendix C.

5. Storm Water

As discussed in the previous section the site appears to drain into the existing combined sewer in Lower Merchant's Road. It is proposed to maintain this arrangement for the site. The site is currently draining into this sewer so no change in flow is proposed by this design. The drainage system on the site will be designed so that storm and foul are separate and only combined at the last point immediate upstream of the sewer connection. The storm drain will be designed to leave a spur out so to allow for ease of connection in the future if an independent storm sewer system is installed along Lower Merchant's Road.

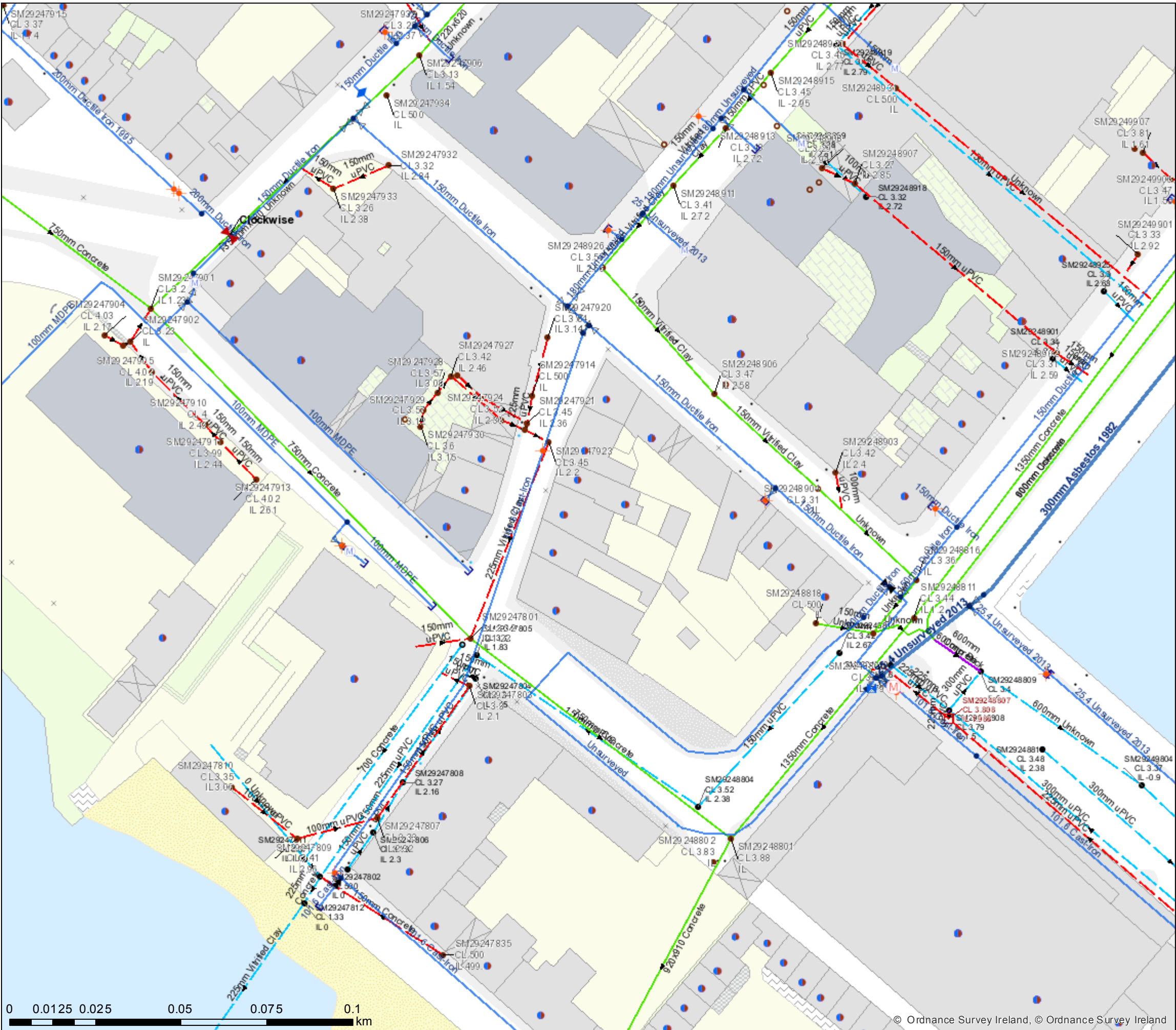
6. Telecom and other Electrical services

There are overhead lines connected to the site and other utilities adjacent which may be affected by the proposed Works. These services will be diverted, the detail of which will be finalised through detailed design.

Appendix A

Existing Storm Water, Foul Water and Water Mains Services Drawing

Irish Water Web Map



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NOTE: DIAL BEFORE YOU DIG Phone: 1850 427 747 or e-mail dig@gasnetworks.ie - The actual position of the gas/electricity distribution and transmission network must be verified on site before any mechanical excavating takes place. If any mechanical excavation is proposed, hard copy maps must be requested from GNI re gas. All work in the vicinity of gas distribution and transmission network must be completed in accordance with the current edition of the Health & Safety Authority publication, 'Code of Practice For Avoiding Danger From Underground Services' which is available from the Health and Safety Authority (1890 28 93 89) or can be downloaded free of charge at www.hsa.ie."

Water Distribution Network - Water Treatment Plant - Water Pump Station - Storage Cell/Tower - Dosing Point - Meter Station - Abstraction Point - Telemetry Kiosk Reservoir - Potable - Raw Water Water Distribution Mains - Irish Water - Private Trunk Water Mains - Irish Water - Private Water Lateral Lines - Irish Water - Non IW Water Casings - Water Abandoned Lines - Boundary Meter - Bulk/Check Meter - Group Scheme - Source Meter - Waste Meter - Unknown Meter ; Other Meter - Non-Return - PRV - PSV - Sluice Line Valve Open/Closed - Butterfly Line Valve Open/Closed - Sluice Boundary Valve Open/Closed - Butterfly Boundary Valve Open/Closed - Scour Valves - Single Air Control Valve - Double Air Control Valve - Water Stop Valves - Water Service Connections - Water Distribution Chambers - Water Network Junctions - Pressure Monitoring Point - Fire Hydrant - Fire Hydrant/Washout Water Fittings - Cap - Reducer - Tap - Other Fittings	Sewer Foul Combined Network - Waste Water Treatment Plant - Waste Water Pump station Sewer Mains Irish Water - Gravity - Combined - Gravity - Foul - Gravity - Unknown - Pumping - Combined - Pumping - Foul - Pumping - Unknown - Syphon - Combined - Syphon - Foul - Overflow Sewer Mains Private - Gravity - Combined - Gravity - Foul - Gravity - Unknown - Pumping - Combined - Pumping - Foul - Pumping - Unknown - Syphon - Combined - Syphon - Foul - Overflow Sewer Lateral Lines - Sewer Lateral Lines - Sewer Casings Sewer Manholes - Standard - Backdrop - Cascade - Catchpit - Bifurcation - Lampole - Hydrobrake - Other; Unknown Discharge Type - Outfall - Overflow - Soakaway - Cascade - Other; Unknown Gas Networks Ireland - Transmission High Pressure Gasline - Distribution Medium Pressure Gasline - Distribution Low Pressure Gasline ESB Networks ESB HV Lines - HV Underground - HV Overhead - HV Abandoned ESB MV/LV Lines - MV Overhead Three Phase - MV Overhead Single Phase - LV Overhead Three Phase - LV Overhead Single Phase - MV/LV Underground - Abandoned Non Service Categories - Proposed - Under Construction - Out of Service - Decommissioned Water Non Service Assets - Water Point Feature - Water Pipe - Water Structure Waste Non Service Assets - Waste Point Feature - Sewer - Waste Structure	Storm Water Network Surface Water Mains - Surface Gravity Mains - Surface Gravity Mains Private - Surface Water Pressurised Mains - Surface Water Pressurised Mains Private Inlet Type - Gully - Standard - Other; Unknown Storm Manholes - Standard - Backdrop - Cascade - Catchpit - Bifurcation - Hatchbox - Lampole - Hydrobrake - Other; Unknown Storm Culverts - Storm Clean Outs - Stormwater Chambers Discharge Type - Outfall - Overflow - Soakaway - Cascade - Other; Unknown Gas Networks Ireland - Transmission High Pressure Gasline - Distribution Medium Pressure Gasline - Distribution Low Pressure Gasline ESB Networks ESB HV Lines - HV Underground - HV Overhead - HV Abandoned ESB MV/LV Lines - MV Overhead Three Phase - MV Overhead Single Phase - LV Overhead Three Phase - LV Overhead Single Phase - MV/LV Underground - Abandoned Non Service Categories - Proposed - Under Construction - Out of Service - Decommissioned Water Non Service Assets - Water Point Feature - Water Pipe - Water Structure Waste Non Service Assets - Waste Point Feature - Sewer - Waste Structure
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Appendix B

Water Mains and Foul Calculations for the site

Irish Water Preconnection Application Form Calculations

Site Details

Address

17-20 Merchants Road
Galway City

Post Development

Residential

Watermains

	No.	Occupancy	Total	
Number of Units	12	2.7	32.4	Persons
			33	Persons

2.7 Assumed Occupancy Level

Source: Irish Water Code of Practice for Water

Average Usage	4950 l/day
	0.057 l/s
Average Day/ Peak Week Demand	0.072 l/s
Peak Demand	0.358 l/s

Average Daily usage 150 l/person/day

1.25 times average daily domestic demand

5 times average day/peak week demand

Source: Irish Water Code of Practice for Water

Wastewater

Dry Weather Flow	5352 l/day
	0.062 l/s
Design Foul Flow	0.372 l/s

Dry Weather Flow 446 l/dwelling/day

Source: Irish Water Code of Practice for Wastewater

Domestic Wastewater peak factor 6

Source: Irish Water Code of Practice for Wastewater

Commerical

Commerical flow	0.009 l/s
Infiltration	0.001 l/s
Dry Weather Flow	0.010 l/s
Peaking Factor	4.500 -
Design Foul Flow	0.040 l/s

Assume dry industry with 15m³/ha/day

Assume 10% for infiltration

Site less than 5.5ha

Surface Water Allowance

Gross Site Area	0.05 ha
Catchment Area	0.001 ha
Intensity	8 mm/hr
Volumetric Runoff Coefficient Cv	0.9 -
	1.300 -
Flow	0.026 l/s

Buildings, Hardstanding and grass. Area from Architect

2% of Gross Site Area

Slopes less than 2% present and 100% AEP event

Total

Design Flow	0.398 l/s
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Water Storage

Residential	4.906 m ³
Commerical	0.750 m ³
Total	5.656 m ³

Assume 24 hours storage for all

Irish Water Preconnection Application Form Calculations

Site Details

Pre Development

Address

17-20 Merchants Road
Galway City

Residential

Watermains

	No.	Occupancy	Total	
Number of Units	4	2.7	10.8	Persons
			11	Persons

2.7 Assumed Occupancy Level

Source: Irish Water Code of Practice for Water

Average Usage	1650 l/day
	0.019 l/s
Average Day/ Peak Week Demand	0.024 l/s
Peak Demand	0.119 l/s

Average Daily usage 150 l/person/day

1.25 times average daily domestic demand

5 times average day/peak week demand

Source: Irish Water Code of Practice for Water

Wastewater

Dry Weather Flow	1784 l/day
	0.021 l/s
Design Foul Flow	0.124 l/s

Dry Weather Flow 446 l/dwelling/day

Source: Irish Water Code of Practice for Wastewater

Domestic Wastewater peak factor 6

Source: Irish Water Code of Practice for Wastewater

Commerical

Commerical flow	0.009 l/s
Infiltration	0.001 l/s
Dry Weather Flow	0.010 l/s
Peaking Factor	4.500 -
Design Foul Flow	0.040 l/s

Assume dry industry with 15m³/ha/day

Assume 10% for infiltration

Site less than 5.5ha

Surface Water Allowance

Gross Site Area	0.05 ha
Catchment Area	0.001 ha
Intensity	8 mm/hr
Volumetric Runoff Coefficient Cv	0.9 -
	1.300 -
Flow	0.026 l/s

Buildings, Hardstanding and grass. Area from Architect

2% of Gross Site Area

Slopes less than 2% present and 100% AEP event

Total

Design Flow	0.150 l/s
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Water Storage

Residential	4.906 m ³
Commerical	0.750 m ³
Total	5.656 m ³

Assume 24 hours storage for all

Appendix C

Proposed Storm, Foul and Watermain Layout

Appendix D

Confirmation of Feasibility

Daniel Cagney

Malachy Walsh and Co, The Elm Suite
Loughmore Centre
Raheen Business Park
Limerick
V94R578

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Theas
Cathair Chorcaí

Irish Water
PO Box 448,
South City
Delivery Office,
Cork City.

www.water.ie

19 November 2021

Re: CDS21004542 pre-connection enquiry - Subject to contract | Contract denied

Connection for Multi/Mixed Use Development of 14 unit(s) at 17-20 Merchants Road, Galway City, Galway

Dear Sir/Madam,

Irish Water has reviewed your pre-connection enquiry in relation to a Water & Wastewater connection at 17-20 Merchants Road, Galway City, Galway (the **Premises**). Based upon the details you have provided with your pre-connection enquiry and on our desk top analysis of the capacity currently available in the Irish Water network(s) as assessed by Irish Water, we wish to advise you that your proposed connection to the Irish Water network(s) can be facilitated at this moment in time.

SERVICE	OUTCOME OF PRE-CONNECTION ENQUIRY <u>THIS IS NOT A CONNECTION OFFER. YOU MUST APPLY FOR A CONNECTION(S) TO THE IRISH WATER NETWORK(S) IF YOU WISH TO PROCEED.</u>
Water Connection	Feasible without infrastructure upgrade by Irish Water
Wastewater Connection	Feasible without infrastructure upgrade by Irish Water
SITE SPECIFIC COMMENTS	
Water Connection	Based on current Irish Water records, there is a 100mm diameter uPVC water main in the public road, along "Long Walk Street". The 100mm diameter main is Irish Water owned and managed and has the capacity to service the proposed development. The proposed water main layouts will require design vetting at application stage in accordance with Irish Water code of practice.
Wastewater Connection	Based on current Irish Water records, there is a 225mm diameter uPVC gravity sewer in the public road, along "Long Walk Street" at the front of the proposed development. The sewer is Irish Water owned and managed and has the capacity to service the proposed development. The proposed sewer layout will require design vetting at application stage in accordance with Irish Water code of practice.

The design and construction of the Water & Wastewater pipes and related infrastructure to be installed in this development shall comply with the Irish Water Connections and Developer Services Standard Details and Codes of Practice that are available on the Irish Water website. Irish Water reserves the right to supplement these requirements with Codes of Practice and these will be issued with the connection agreement.

Whilst every care has been taken in its compilation Irish Water gives this information as to the position of its underground network as a general guide only on the strict understanding that it is based on the best available information provided by each Local Authority in Ireland to Irish Water. Irish Water can assume no responsibility for and give no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided and does not accept any liability whatsoever arising from any errors or omissions. This information should not be relied upon in the event of excavations or any other works being carried out in the vicinity of the Irish Water underground network. The onus is on the parties carrying out excavations or any other works to ensure the exact location of the Irish Water underground network is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.

1) The initial assessment referred to above is carried out taking into account water demand and wastewater discharge volumes and infrastructure details on the date of the assessment. **The availability of capacity may change at any date after this assessment.**

- 2) This feedback does not constitute a contract in whole or in part to provide a connection to any Irish Water infrastructure. All feasibility assessments are subject to the constraints of the Irish Water Capital Investment Plan.
- 3) The feedback provided is subject to a Connection Agreement/contract being signed at a later date.
- 4) A Connection Agreement will be required to commencing the connection works associated with the enquiry this can be applied for at <https://www.water.ie/connections/get-connected/>
- 5) A Connection Agreement cannot be issued until all statutory approvals are successfully in place.
- 6) Irish Water Connection Policy/ Charges can be found at <https://www.water.ie/connections/information/connection-charges/>
- 7) Please note the Confirmation of Feasibility does not extend to your fire flow requirements.
- 8) Irish Water is not responsible for the management or disposal of storm water or ground waters. You are advised to contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges
- 9) To access Irish Water Maps email datarequests@water.ie
- 10) All works to the Irish Water infrastructure, including works in the Public Space, shall have to be carried out by Irish Water.

If you have any further questions, please contact Barry Butler from the design team by email barry.butler@water.ie For further information, visit **www.water.ie/connections**.

Yours sincerely,



Yvonne Harris

Head of Customer Operations