
Civil Engineer Services Part 8 Report

Project:

Proposed Housing Development,
The Gardens, Ropewalk,
Cork City, Co. Cork.

Client:

Cork City Council



Comhairle Cathrach Chorcaí
Cork City Council

Date of Report:

20th September 2023

Project Ref. No.:

23082

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1.0 Introduction & Proposed Development

The following report outlines the Civil Engineering design elements for a proposed housing development at The Gardens, Ropewalk, Cork City, Co. Cork. The proposed development consists of the demolition of an existing semi-detached house and the construction of 3No. social housing units.

2.0 Civil Engineering Services

The following section outlines the civil engineering services for the proposed development.

2.1 Foul Sewerage

Existing Foul Network:

There is an existing foul sewer located on Ropewalk, to the east of the site. There is also an existing foul private drain traversing the site.

Proposed Foul Sewerage:

It is proposed to discharge the foul effluent from the proposed development to the existing foul sewer on Ropewalk, to the east of the site.

Please refer to drawing 23082-100 for existing foul sewer details and drawing 23082-150 for the proposed foul sewer details.

2.2 Surface Water Drainage:

Existing Surface Water Drainage:

There is an existing surface water sewer located on Ropewalk, to the east of the site.

Proposed Surface Water Drainage:

It is proposed to discharge the surface water from the proposed development to the existing surface water sewer on Ropewalk, to the east of the site.

Sustainable Urban Drainage Systems (SUDS) in the form of permeable paving has been provided to manage the surface water on the paved area of the development. The surface water discharge from the remainder of the site will be attenuated and discharged to the surface water sewer via a flow control device that will limit the rate of discharge to 5.0 l/s.

Please refer to drawing 23082-100 for existing surface water sewer details and drawing 23082-150 for the proposed surface water sewer details. The surface water network calculation can be found in Appendix A of this report.

2.3 Water Supply:

Existing Watermain:

There is an existing 25mm diameter watermain located on Ropewalk located to the east of the site. There is also a 100mm diameter watermain located on Upper Convent Road, which is located to the south of the site.

Proposed Watermain:

It is proposed to connect the proposed development to the existing 100mm diameter water main located on Upper Convent Road. The development will be connected via a watermeter and a new fire hydrant for the development will be provided.

Appendix A - Water Services Calculations

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	Scotland and Ireland	Connection Type	Level Soffits
M5-60 (mm)	17.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.200	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	4.00	Enforce best practice design rules	✓

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	SW MH1	SW MH2	41.235	0.600	6.190	5.780	0.410	100.6	150	4.69	50.0
1.001	SW MH2	SW MH3	1.921	0.600	5.780	5.761	0.019	101.1	225	4.71	50.0
1.002	SW MH3	ATT. Tank	1.231	0.600	5.761	5.749	0.012	102.6	225	4.73	50.0
1.003	ATT. Tank	SW MH4 FC	9.855	0.600	5.749	5.650	0.099	99.5	225	4.85	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.002	17.7	4.9	2.120	2.430	0.036	0.0	54	0.855
1.001	1.300	51.7	7.9	2.355	2.374	0.058	0.0	59	0.946
1.002	1.290	51.3	7.9	2.374	2.386	0.058	0.0	59	0.939
1.003	1.310	52.1	7.9	2.386	2.395	0.058	0.0	58	0.946

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	41.235	100.6	150	Circular	8.460	6.190	2.120	8.360	5.780	2.430
1.001	1.921	101.1	225	Circular	8.360	5.780	2.355	8.360	5.761	2.374
1.002	1.231	102.6	225	Circular	8.360	5.761	2.374	8.360	5.749	2.386
1.003	9.855	99.5	225	Circular	8.360	5.749	2.386	8.270	5.650	2.395

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	SW MH1		Junction		SW MH2	1200	Manhole	Adoptable
1.001	SW MH2	1200	Manhole	Adoptable	SW MH3	1200	Manhole	Adoptable
1.002	SW MH3	1200	Manhole	Adoptable	ATT. Tank	1200	Manhole	Adoptable
1.003	ATT. Tank	1200	Manhole	Adoptable	SW MH4 FC	1200	Manhole	Adoptable

Appendix B – Uisce Eireann - Confirmation of Feasibility

CONFIRMATION OF FEASIBILITY

Robert Power

DRA Consulting Engineers
The Park
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Limerick
Co. Limerick
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24 October 2023

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

Uisce Éireann
PO Box 448
South City
Delivery Office
Cork City

www.water.ie

**Our Ref: CDS23007264 Pre-Connection Enquiry
The Gardens, Rope Walk, Blackrock, Cork, Co. Cork**

Dear Applicant/Agent,

We have completed the review of the Pre-Connection Enquiry.

Uisce Éireann has reviewed the pre-connection enquiry in relation to a Water & Wastewater connection for a Housing Development of 3 unit(s) at The Gardens, Rope Walk, Blackrock, Cork, Co. Cork (**the Development**).

Based upon the details provided we can advise the following regarding connecting to the networks;

- **Water Connection** - Feasible Subject to upgrades:

Please note that current Uisce Éireann records do not show a public watermain network in the vicinity of the potential connection point highlighted as part of this submission and existence of such network(s) was inconclusive from survey information provided. If a connection is proposed at this location, it will be necessary to verify the existence of this network and connectivity to the current public water infrastructure as part of any future connection application process.

Alternatively, to facilitate the proposed connection at the Development to the public water network, the Uisce Éireann watermain network will have to be extended by approximately 45m. Uisce Éireann currently does not have any plans to extend its network in this area. These works will be carried out by Uisce Éireann and the costs for this will be included in your connection fee. Please see www.water.ie/connections/ for information on connection charges.

- **Wastewater - Connection** Feasible without infrastructure upgrade by Uisce Éireann:

Please note that current Uisce Éireann records do not show the public wastewater and storm water network extending to the proposed connection point highlighted as part of this submission and from provided survey information. It will be necessary to verify the existence of these network extents, including ownership and connectivity to the current public wastewater infrastructure as part of any future connection application process.

Any drainage proposals must incorporate an acceptable level of Sustainable Drainage Systems / Attenuation in the management of stormwater to reduce peak surface water discharge if it is identified that the existing storm water network does has connectivity to the existing combined network. Full details of these to be agreed with the LA Drainage Division.

This letter does not constitute an offer, in whole or in part, to provide a connection to any Uisce Éireann infrastructure. Before the Development can be connected to our network(s) you must submit a connection application and be granted and sign a connection agreement with Uisce Éireann.

As the network capacity changes constantly, this review is only valid at the time of its completion. As soon as planning permission has been granted for the Development, a completed connection application should be submitted. The connection application is available at www.water.ie/connections/get-connected/

Where can you find more information?

- **Section A** - What is important to know?
- **Section B** - Details of Uisce Éireann's Network(s)

This letter is issued to provide information about the current feasibility of the proposed connection(s) to Uisce Éireann's network(s). This is not a connection offer and capacity in Uisce Éireann's network(s) may only be secured by entering into a connection agreement with Uisce Éireann.

For any further information, visit www.water.ie/connections, email newconnections@water.ie or contact 1800 278 278.

Yours sincerely,



Dermot Phelan
Connections Delivery Manager

Section A - What is important to know?

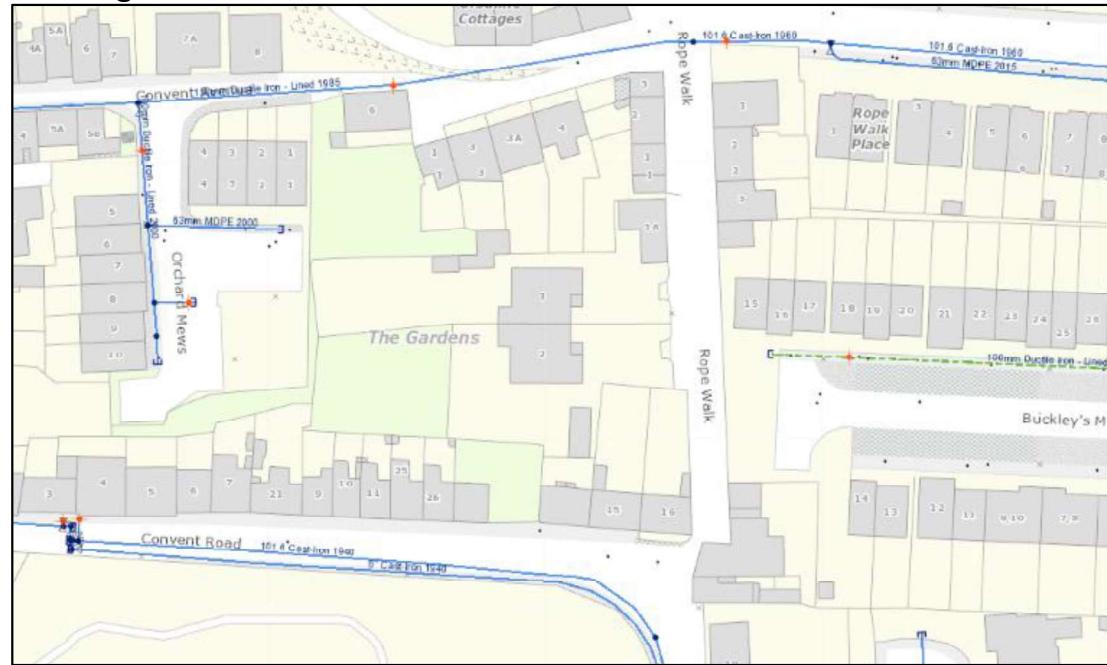
What is important to know?	Why is this important?
Do you need a contract to connect?	<ul style="list-style-type: none"> Yes, a contract is required to connect. This letter does not constitute a contract or an offer in whole or in part to provide a connection to Uisce Éireann's network(s). Before the Development can connect to Uisce Éireann's network(s), you must submit a connection application <u>and be granted and sign</u> a connection agreement with Uisce Éireann.
When should I submit a Connection Application?	<ul style="list-style-type: none"> A connection application should only be submitted after planning permission has been granted.
Where can I find information on connection charges?	<ul style="list-style-type: none"> Uisce Éireann connection charges can be found at: https://www.water.ie/connections/information/charges/
Who will carry out the connection work?	<ul style="list-style-type: none"> All works to Uisce Éireann's network(s), including works in the public space, must be carried out by Uisce Éireann*. <p>*Where a Developer has been granted specific permission and has been issued a connection offer for Self-Lay in the Public Road/Area, they may complete the relevant connection works</p>
Fire flow Requirements	<ul style="list-style-type: none"> The Confirmation of Feasibility does not extend to fire flow requirements for the Development. Fire flow requirements are a matter for the Developer to determine. What to do? - Contact the relevant Local Fire Authority
Plan for disposal of storm water	<ul style="list-style-type: none"> The Confirmation of Feasibility does not extend to the management or disposal of storm water or ground waters. What to do? - Contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges.
Where do I find details of Uisce Éireann's network(s)?	<ul style="list-style-type: none"> Requests for maps showing Uisce Éireann's network(s) can be submitted to: datarequests@water.ie

What are the design requirements for the connection(s)?	<ul style="list-style-type: none"> The design and construction of the Water & Wastewater pipes and related infrastructure to be installed in this Development shall comply with <i>the Uisce Éireann Connections and Developer Services Standard Details and Codes of Practice</i>, available at www.water.ie/connections
Trade Effluent Licensing	<ul style="list-style-type: none"> Any person discharging trade effluent** to a sewer, must have a Trade Effluent Licence issued pursuant to section 16 of the Local Government (Water Pollution) Act, 1977 (as amended). More information and an application form for a Trade Effluent License can be found at the following link: https://www.water.ie/business/trade-effluent/about/ <p>**trade effluent is defined in the Local Government (Water Pollution) Act, 1977 (as amended)</p>

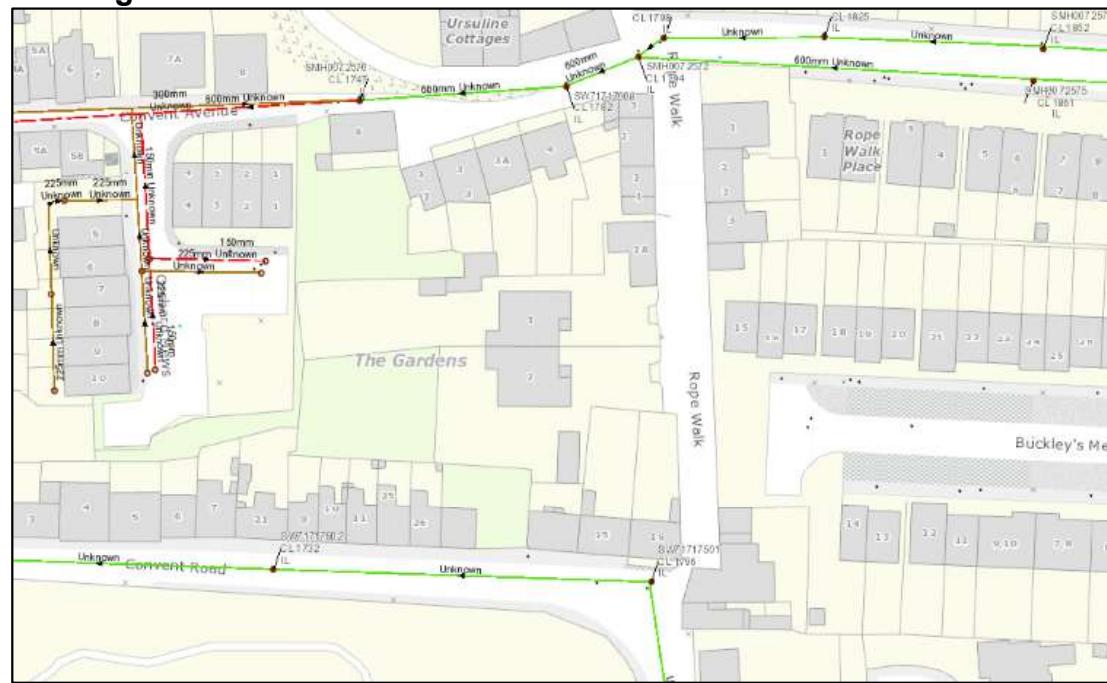
Section B – Details of Uisce Éireann’s Network(s)

The map included below outlines the current Uisce Éireann infrastructure adjacent the Development: To access Uisce Éireann Maps email datarequests@water.ie

Existing Water Infrastructure:



Existing Wastewater Infrastructure:



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Note: The information provided on the included maps as to the position of Uisce Éireann's underground network(s) is provided as a general guide only. The information is based on the best available information provided by each Local Authority in Ireland to Uisce Éireann.

Whilst every care has been taken in respect of the information on Uisce Éireann's network(s), Uisce Éireann assumes no responsibility for and gives no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided, nor does it accept any liability whatsoever arising from or out of any errors or omissions. This information should not be solely relied upon in the event of excavations or any other works being carried out in the vicinity of Uisce Éireann's underground network(s). The onus is on the parties carrying out excavations or any other works to ensure the exact location of Uisce Éireann's underground network(s) 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.