



## **Services and Infrastructure Report**

**2 No. Houses**

**at**

**Straw Hall, Cork**

**For**

**Cork City Council**

**By:**

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<b>Document Verification</b>				
	<b>Filename</b>	STH-XX-XXX-RP-CRO-CE-00500 Services & infrastructure.docx		
Rev	Date	Prepared By:	Checked By:	Approved By:
Issue 0	22/01/2026	Ciarán Cronin BEng CEng MIEI	Marie O'Donovan BEng MIEI	Ciarán Cronin BEng CEng MIEI
				

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## 1 Introduction

This report provides an overview of the civil services, potential flood risk, and roads and traffic impacts associated with the proposed development.

The proposed development is located at Straw Hall, Cork located between St. Mary's Road and Gerald Griffin St. The development location has been identified in Figure 1 below.



**Figure 1 Site Location.**

The development description reads as follows:

Demolition of existing building and construction of 2 No. two storey houses.

## 1.1 The site.

The site is located at Straw Hall between St. Marys Road and Gerald Griffin Street accessed off Farren Street to the east.

The immediate surroundings are as follows:

- North – Open plot with retaining wall to St. Marys Road.
- South – Public Street St. Patricks arch.
- East - Neighbouring Detached house
- West - Neighbouring Detached house

Ground cover within the site is a mix of roof, impermeable hardstanding and soft landscaping. Existing drainage infrastructure connects into the Wider City sewer network, which ultimately discharges at the Gerald Griffin Street.

According to CFRAM mapping, the site is classified as Flood Zone C, lying outside the 0.1% AEP fluvial and coastal floodplains, and is therefore at low risk of flooding.

## 1.2 Proposed Development – Construction Overview

The project comprises the demolition of a commercial building and construction of 2 no new houses.

Construction will involve demolition of the existing structure, site clearance and new boundary treatment and construction for 2 no houses with ancillary site works.

Key requirements include:

- Drainage and service to facilitate the 2 new houses.
- Careful construction phasing and logistics in a live street environment, with strict dust and noise control measures during demolition and following construction.

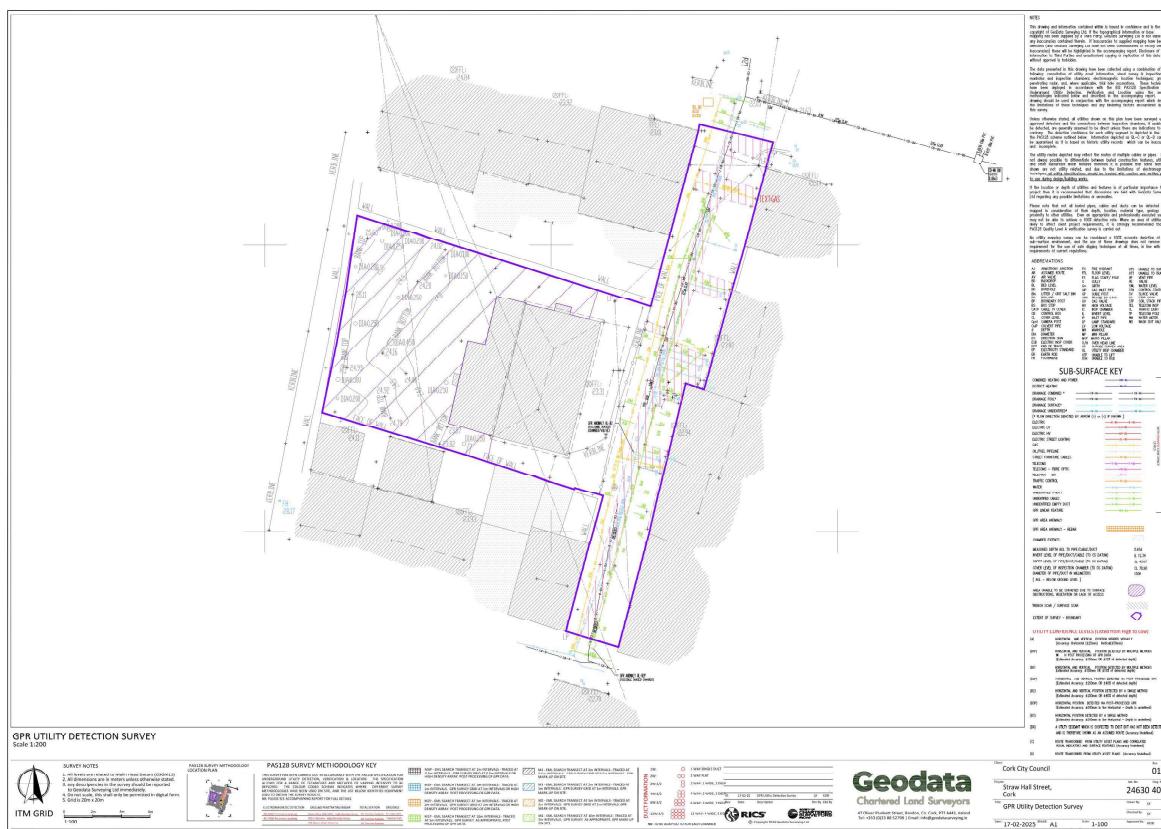
## 2 Civil Services

A review of available record drawings and on-site GPRS surveys identified the presence of a combined surface water and foul sewer infrastructure in the immediate vicinity of the proposed development. The existing services are summarised below.

### **Existing combined service:**

- A 225 mm diameter combined water sewer is located along the southern side of the proposed development footprint.
  - This sewer is part of the established local drainage system and conveys foul and surface water flows eastwards in front of the site to Farren St. and ultimately to Gerald Griffin St.

The existing sewer infrastructure described above is illustrated on Figure 2 below, which shows the alignment, size and direction of flow of the identified surface water and foul sewers relative to the footprint of the proposed development.



**Figure 2 Existing Services.**

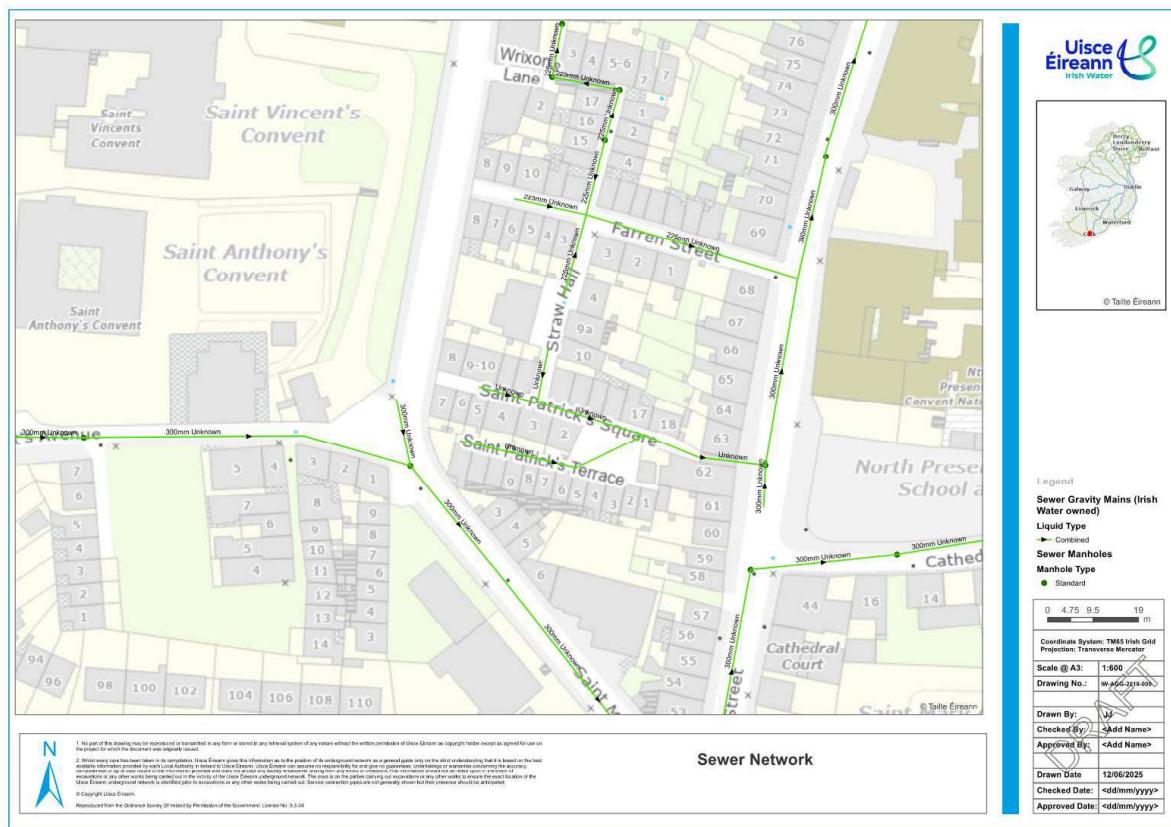


Figure 3 Existing network map.

## 2.1 Proposed Storm & Foul

### 2.1.1 Storm

The houses are replacing and existing building c80 sqm floor area there will be no net increase in hardened surface and there will be no extra runoff. As this development replaces impermeable surfacing on a like-for-like basis, there will be no increase in surface water runoff. New rainwater downpipes will discharge via bioretention planters (refer to Section 3.1 Drainage Impact Assessment below), and connect into attenuation tanks located at the rear of each property restricting flow to 2 l/S/HA.

All drainage within the development will remain fully separated:

- Ultimately Stormwater runoff from roofed and paved areas will discharge to the existing combined drainage system, with provision to allow future separation should the opportunity arise.

The roof area equates to approximately 80 m<sup>2</sup>, which is effectively a like-for-like replacement of existing impermeable hardstanding. Surface water drainage for the proposed development has been designed in accordance with the Greater Dublin Strategic Drainage Study (GDSDS). The site comprises a very small impermeable area of approximately 80 m<sup>2</sup> (0.008 ha). In line with GDSDS guidance, post-development runoff is restricted to greenfield runoff rates, with a minimum allowable discharge rate of 2.0 l/s/ha applied. This equates to a theoretical discharge of 0.016 l/s; however, such a flow is not practically achievable or maintainable. Accordingly, a minimum practical discharge rate of 0.1 l/s has been adopted, which is consistent with accepted Local Authority practice for small sites. Surface water runoff will be attenuated on site and controlled prior to discharge, ensuring no increase in flood risk to the receiving drainage network for the 1 in 30 year event and the 1 in 100 year event including a 20% climate change allowance.

For verification, the Greenfield runoff rate estimation tool (available via UK SuDS) was also used, which provides Greenfield site runoff rates based on key site characteristic inputs. The results were consistent with the IH124 calculation and confirm that the predicted discharge rate is extremely modest.

This flow can be readily accommodated within the existing surface water drainage networks serving the area. Given that the extension replaces existing impermeable concrete, the calculated flow represents a theoretical maximum rather than an actual increase in site runoff. Accordingly, the proposed development will have no material impact on the operation or capacity of the existing drainage infrastructure.

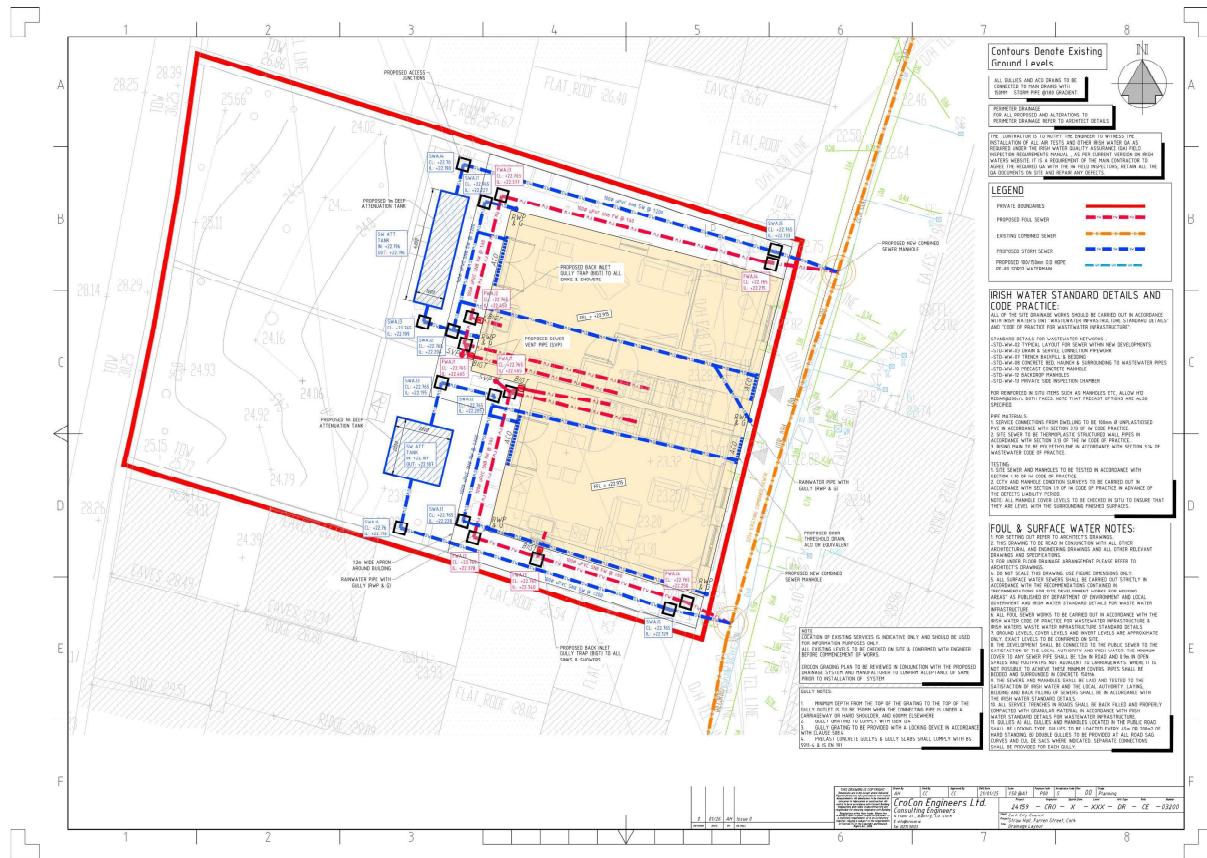


Figure 3 Drainage Layout

### 2.1.2 Foul

A Pre-Connection Enquiry was submitted to Uisce Éireann in respect of the proposed development. A Confirmation of Feasibility (CoF) was received on 17 November 2025, under Uisce Éireann Reference No. CDS25004405, confirming that a connection to the public wastewater network is feasible, subject to compliance with Uisce Éireann's standard conditions and requirements at detailed design and Connection Application stage.

The development incorporates Sustainable Drainage Systems (SuDS) and stormwater attenuation measures to manage surface water runoff and to minimise surface water inflow to the public combined sewer network. Surface water discharge from the site will be restricted to 2.0 l/s/ha, reduced proportionally to the site area. A full Storm Water Management submission, including all relevant calculations and design drawings, will be provided at Connection Application stage in accordance with the Hierarchy of Discharge set out in the Implementation of Urban Nature-Based Solutions Guidance Document. All stormwater

proposals will be subject to agreement with the Local Authority Stormwater Division and will demonstrate a net reduction in surface water flows to the Uisce Éireann network.

The Applicant will comply with the Water Services Act 2007 (as amended) and Part H of the Building Regulations 2016, ensuring no adverse impacts on existing drains or sewers.

### 3 Flood Risk

The site is located on the north of the River Lee at c23m OD, and falls within OPW Flood Zone C. This classification indicates that the site lies outside the 0.1% Annual Exceedance Probability (AEP) fluvial and coastal flood extents and is therefore considered to be at low risk of flooding. The designation confirms that the proposed development is appropriate in terms of flood risk vulnerability and does not require further site-specific flood mitigation beyond standard best practice measures.

Flood risk to the site of the proposed development is low and there is no historic record of flooding at the site. The risk of flooding in a climate change scenario will also remain low. The proposed development is primarily an infill and replacement of existing building and therefore will not generate any additional flows. As such, the works will have no impact on flood water levels and/or displacement of flood waters.

Given the absence of significant flood risk at the site and a sufficient elevation above ground level, access and egress routes are unlikely to be compromised during flood events. The proposed development will not have any impact on floodplain storage or conveyance and will therefore not have any impact off site.

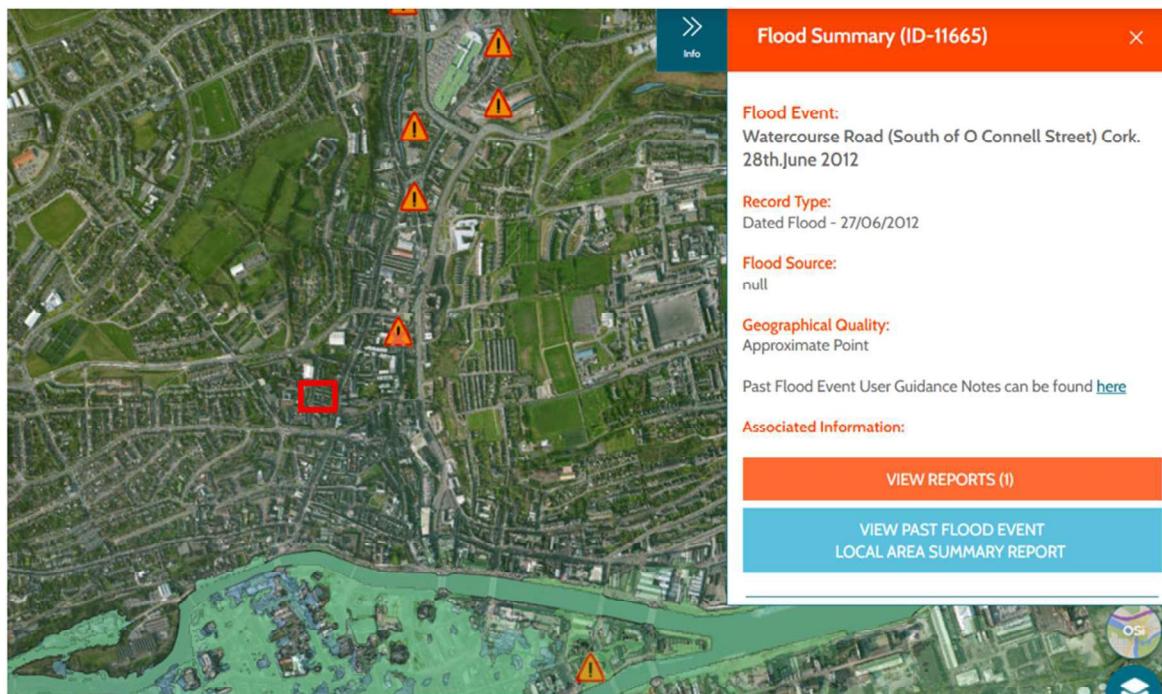
The proposed development is classified as a "Highly Vulnerable Development" as per OPW's vulnerability classification. The site is not within the 1000 year fluvial or tidal floodplain, within Flood Zone C. Therefore, a justification test for the development is not required.

In consulting the Office of Public Works (OPW) Flood maps ([floodinfo.ie](http://floodinfo.ie)) along with the Strategic Flood Risk Assessment for the Cork City Development Plan 2023–2028 (CCDP SFRA), it has been confirmed that the proposed development site is not located within a designated flood zone.

The site lies outside the study area of the OPW CFRAM Study, and therefore overlaying CFRAM mapping provides little meaningful benefit in terms of predictive flood risk

assessment. The more likely cause of flooding to the site would be pluvial flooding rather than fluvial sources.

A review of the Past Flood Events tab on [www.floodinfo.ie](http://www.floodinfo.ie) has been undertaken to provide historic flood risk indicators. This confirms that there are no known flood events recorded locally at or adjacent to the development site. The closest recorded flood event is associated with Watercourse Road (South of O Connell Street) 167,400 72,850 200m to the north east at c3mOD.



**Figure 5 Flood Events Map**

For context, the building finished floor level (FFL) is c23m, which provides a substantial margin above both historic and predictive flood risk indicators.

Due to small scale of the proposed development and the fact that the buildings are located over an existing impermeable hardstanding area, there is limited opportunity or requirement for the incorporation of major SuDS features. Surface water discharges will therefore continue in line with Cork City Water Services requirements.

However, to enhance surface water management, the design incorporates two water buts and bioretention planters. These planters will provide interception storage and treatment of runoff, achieving the recommended 5 mm interception volume from the roof areas of the

extension and link corridor before discharging to the proposed modulate attenuation tanks and then to the existing combined water drainage network.

### 3.1 Drainage Impact Assessment.

Modern surface water management requires a softer engineered or ‘nature-based approach’ to be used to manage rainfall runoff on the site i.e., to manage and treat surface water above-ground rather than sending rainfall below-ground into drains, pipes, attenuation tanks and other ‘hard engineering’ solutions. The aim is to maximise the retention and/or infiltration of storm water runoff on-site, minimise discharges to the public drainage system and to limit the discharge rates from the site to greenfield runoff rate or less.

To help with selecting and using nature-based solutions, please see Table 1 which identifies the options to be utilised on this site.

**Table 1**  
**SUDS SELECTION HIERARCHY SHEET FOR SMALL-SCALE DEVELOPMENT**

SuDS Measures		Measures to be used on site	Rational for selecting / not selecting measure including discharge rate applied with supporting calculations
Water butt – 150L capacity or more (based water use demand) with means of overflow		X	Water Harvesting Cost saving Environmental benefits
Permeable paving – consider for all hard paved areas without heavy traffic		X	Increased surface area for infiltration achieved.
Bio-retention planter – disconnect downpipe connection into drains and allow roof runoff into planter with means of overflow		X	Water Harvesting Cost saving Environmental benefits

Rain garden - disconnect downpipe/RWP into the planted flower bed			Garden inclines away from the houses.
Green / Blue Roof – requires a minimum substrate depth (growth medium) of at least 80 mm excluding the vegetative map			Limited applicability: Not compatible with design. Installation and ongoing maintenance costs Structural considerations
Other			Water attenuated to 2l/s/ha per Uisce Eireann COF.

As per Criterion 4, in accordance with the recommendations of CIRIA 753 (SuDS Manual) and requirements of CCC, all new developments are to incorporate the principles of ‘SuDS’. The aim of ‘SuDS’, inclusion across the development is to provide an effective system separate from the foul network to mitigate the adverse effects of storm water run-off on the environment, through enhanced quality systems and on local infrastructure to aid in preventing downstream flooding. The features proposed shall reduce runoff volumes, pollution concentrations and enhance groundwater recharge and biodiversity.

The proposed development ‘SuDS’ features shall consist of:

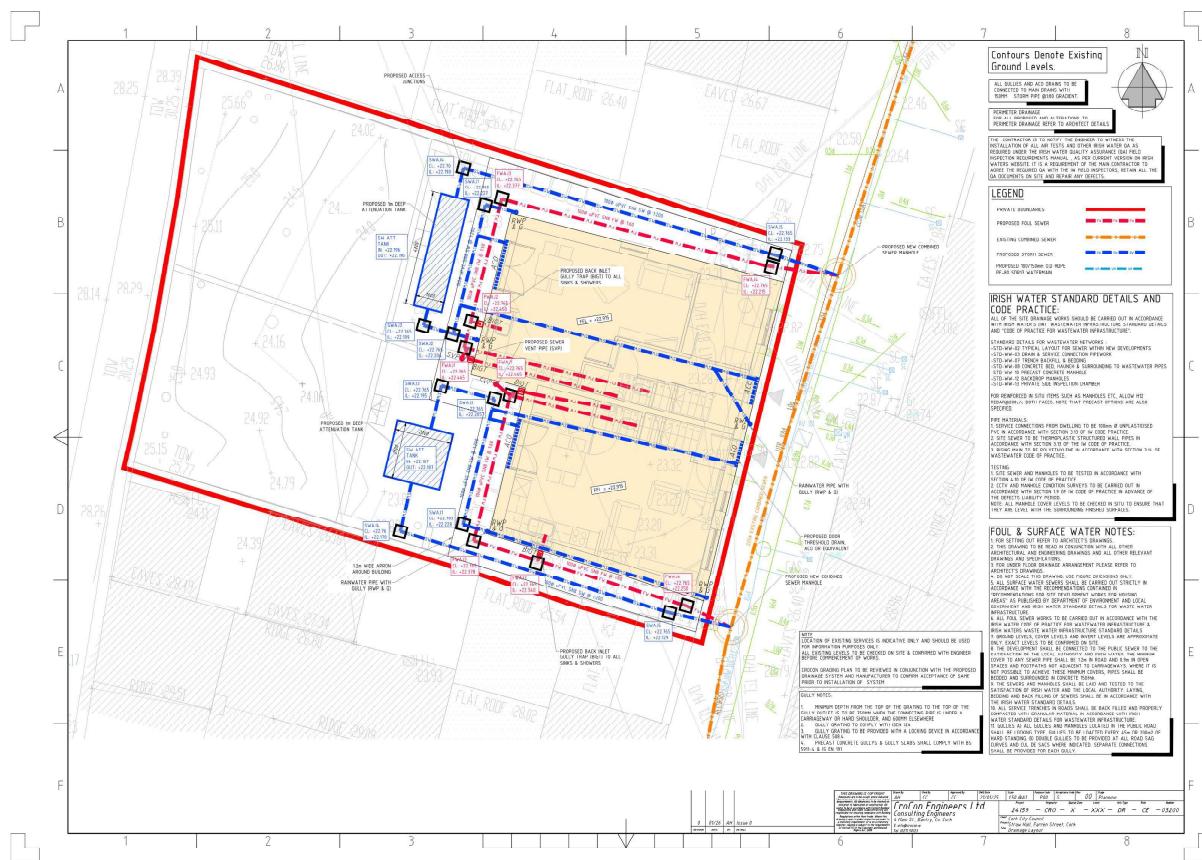
- a) Permeable Paving – this system allows rainwater to be directed into carparking bays whereby the rainwater can filter through gaps in the paving blocks and percolate into the subsoil. The area which can be drained is subject to the infiltration characteristics of the subsoil.
- b) Water Butts – Water butts collect water from roofs and are installed/connected to rainwater downpipes. Each installed water butt will have a capacity of 150l.

- c) Low Water Usage Appliances – It is also worth highlighting that low water usage appliances should also be utilised to aid in the reduction of water usage on the development.
- d) Small scale modular attenuation tanks.

The combination of the above noted elements will allow the proposed development to adhere to the principles of sustainable drainage practices while enhancing overall storm water quality.

## 4 Traffic, Access, and Sustainable Transport.

At a site-specific level, the proposed development has been designed in accordance with the sustainable mobility objectives of the Cork City Development Plan. The development comprises two no. dwelling houses located within an established urban area of Cork City, where access to local services, employment, and public transport is readily available. In this context, no on-site car parking is provided as part of the proposal, thereby supporting a reduced reliance on private car use in accordance with Development Plan policy. The development prioritises sustainable modes of travel, with the provision of secure cycle parking within the curtilage of each dwelling to facilitate active travel for daily trips. The overall approach reflects the compact growth and sustainable transport principles of the Cork City Development Plan and is considered appropriate given the scale, location, and accessibility of the site.

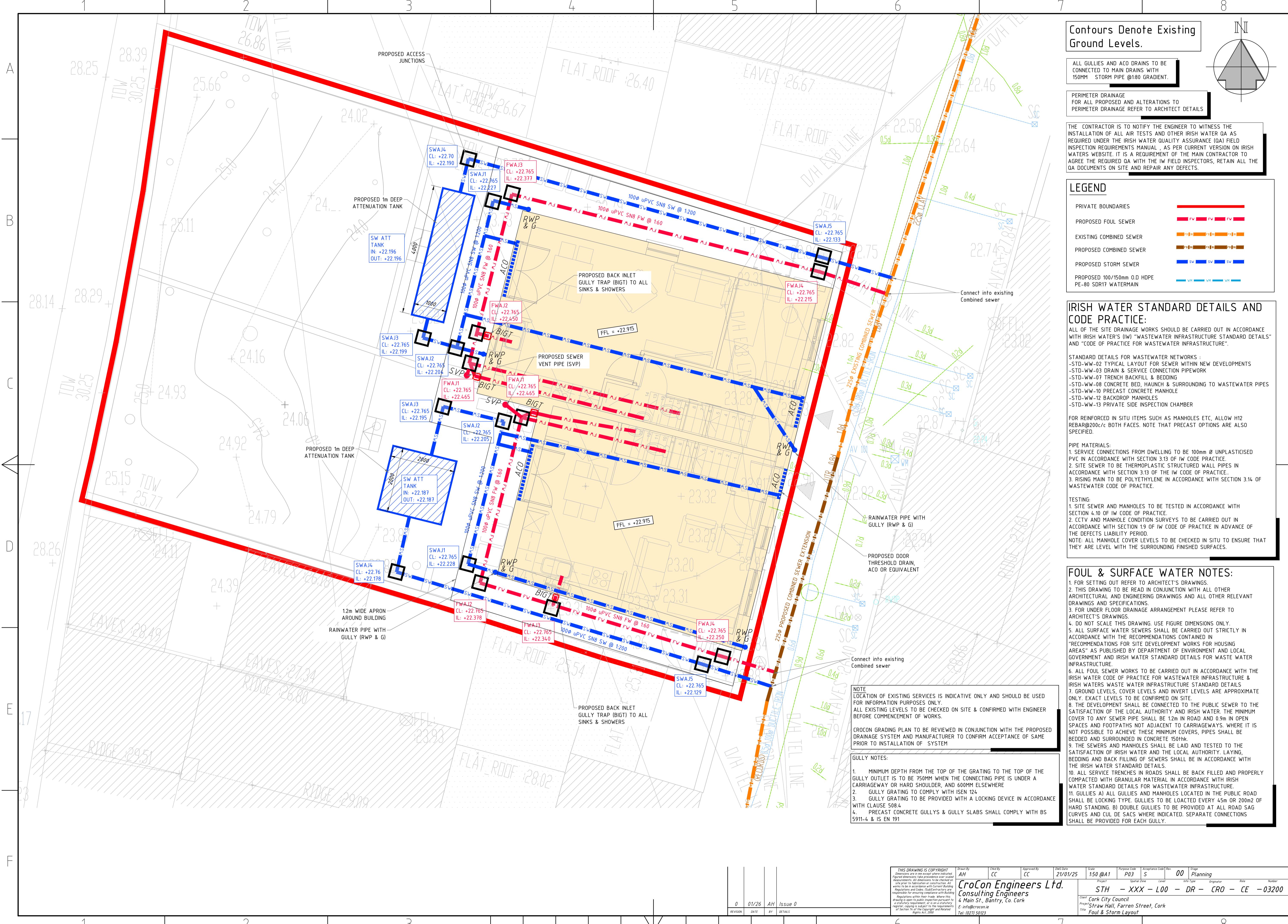


## 5 Summary

The proposed development involves the demolition of an existing building and the construction of 2 no houses. The project has been assessed across all key engineering aspects, with no significant constraints identified.

- **Drainage:** The footprint (c80 m<sup>2</sup>) is located over existing hardstanding, so there is no increase in surface water runoff. Two bioretention planters are included to provide 5 mm interception before discharge to the existing surface water system. Foul and surface water drainage will remain fully separated until connect into the combined network, with a new public sewer connections required.
- **Water & Utilities:** Two no additional service connections required. Existing water, wastewater, and energy infrastructure can accommodate the development without modification.
- **Flood Risk:** The site is in OPW Flood Zone C, confirming a low risk of fluvial or coastal flooding. Standard surface water controls are sufficient.
- **Traffic & Access:** The development does not alter existing road layouts. It supports a modal shift by utilising existing bus connection and secure cycle.
- **Structural:** Normal domestic type construction activity.
- **Construction Logistics:** The works will be delivered within a live acute hospital environment, with careful phasing, dust/noise control, and infection prevention measures in place.

Overall, the scheme is a low-impact engineering project: drainage and utilities are readily managed, flood risk is minimal, and the transport network is unaffected. The proposals are compliant with all relevant legislation and technical standards, ensuring a straightforward and sustainable delivery.



## CONFIRMATION OF FEASIBILITY

Marie O'Donovan

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17 November 2025

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](http://www.water.ie)

**Our Ref: CDS25004405 Pre-Connection Enquiry  
Straw Hall, Cork City**

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 2 unit(s) at Straw Hall, Cork City, (the **Development**).

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

- **Water Connection** - Feasible without infrastructure upgrade by Uisce Éireann

The confirmation of feasibility to connect to the Uisce Éireann infrastructure does not extend to your fire flow requirements. Uisce Éireann cannot guarantee that the flow rates and residual pressures will meet the requirements of the Fire Authority.

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

The Development must incorporate Sustainable Drainage Systems/Attenuation in the management of storm water and to reduce surface water inflow into the receiving combined sewer. The flow is to be set @ 2l/s/ha (reduced accordingly to size of site). At Connection Application a full Storm Water submission along with any design/calculations, is to be submitted following Hierarchy of Discharge set out in the Implementation of Urban Nature-Based Solutions Guidance Document. The full details of these must be agreed with the Local Authority Stormwater Division. The developments proposed stormwater must demonstrate net reduction of total flows to the UE network.

**Stiúrthóirí / Directors:** Niall Gleeson (POF / CEO), Jerry Grant (Cathaoirleach / Chairperson), Gerard Britchfield, Liz Joyce, Michael Nolan, Patricia King, Eileen Maher, Cathy Mannion, Paul Reid, Michael Walsh.

**Oifig Chláraithe / Registered Office:** Teach Colvill, 24-26 Sráid Thalbóid, Baile Átha Cliath 1, D01 NP86 / Colvill House, 24-26 Talbot Street, Dublin, Ireland D01NP86

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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/](http://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](http://www.water.ie/connections), email [newconnections@water.ie](mailto:newconnections@water.ie) or contact 1800 278 278.

Yours sincerely,



**Dermot Phelan**  
**Connections Delivery Manager**

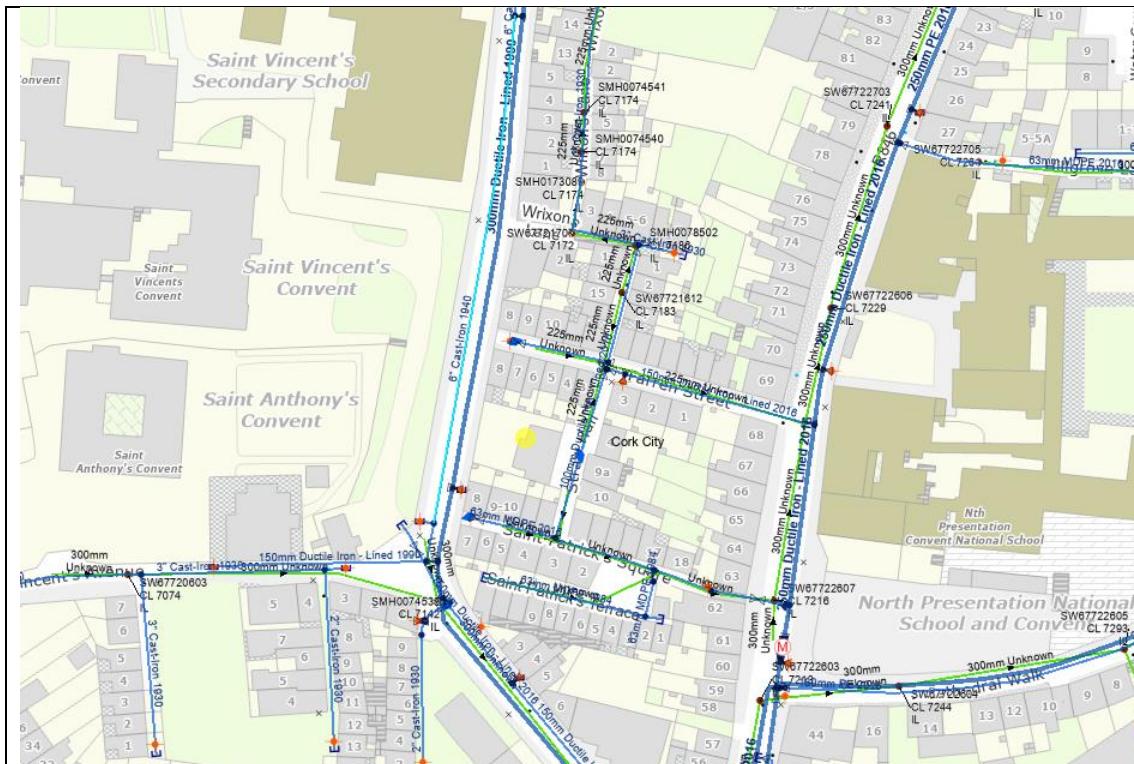
## Section A - What is important to know?

What is important to know?	Why is this important?
<b>Do you need a contract to connect?</b>	<ul style="list-style-type: none"> <li>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).</li> <li>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.</li> </ul>
<b>When should I submit a Connection Application?</b>	<ul style="list-style-type: none"> <li>A connection application should only be submitted after planning permission has been granted.</li> </ul>
<b>Where can I find information on connection charges?</b>	<ul style="list-style-type: none"> <li>Uisce Éireann connection charges can be found at: <a href="https://www.water.ie/connections/information/charges/">https://www.water.ie/connections/information/charges/</a></li> </ul>
<b>Who will carry out the connection work?</b>	<ul style="list-style-type: none"> <li>All works to Uisce Éireann's network(s), including works in the public space, must be carried out by Uisce Éireann*.</li> </ul> <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>
<b>Fire flow Requirements</b>	<ul style="list-style-type: none"> <li>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.</li> <li><b>What to do?</b> - Contact the relevant Local Fire Authority</li> </ul>
<b>Plan for disposal of storm water</b>	<ul style="list-style-type: none"> <li>The Confirmation of Feasibility does not extend to the management or disposal of storm water or ground waters.</li> <li><b>What to do?</b> - Contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges.</li> </ul>
<b>Where do I find details of Uisce Éireann's network(s)?</b>	<ul style="list-style-type: none"> <li>Requests for maps showing Uisce Éireann's network(s) can be submitted to: <a href="mailto:datarequests@water.ie">datarequests@water.ie</a></li> </ul>

<b>What are the design requirements for the connection(s)?</b>	<ul style="list-style-type: none"> <li>The design and construction of the Water &amp; Wastewater pipes and related infrastructure to be installed in this Development shall comply with <b><i>the Uisce Éireann Connections and Developer Services Standard Details and Codes of Practice</i></b>, available at <a href="http://www.water.ie/connections">www.water.ie/connections</a></li> </ul>
<b>Trade Effluent Licensing</b>	<ul style="list-style-type: none"> <li>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).</li> <li>More information and an application form for a Trade Effluent License can be found at the following link: <a href="https://www.water.ie/business/trade-effluent/about/">https://www.water.ie/business/trade-effluent/about/</a></li> </ul> <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](mailto:datarequests@water.ie)**



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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.