

Residential Development at Lott Lane, Kilcoole, Co. Wicklow.

Part 8 Application
Infrastructure Report

Wicklow County Council

Project number: 60646100

January 2022

Quality information

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Revision History

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1. Introduction

This report has been prepared to outline the civil engineering infrastructural design intent of the proposed Wicklow County Council (WCC) Part-8 residential development located at the site of Lott Lane, Kilcoole, County Wicklow.

This report provides an infrastructure strategy based on the topography and the existing foul, surface water drainage and watermain networks around the proposed site area. Details on gas, power, and telecommunication networks are also included in this report.

1.1 Site Location

The greenfield site is located north-east of Kilcoole town. The area of development is outlined in Figure 1, please refer to drawing no. 60646100-ACM-00-XX-DR-CE-10-0001 the red line boundary. The site is bounded to the north by agricultural lands, to the south by private detached residential dwellings and a private laneway, to the east by natural greenfield and to the west by Lott Lane. The site itself is predominantly grassland with some areas of low to moderately dense vegetation. The eastern site boundary is located approximately 900 meters west of the Irish Sea coastline.



Figure 1: Proposed site location

1.2 Site topography

The general topography of the site and surrounding area is gently sloping/falling towards the Irish Sea to the east. As there is currently no surface water network to the east and south of the site, the surface water will not be able to drain into the public surface water network along Lott Lane due to the elevation differences. Lott Lane is approximately 10 m higher than the east of the site. Refer to drawing no. 60646100-ACM-00-XX-DR-CE-10-0004 for the site layout and topographical survey.

2. Pre-Planning Consultations

2.1 Irish Water

AECOM submitted a Pre-Connection Enquiry to Irish Water on the 13th February 2021 and a Confirmation of Feasibility (CoF) was issued by Irish Water on the 18th February 2021, refer to Appendix A.

Irish Water noted in the CoF that the Wastewater Connection point would be reviewed at Connection Application Stage based on local network upgrades required at that time. Hence, AECOM have recently engaged with Irish Water and WCC regarding interim and permanent solutions, refer to Section 4.2 for further details.

A Public Works Services Agreement (PWSA) was detailed in the CoF as a water storage reservoir may be required to service the development. Upgrade works to 460 m of watermain are required in addition to 100 m of new watermain. AECOM are currently engaging with Irish Water regarding these upgrades.

2.2 Wicklow County Council

AECOM have engaged with Ruari O'Hanlon, Greystones Municipal District Engineer and Eddie Murphy, Chief Technician WCC on site at Lott Lane on the 8th December 2021.

3. Rainwater/Surface Water Management

3.1 Existing Surface Water Drainage

Existing surface water drainage records were received from Wicklow County Council (WCC) dated the 14/12/2020. Refer to Appendix A for existing utility records. The records show an existing 225 mm uPVC pipe flowing south in Lott Lane, as indicated in Figure 2 by the blue dashed line.

There is no existing surface water drainage running through the subject site boundary according to the WCC records. As stated in Section 1.2, there is currently no surface water network to the east and south of the site.

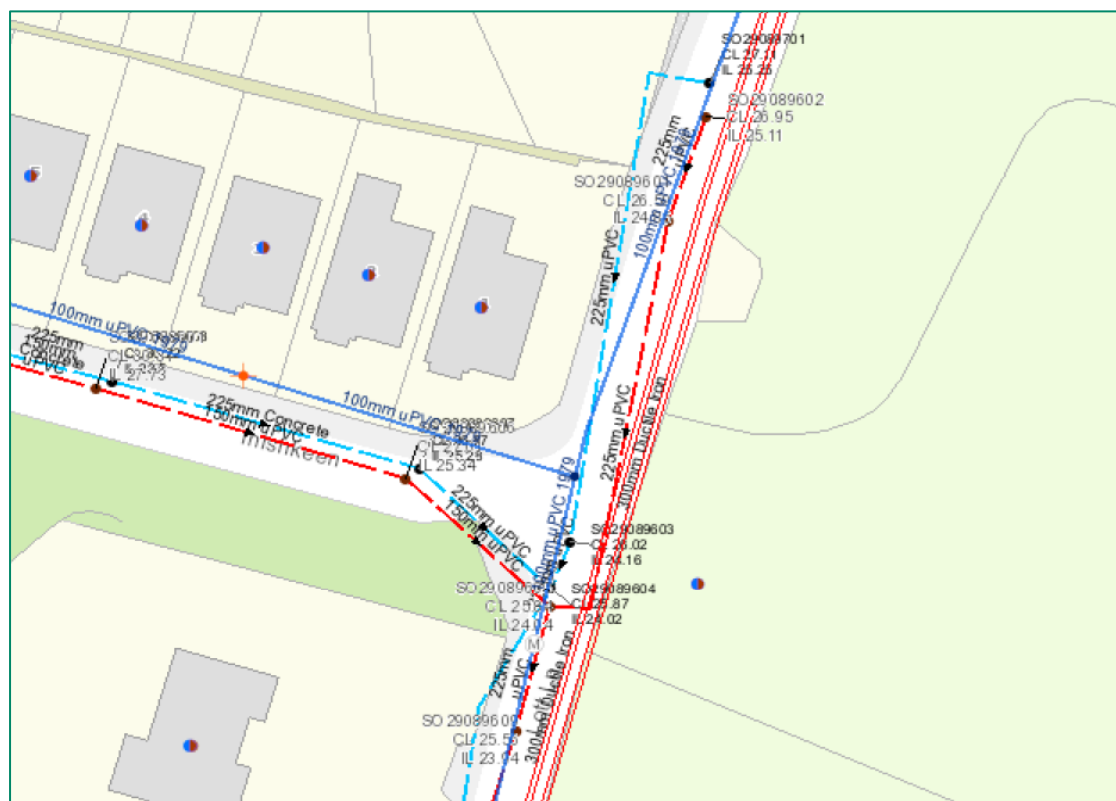


Figure 2: Existing surface water drainage

3.2 Nursing Home Site – Surface Water Infrastructure

The nursing home south of the site was granted planning permission in August 2010, under planning reference number 09/530, and an extension granted under Plan. Reg. 15/409 in 2015.

The application described a ditch near the site, which was not required due to a high infiltration rate. Therefore, the site is drained within the curtilage of the site using longitudinal trench pits. A total of 4050 m² is drained by 6 no. soakpits/trenches which total a combined length of 128 m. An exfiltration area of 339 m² was required to deal with the 4050 m² of hardstanding area being drained. The lowest infiltration rate which was found on the nursing home site was 2.3×10^{-4} . The site was found to be predominantly gravel, and sand, given its location within the marginal-large gravel body which extends from Kilcoole to Kilpedder.

The soakaways were designed to a 1:100 year storm return period of 30 minutes duration, it appears climate change was not considered in the calculations. This results in 0.029 m rainfall depth. A factor of safety of 5 was applied.

3.3 Proposed Rainwater Strategy

AECOM referred to the 'Nature-based solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas, Best Practice Interim Guidance Document', published by the Department of Housing, Local Government and Heritage, while preparing a rainwater management strategy.

It should be noted that reducing the impermeable area of a site is the first step in creating a sustainable rainwater management plan, this will be considered throughout the design of the project.

Given the site for the proposed residential development likely has similar characteristics to that described above, it is proposed to infiltrate surface water runoff to ground. The following are proposed in order to allow surface water to drain to ground;

- **Soakpits and rainwater harvesting butts** in individual gardens, draining the roofs of the dwellings,
- **Permeable paving and/or grasscrete** at driveways and parking spaces, draining roads, footpaths and driveways,
- **Tree Pits and raingardens**, at the road edge to drain footpaths and roads,
- **Swales and infiltration trenches**, draining roads and footpaths, and
- **Soakaways/Ponds/Basins** in areas of Public Open Space.

As mentioned in the Nature-based Solutions (NBS) Best Practice Interim Guidance Document, in order to design in climate resilience, overland flows should be considered to direct excess rainwater, as a result of high intensity rainfall, to suitable areas such as green space or nature-based solutions. Therefore, road design and cambers should be considered, perhaps removing the camber and directing runoff from the full road width to green areas which aren't bordered with a footpath, or where dropped kerbs could be implemented.

Similarly, grasscrete/reinforced cellular grass paving systems will be considered at any low-lying turning heads, another item mentioned in the NBS guidance document. This would allow rainwater which gathers in the low-lying area of the site further opportunity to infiltrate to ground.

AECOM are proposing to follow a similar surface water strategy to the adjoining Nursing Home site and discharge the SW to ground via the measures above.

Refer to drawing no. 60646100-ACM-00-XX-DR-CE-10-0500 for the proposed SuDS strategy.

4. Wastewater Drainage

4.1 Existing Wastewater Drainage

According to WCC records a 225 mm uPVC existing foul water pipe flows south along Lott Lane. The foul water network displayed as the red dashed line can be seen in Figure 3. Please refer to Appendix A for the existing records obtained.

Similar to the surface water pipe in Lott Lane, the foul line in Lott Lane is too high for the site to be drained by gravity to this line.

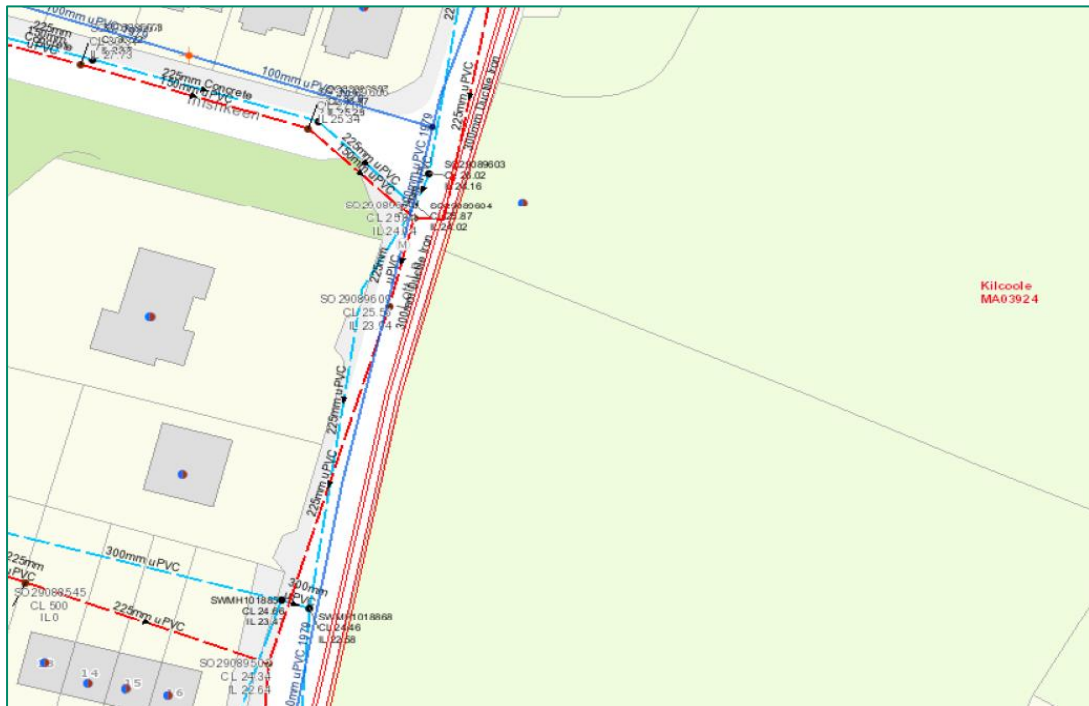


Figure 3: Existing foul water drainage

4.2 Proposed Wastewater Drainage

Given the site cannot be drained by gravity to Lott Lane, it is proposed to discharge the foul by gravity to Sea Road. However, engagement with landowners is required to allow this and a solution is therefore proposed in the interim. This interim solution is to provide a pumping station which will pump the wastewater to the 225 mm uPVC sewer on Lott Lane.

Both interim and permanent options (route 1 & 2) above will result in the wastewater from the site being discharging to the Kilcoole Wastewater Treatment Plant (Kilcoole WWTP) off Sea Road. Refer to Figure 5 for the proposed permanent and interim wastewater solutions.

The proposed Type 3 interim pumping station should comply with Irish Water Standard Detail STD-WW-29 or STD-WW-29A, which allow vehicle access via a lay-by or via direct access. Refer to snips below in Figure 4 and/or Appendix C. Emergency storage is required also to prevent flooding in the case of a power failure. Approx. 70 m³ of storage is required.

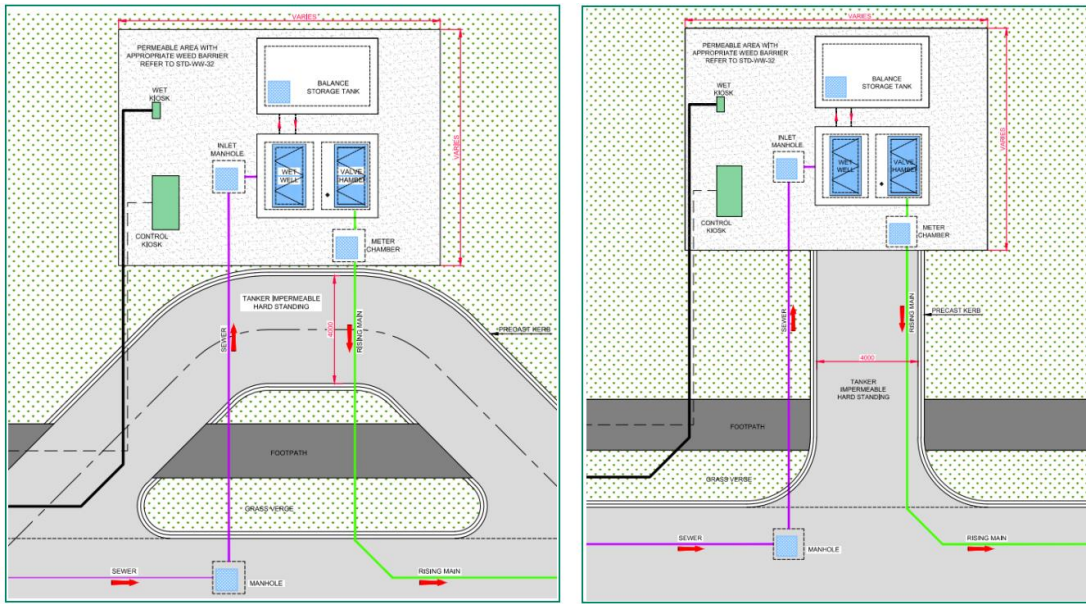


Figure 4: Wastewater Pumping Station Access Arrangements – Lay-By (Left) or Direct Access (Right)

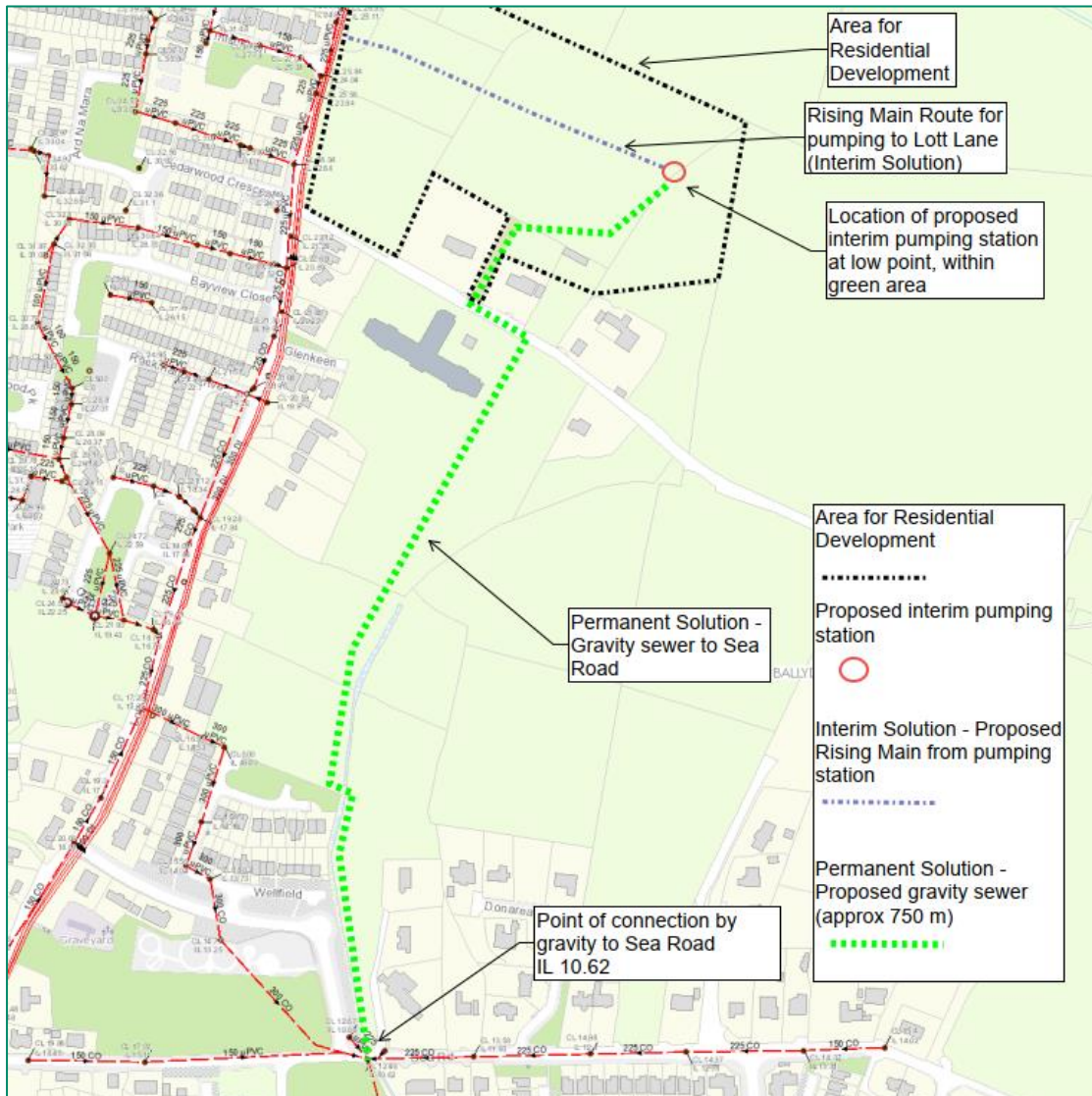


Figure 5: Proposed Wastewater Interim & Permanent Solutions

5. Water Supply

5.1 Existing Water Supply

In line with WCC records, an existing 100 mm uPVC watermain runs along Lott Lane and also in the private laneway, for a distance of approx. 70 m. Refer to Figure 6 below.

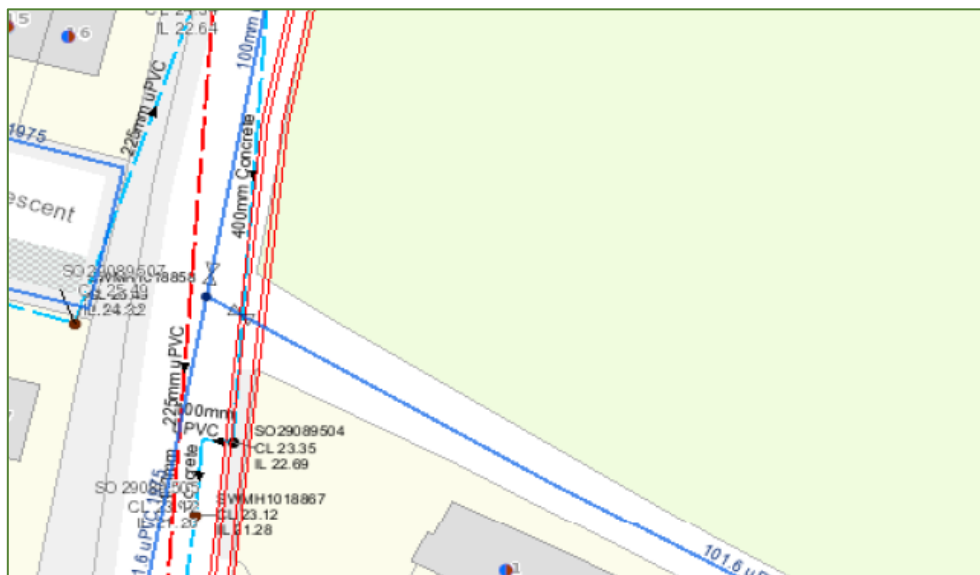


Figure 6: Existing Watermain

5.2 Proposed Water Distribution

A 150 mm watermain is required within the development to service the residential units.

A Public Works Services Agreement (PWSA) was detailed in the CoF (refer to Appendix A) as water storage a reservoir is required to service the development. Upgrade works to 460 m of watermain are required also (from 100 mm to x mm). An extra spur of 100 m (new watermain) is also required.

6. Existing Gas, Power and Telecommunication Services

6.1 Existing Gas Services

According to recent records, existing gas pipes are found to be located in the residential estate to the west of the existing site border where Lott lane runs north-south of the map. The existing gas services are located approximately 10 meters from the western site boundary. Figure 7 below shows the location of existing gas services.

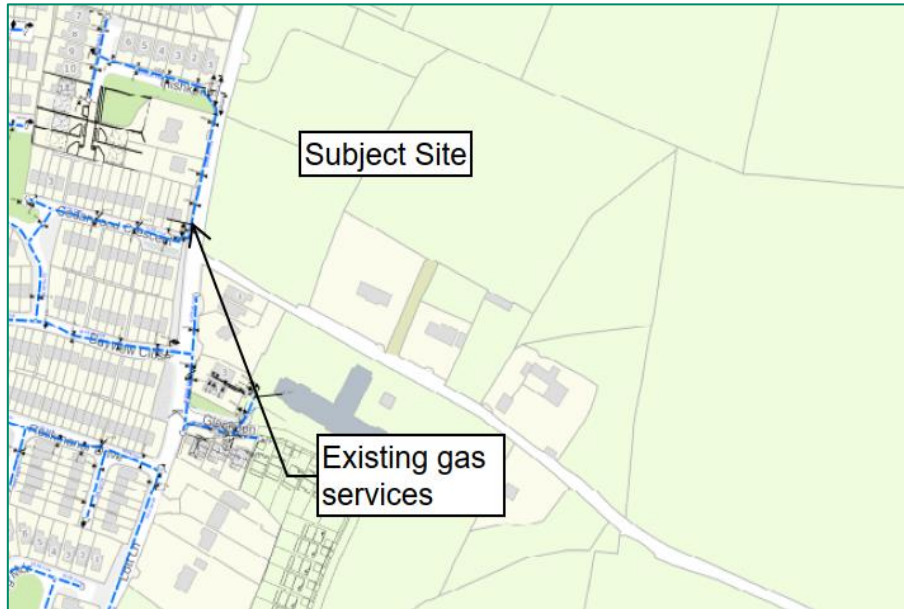


Figure 7: Existing gas service

6.2 Existing Eircom Services

Figure 8 below shows the arrangement of the existing Eircom services in the area. Existing services run adjacent the western boundary along Lott Lane and southern boundary along a private tertiary road.

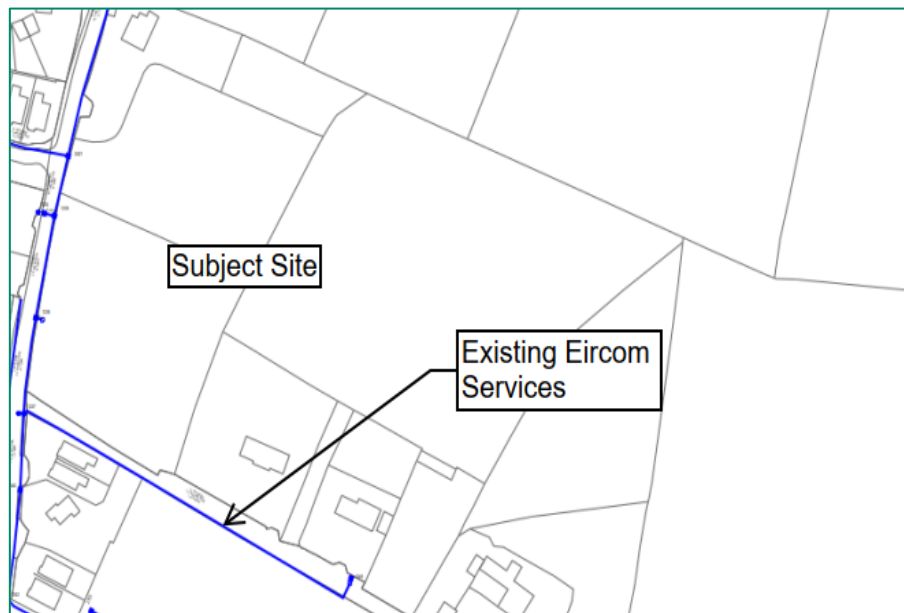


Figure 8: Existing Eircom services

6.3 Existing Virgin Media Services

In accordance with Virgin Media, the nearest of these services run along Kilcoole main street as seen in Figure 9.

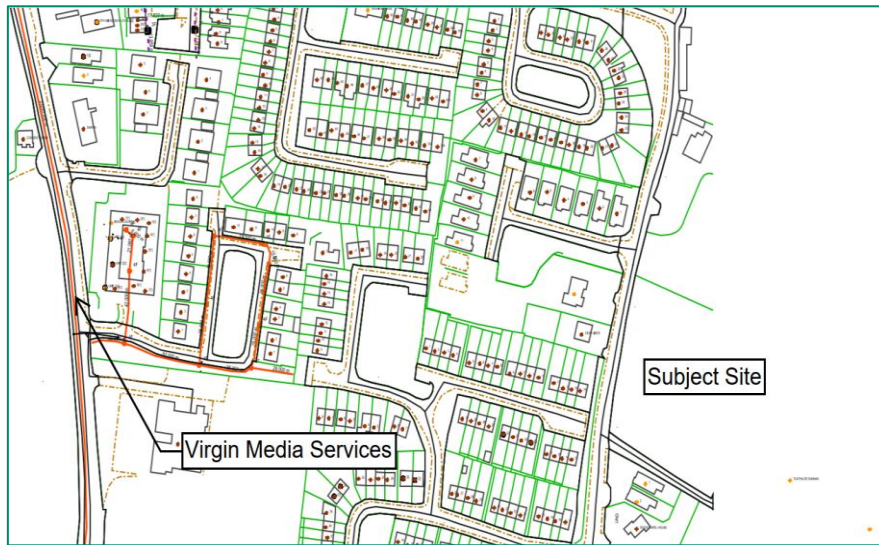


Figure 9: Existing Virgin Media services

Appendix A – Irish Water Confirmation of Feasibility

Clodagh Holmes

Adelphi Plaza
Upper George's Street
Dun Laoghaire
Dublin

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

18 February 2021

Re: CDS21000967 pre-connection enquiry - Subject to contract | Contract denied

Connection for Multi/Mixed Use Development of 161 unit(s) at Lott Lane, Kilcoole, Co. Wicklow

Dear Sir/Madam,

Irish Water has reviewed your pre-connection enquiry in relation to a Water & Wastewater connection at Lott Lane, Kilcoole, Co. Wicklow (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.

Strategic Housing Development

Irish Water notes that the scale of this development dictates that it is subject to the Strategic Housing Development planning process. Therefore:

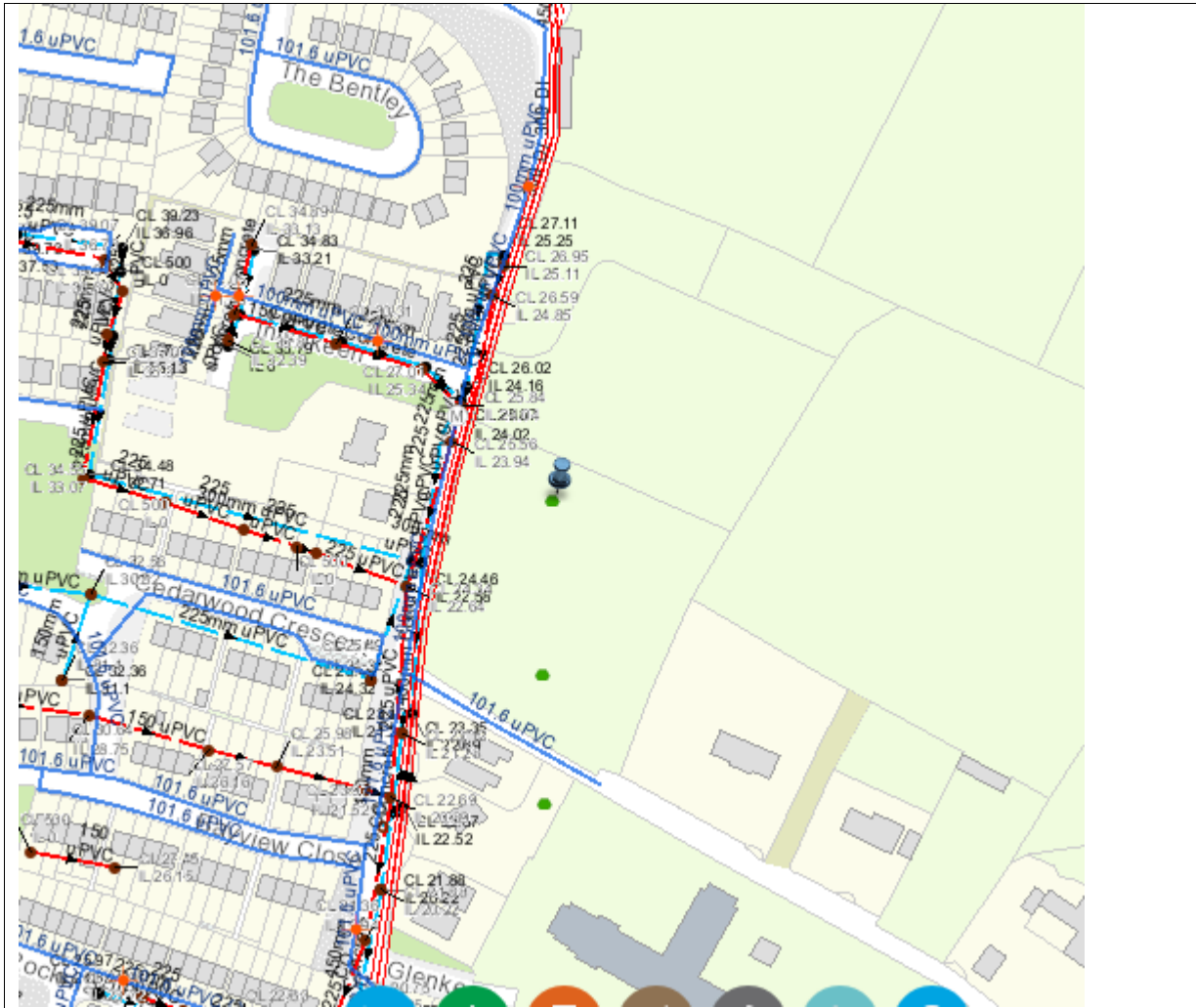
- A. In advance of submitting your full application to An Bord Pleanála for assessment, you must have reviewed this development with Irish Water and received a Statement of Design Acceptance in relation to the layout of water and wastewater services.
- B. You are advised that this correspondence does not constitute an offer in whole or in part to provide a connection to any Irish Water infrastructure and is provided subject to a connection agreement being signed and appropriate connection fee paid at a later date.
- C. In advance of submitting this development to An Bord Pleanála for full assessment, the Developer is required to have entered into a Project Works Services Agreement to deliver investigations to confirm the available capacity and to determine the full extent of any upgrades which may be required to be completed to Irish Water infrastructure.

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 Subject to upgrades
Wastewater Connection	Feasible Subject to upgrades

SITE SPECIFIC COMMENTS

Water Connection	In regards to the water infrastructure, storage will be required to service the development. A Project Works Services Agreement will be required to determine a reservoir site, size and network enhancements. In terms of water networks some minor upgrades are also required prior to connection. You will be required to lay approx. 460m of mm internal diameter main from the junction of Sea Road and Main Street heading Northwards along Lott Lane to tie into mm uPVC main just south of Inishkeen. An extra spur of 100m of 100mm watermain will also be required further north on Lott Lane.
Wastewater Connection	At connection application stage a review of the wastewater connection point and what local network upgrades are required.
<p>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.</p>	

The map included below outlines the current Irish Water infrastructure adjacent to your site:



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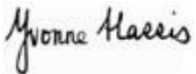
General Notes:

- 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 Patrick O'Neill from the design team on 01 89 25250 or email patoneil@water.ie For further information, visit www.water.ie/connections.

Yours sincerely,




Yvonne Harris

Head of Customer Operations

Appendix B – Existing Utility Records

Irish Water Web Map





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Water Distribution Network	Sewer Foul Combined Network	Storm Water Network
<ul style="list-style-type: none"> Water Treatment Plant Water Pump Station Storage Cell/Tower Dosing Point Meter Station Abstraction Point Telemetry Kiosk 	<ul style="list-style-type: none"> Waste Water Treatment Plant Waste Water Pump station 	<ul style="list-style-type: none"> Surface Water Mains Surface Gravity Mains Private Surface Water Pressurised Mains Surface Water Pressurised Mains Private
<ul style="list-style-type: none"> Irish Water Private 	<ul style="list-style-type: none"> Gravity - Combined Gravity - Foul Gravity - Unknown Pumping - Combined Pumping - Foul Pumping - Unknown Syphon - Combined Syphon - Foul Overflow 	<ul style="list-style-type: none"> Inlet Type Gully Standard Other: Unknown
<ul style="list-style-type: none"> Irish Water Private 	<ul style="list-style-type: none"> Gravity - Combined Gravity - Foul Gravity - Unknown Pumping - Combined Pumping - Foul Pumping - Unknown Syphon - Combined Syphon - Foul Overflow 	<ul style="list-style-type: none"> Storm Manholes Standard Backdrop Catchpit Cascade Bifurcation Hatchbox Lampole Hydrobrake Other: Unknown Storm Culverts Storm Clean Outs Stormwater Chambers
<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Standard Backdrop Cascade Catchpit Bifurcation Hatchbox Lampole Hydrobrake Other: Unknown 	<ul style="list-style-type: none"> Discharge Type Outfall Overflow Soakaway Other; Unknown
<ul style="list-style-type: none"> Cap Reducer Tap Other Fittings 	<ul style="list-style-type: none"> Catchpit Gully Standard Other: Unknown 	<ul style="list-style-type: none"> Gas Networks Ireland Transmission High Pressure Gasline Distribution Medium Pressure Gasline Distribution Low Pressure Gasline
	<ul style="list-style-type: none"> Standard Outlet Other: Unknown 	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> Flushing Structure Other: Unknown 	<ul style="list-style-type: none"> Non-Service Categories Proposed Under Construction Out of Service Decommissioned
	<ul style="list-style-type: none"> Catchpit Gully Standard Other: Unknown 	<ul style="list-style-type: none"> Water Non-Service Assets Water Point Feature Water Pipe Water Structure Waste Non-Service Assets Waste Point Feature Sewer Waste Structure

Irish Water Web Map



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Water Distribution Network Water Treatment Plant Water Pump Station Storage Cell/Tower Dosing Station 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 Station 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 Hatchbox Lamphole Hydrobrake Other; Unknown	Discharge Type Outfall Overflow Soakaway Standard Outlet Other; Unknown Rodding Eye Flushing Structure Other; Unknown Sewer Inlets Catchpit Gully Standard Other; Unknown Sewer Fittings Vent/Cal Other; Unknown	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 Lamphole Hydrobrake Other; Unknown Storm Culverts Stormwater Chambers Discharge Type Outfall Overflow Soakaway 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 MVLV Lines MV Overhead Three Phase MV Overhead Single Phase LV Overhead Three Phase LV Overhead Single Phase MVLV 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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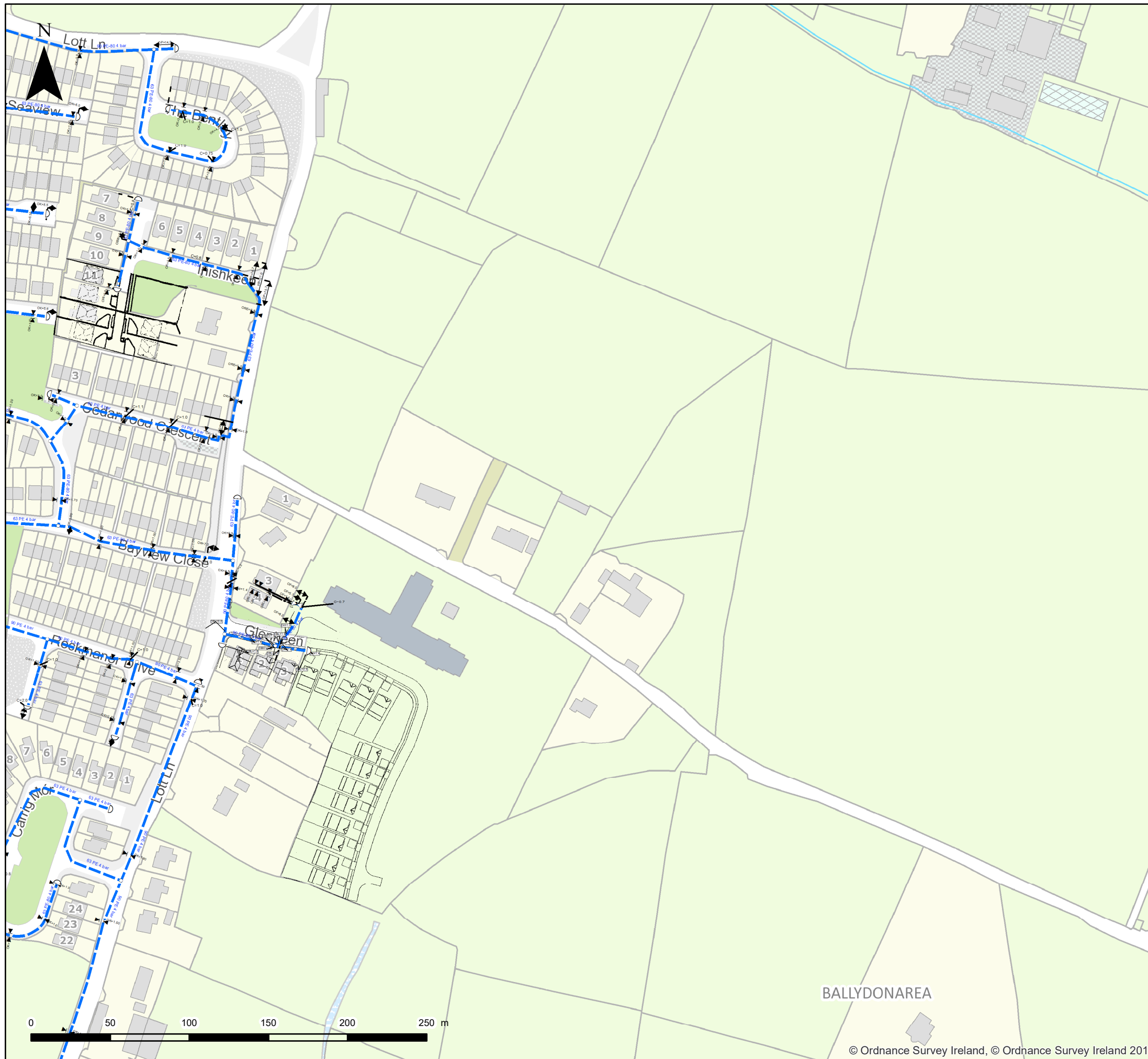
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Print Date: 14/12/2020

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Important Safety Notice: Damage to gas pipelines can result in serious injury or death. Gas network information is provided as a general guide. The exact location and depth of medium or low pressure distribution gas pipes must be verified on site by carrying out necessary investigations, including, for example, hand digging trial holes along the route of the pipe. Service pipes are not generally shown but their presence should always be anticipated.


High pressure transmission pipelines are shown in red. If a transmission pipeline is identified within 10m of any intended excavations then work must not proceed before GNI has been consulted. The true location and depth of a transmission pipeline must be verified on site by a representative of GNI. Contact can be made through 1850 427 747.

All work in the vicinity of the gas network must be completed in accordance with the current edition of the Health and Safety Authority publication, 'Code of Practice For Avoiding Danger From Underground Services' which is available from the Health and Safety Authority (1890 289 389) or can be downloaded at www.hsa.ie.

Legal Notice: Gas Networks Ireland (GNI) and its affiliates, accept no responsibility for the accuracy of any information contained in this document including data concerning location and technical designation of the gas distribution and transmission network (the "Information"). The information should not be relied on for accurate distance or depth of cover measurements.

Any representations and warranties, express or implied, are excluded to the fullest extent permitted by law. No liability shall be accepted for any loss or damage including, without limitation, direct, indirect or consequential loss, arising out of or in connection with the use or re-use of the information.

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 Aurora Telecom Duct


 Aurora Telecom Sub Duct


 Aurora Telecom Inserted Gas Pipe


Aurora Telecom Queries - 01-8926166 (Office Hours)


 Aurora_Network_Queries@gasnetworks.ie


 Aurora Telecom Emergency Only 1850 427399 / 01 2030120


 Transmission Pipe (High Pressure)


 Transmission Pipe (Construction Issue)


 Distribution Pipe (Medium Pressure)


 Distribution Pipe (Low Pressure)

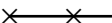
 Service Pipe (Medium Pressure)



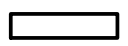

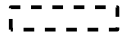








 Service Pipe (Low Pressure)

 Strategic Pipe (Medium Pressure)

 Strategic Pipe (Low Pressure)

 Inserted

 Abandoned Pipe

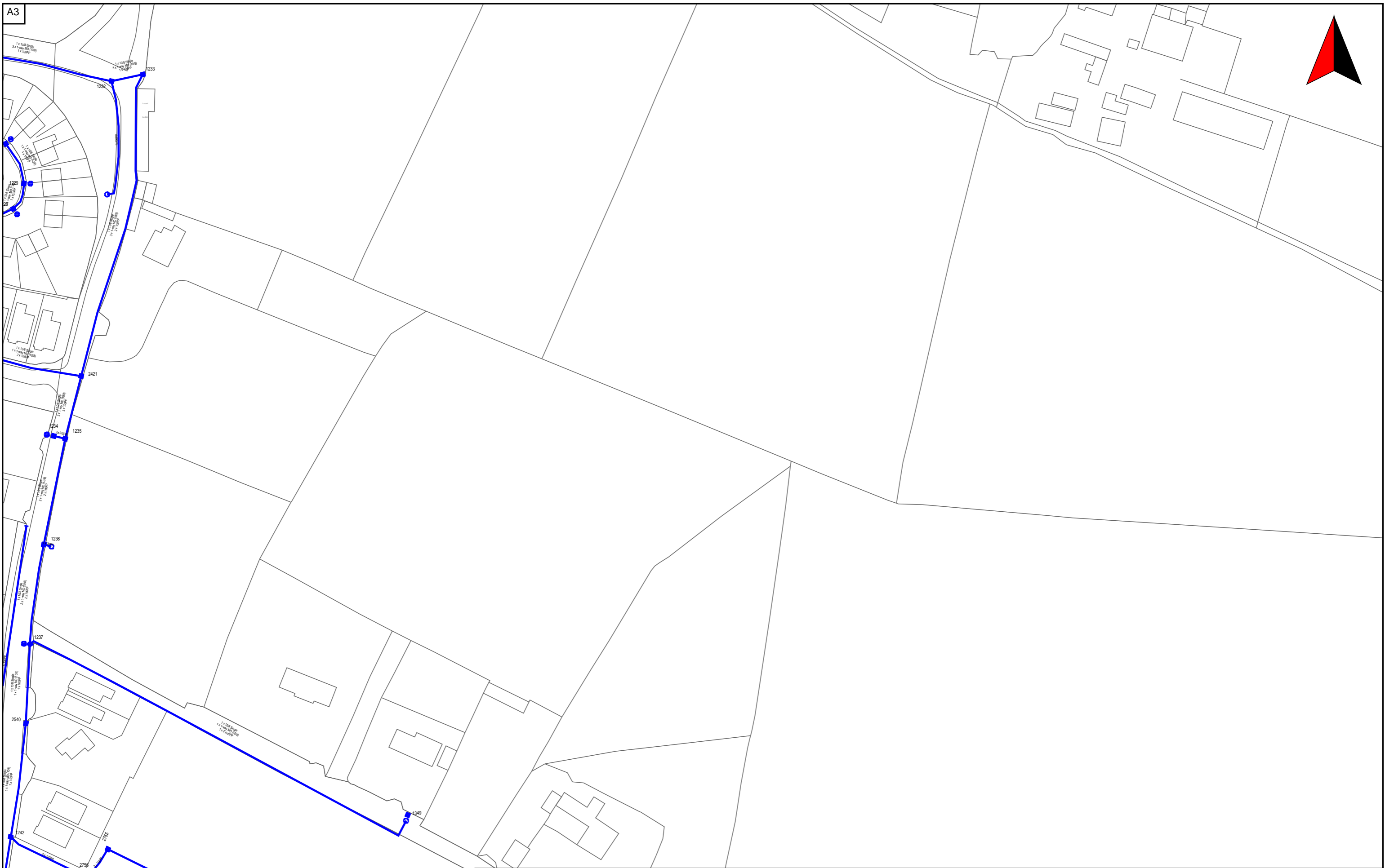
C=?	Cover (depth in metres)		Pressure Monitor
	CP Test Point		Protection (Slabbing)
	End Cap		Protection (Sleeve)
	Hot Tap		Reducer
	Installation		Service Terminator
	Valve		Tee
	Mains Verification**		Transition

** Please contact GNI on 1850-427747 for specific information




GAS NETWORK INFORMATION

Description: Lott Lane	
Location: 730070,708529	
Plot Date: 14/12/2020 15:15	Scale: 2500 @ A3
Plotted By: 356	Ref ID: 356_14122020151556



PLANT REQUESTED FROM eircom emaps CBYD SERVICE

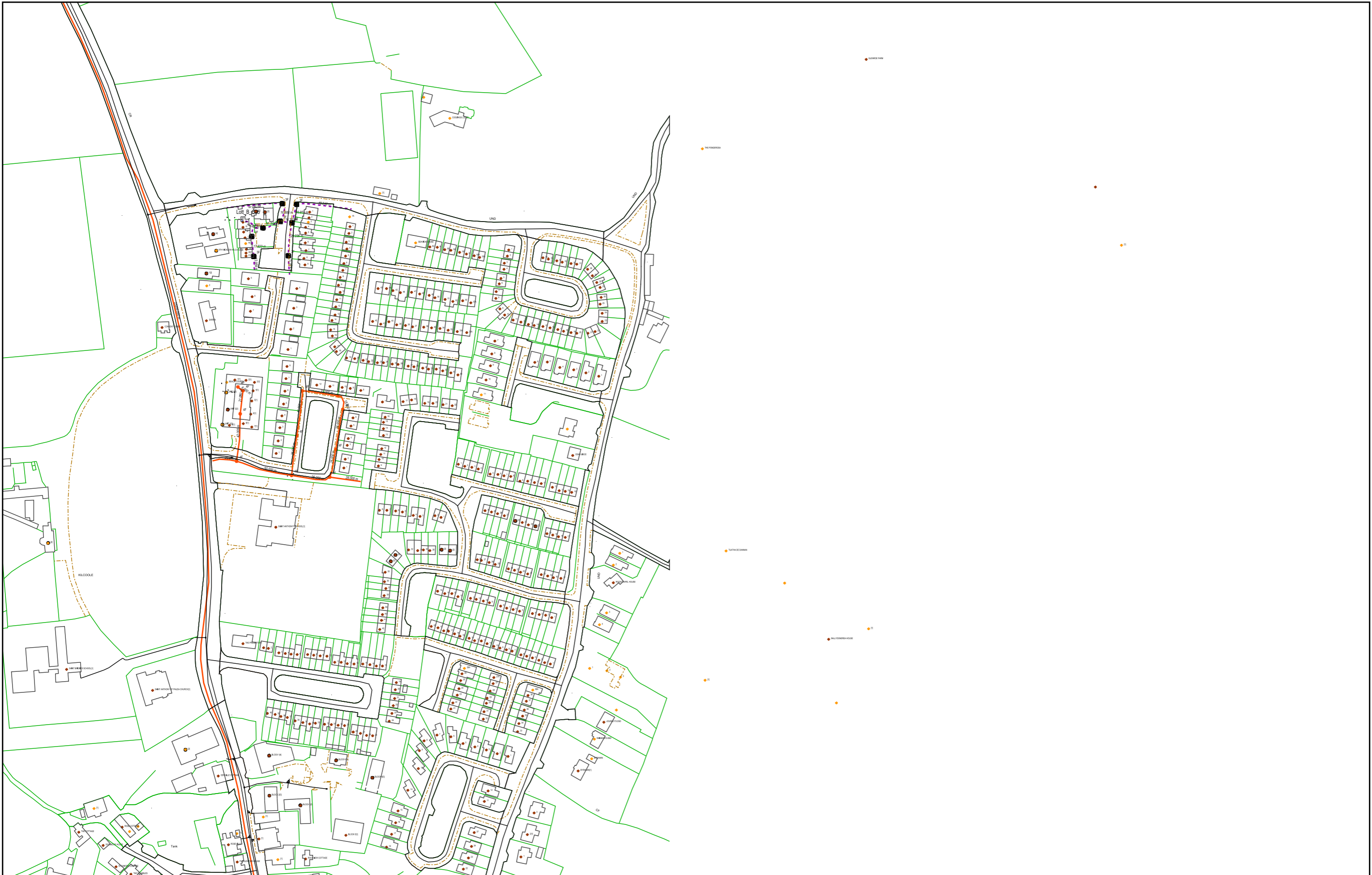
<https://cbyd.emaps.eircom.ie/>


Scale: 1:1500	Irish National Grid Co-Ordinates Centre XY: 330223 m, 208608 m
Date 14/12/2020	emaps CBYD

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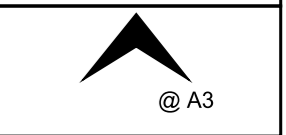




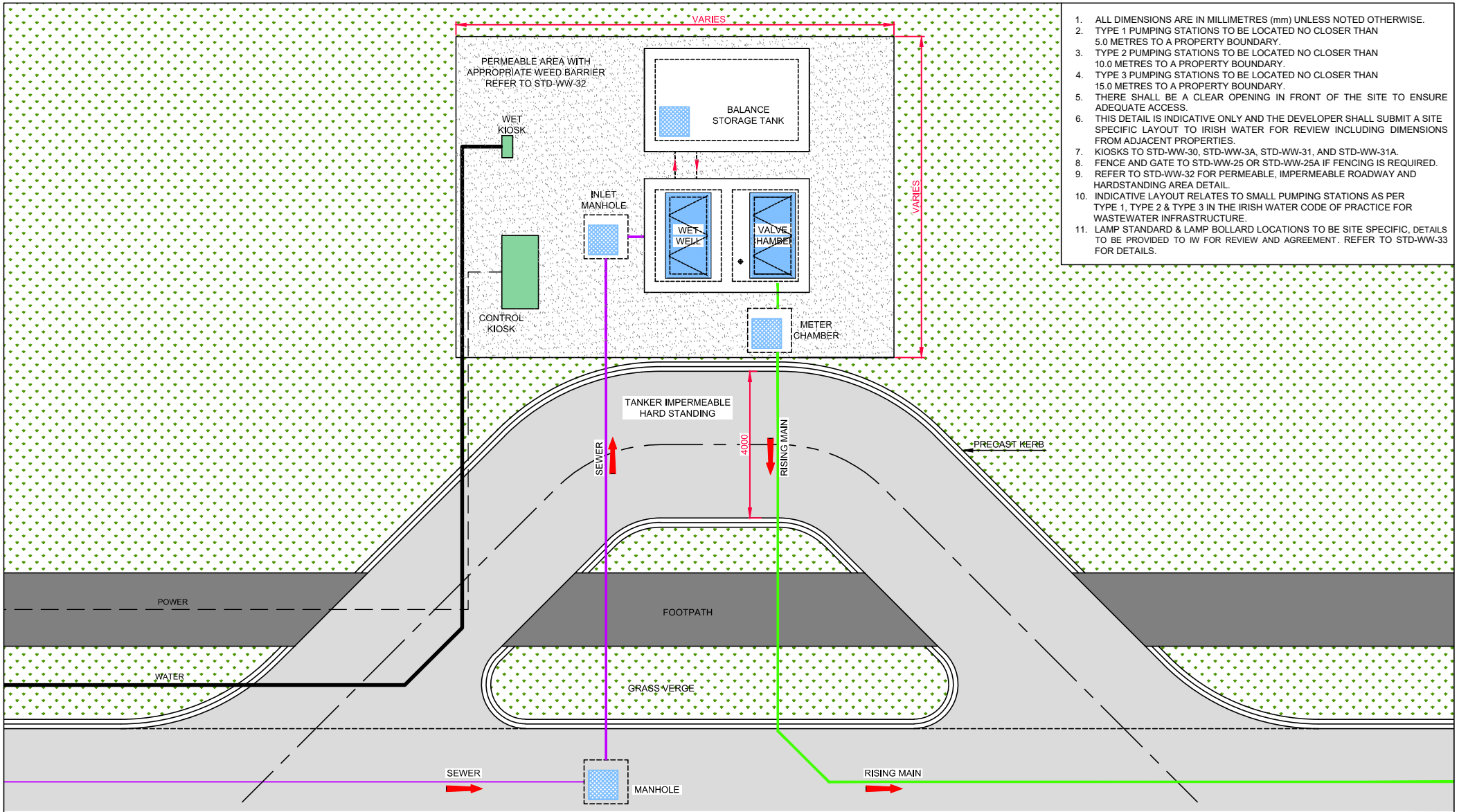

 Unit 7,
 Westgate Business Park,
 Ballymount,
 Dublin 24.

PROJECT NAME
 DESIGNED BY:

Ordnance Survey Ireland Licence No. EN0023805
 (c) Ordnance Survey Ireland and Government of Ireland
 Produced on: 14/12/2020



Appendix C – Wastewater Pumping Station Access Options



1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. TYPE 1 PUMPING STATIONS TO BE LOCATED NO CLOSER THAN 5.0 METRES TO A PROPERTY BOUNDARY.
3. TYPE 2 PUMPING STATIONS TO BE LOCATED NO CLOSER THAN 10.0 METRES TO A PROPERTY BOUNDARY.
4. TYPE 3 PUMPING STATIONS TO BE LOCATED NO CLOSER THAN 15.0 METRES TO A PROPERTY BOUNDARY.
5. THERE SHALL BE A CLEAR OPENING IN FRONT OF THE SITE TO ENSURE ADEQUATE ACCESS.
6. THIS DETAIL IS INDICATIVE ONLY AND THE DEVELOPER SHALL SUBMIT A SITE SPECIFIC LAYOUT TO IRISH WATER FOR REVIEW INCLUDING DIMENSIONS FROM ADJACENT PROPERTIES.
7. KIOSKS TO STD-WW-30, STD-WW-3A, STD-WW-31, AND STD-WW-31A.
8. FENCE AND GATE TO STD-WW-25 OR STD-WW-25A IF FENCING IS REQUIRED.
9. REFER TO STD-WW-32 FOR PERMEABLE, IMPERMEABLE ROADWAY AND HARDSTANDING AREA DETAIL.
10. INDICATIVE LAYOUT RELATES TO SMALL PUMPING STATIONS AS PER TYPE 1, TYPE 2 & TYPE 3 IN THE IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE.
11. LAMP STANDARD & LAMP BOLLARD LOCATIONS TO BE SITE SPECIFIC, DETAILS TO BE PROVIDED TO IW FOR REVIEW AND AGREEMENT. REFER TO STD-WW-33 FOR DETAILS.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT



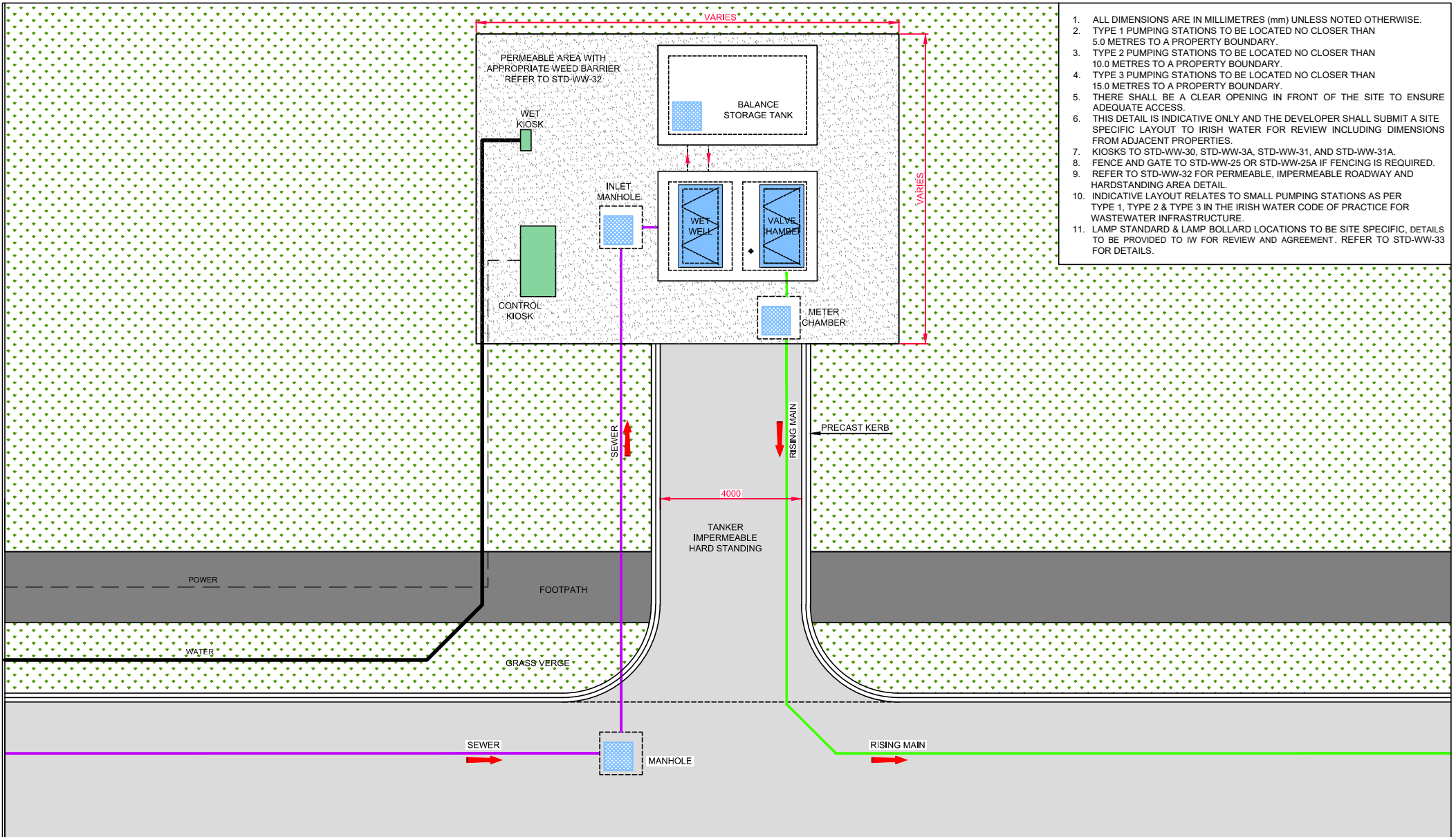
No.	Date	Dm	Chk	Description	App
1	07/20	RH	TOC	Site Layout Modified	MOD
0	09/15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WASTEWATER

TITLE

INDICATIVE PUMPING STATION SITE LAYOUT
ACCESS VIA LAY-BY

SCALE	DATE
NOT TO SCALE	SEPT. 2015
DRAWING No.	REV
STD-WW-26	1



1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. TYPE 1 PUMPING STATIONS TO BE LOCATED NO CLOSER THAN 5.0 METRES TO A PROPERTY BOUNDARY.
3. TYPE 2 PUMPING STATIONS TO BE LOCATED NO CLOSER THAN 10.0 METRES TO A PROPERTY BOUNDARY.
4. TYPE 3 PUMPING STATIONS TO BE LOCATED NO CLOSER THAN 15.0 METRES TO A PROPERTY BOUNDARY.
5. THERE SHALL BE A CLEAR OPENING IN FRONT OF THE SITE TO ENSURE ADEQUATE ACCESS.
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7. KIOSKS TO STD-WW-30, STD-WW-3A, STD-WW-31, AND STD-WW-31A.
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REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

						STANDARD DETAILS - WASTEWATER		SCALE NOT TO SCALE	DATE SEPT. 2015
	TITLE							DRAWING No.	REV
INDICATIVE PUMPING STATION SITE LAYOUT DIRECT ACCESS FROM PUBLIC ROAD							STD-WW-26A	0	
No.	Date	Dm	Chk	Description	App				
0	07/20	RH	TOC	Initial Issue	MOD				

