

CHAPTER 15

MATERIAL ASSETS



15.0 MATERIAL ASSETS

15.1 INTRODUCTION

- 15.1 This chapter prepared evaluates the potential impacts, from the proposed development on Material Assets as defined in the EPA Guidelines *'Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports'* (EPA, 2022), Advice Notes *Draft Advice Notes for Preparing Environmental Impact Statements* (EPA, 2015), and *European Commission Guidance on Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report* (2017).

15.2 METHODOLOGY

- 15.2 The Directive 2011/92/EU defined Material Assets as *'resources that are valued and that are intrinsic to specific places; they may be of either human or natural origin'* this included architectural and archaeological heritage. The Directive 2014/52/EU included architectural and archaeological heritage as components of cultural heritage; this EIA report has also done so within Chapter 13 Archaeological, Architectural and Cultural Heritage.
- 15.3 The EPA Guidelines (2022) state that material assets are taken to mean *"built services and infrastructure, roads and traffic and waste management"*. The EPA Advice Notes (2015) also gives examples of material assets including assimilative capacity of air and water; ownership and access; and tourism and recreational infrastructure. The European Commission Guidance (2017) refers to several examples of material assets including buildings, other structures, mineral resources and water resources.
- 15.4 In this EIA Report, the impacts on some of the material assets described in the above guidance have already been considered in the following chapters and therefore these aspects will not be addressed in specific detail within this chapter.
- Chapter 5, Population and Human Health
 - Chapter 6, Land, Soils, Geology & Hydrogeology
 - Chapter 7, Hydrology
 - Chapter 9, Air Quality & Climate
 - Chapter 13, Cultural Heritage
 - Chapter 14, Traffic & Transportation
 - Chapter 16, Waste Management
- 15.5 This chapter assesses ownership and access, built services and infrastructure, which have not already been addressed elsewhere in this EIA Report. The subsequent sections address built services and infrastructure. The potential impacts on built services and infrastructure, if any, are assessed in under the following subheadings:
- Land Use, Property, and Access
 - Power and Electrical Supply
 - Surface water infrastructure
 - Foul drainage infrastructure
 - Water supply
 - Telecommunications

- 15.6 The associated built services and infrastructure in the vicinity of the site are summarised in the following sections.

15.3 RECEIVING ENVIRONMENT AND CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

15.3.1 Land Use

- 15.7 The site comprises a block of light-industrial land located to the north-west corner of the Omni Park Shopping Centre, Santry and at Santry Hall Industrial Estate Swords Road, Dublin 9 D09FX31 and D09HC84. Omni Park, which is in the control of the applicant forms part of a District Centre land bank which is primarily in commercial use. The site is presently developed light-industrial land, comprised a large warehouse, with associated structures (offices, storage etc.). The entirety of the site is hard-surfaced.
- 15.8 Lands to the north of the site are also under light-industrial use, while lands to the east and south provide commercial services. Residential land lies to the west of the subject lands. Vehicular access to the site is currently provided to the back of Marks and Spencer and Lidl supermarkets by security gates from the Santry Hall Industrial estate Road off the Swords Road (R132).
- 15.9 The proposed development site is zoned as 'Z4 –District Centre' in the Dublin City Council (DCC) Development Plan 2016-2022 and DCC Draft Development Plan 2022 – 2028, for which the zoning objective is to "*Provide an increased density of development, a viable retail and commercial core, a comprehensive range of high-quality community and social services, and a distinctive spatial identity with a high-quality physical environment*". The context of the site is described further in Chapter 2 (Description of Development) and Chapter 3 (Planning and Development Context), and the "Statement of Consistency with Planning Policy" submitted as part of this planning application.

15.3.2 Power and Electrical Supply

- 15.10 During construction, contractors will require power for onsite accommodation, and construction equipment/plant. A construction compound and temporary power supply will be established in consultation with the utility supplier. The power requirements for the construction phase will be relatively minor.
- 15.11 Once in operation, electricity will be provided to the site via the national grid tying in with existing infrastructure in neighbouring areas. New electricity and telecommunications services infrastructure will be put in place to serve the various buildings. This will be carried out in accordance with the requirements of the various service providers.
- 15.12 The proposed development will not require any gas connections.

15.3.3 Surface Water Infrastructure

- 15.13 The existing commercial units are currently drained via gravity into 2 no. private surface water drainage networks which connect into other private surface water networks within the site. The private sewer network flows east where it connects into a public surface water sewer located within Swords Road.

- 15.14 The existing private surface water networks and their connections to the private surface water network will be decommissioned. Surface water run-off from the proposed development will be collected in a new slung surface water drainage network which will connect to an existing 750mm public surface water sewer located in the loading area to the west of OMNI Shopping Centre.
- 15.15 Sustainable drainage systems (SuDS) measures will be incorporated into the stormwater drainage network to improve the quality of stormwater leaving the site. SuDS are drainage systems that are environmentally beneficial, causing minimal or no long-term detrimental damage.
- 15.16 These measures will include green roofs, attenuation, permeable paving, hydrobrake and permeable reinforced grass. Petrol interceptors will also be provided in car parking areas.
- 15.17 The stormwater drainage network has been designed and modelled for the 100-year storm event. Further information in relation to surface water drainage and flood risk is provided in Chapter 7 (Hydrology), and the Engineering Planning Report undertaken by EirEng (2022) submitted as part of this planning application.

15.3.4 Foul Drainage Infrastructure

- 15.18 Welfare facilities will be provided for the contractors via portable sanitary facilities within the construction compound site during the construction works. It is anticipated that initially, waste will be collected by tanker and disposed of appropriately, and that temporary connections to the existing services will be established to provide service and utilities subject to relevant applications and approvals.
- 15.19 All foul effluent generated at the proposed development site during the operational phase shall be collected in a new foul drainage network for the proposed development designed in accordance with Irish Water Code of Practice for Wastewater Infrastructure.
- 15.20 A Pre-connection Enquiry (PCE) has been submitted to Irish Water on the basis of the foul water flows for the proposed development site. Further reference is made to foul water drainage in Chapter 7 (Hydrology) and the Engineering Planning Report undertaken by EirEng (2022) submitted as part of this planning application.

15.3.5 Water Supply

- 15.21 The proposed water supply network will be designed and installed to the requirements and specifications set out in the Irish Water Code of Practice for Water. Measures are proposed to minimise water use during the operational phase, including low consumption sanitary fittings, and leak detection systems and rainwater. A pre-connection enquiry was submitted to Irish Water and they replied by a Confirmation of feasibility (COF) letter dated 1 December 2021 (see Appendix 15.1) stating *“that your proposed connection to the Irish Water network(s) can be facilitated at this moment in time.”*

15.3.6 Telecommunications

- 15.22 There are telecommunication lines in existence for telephone and broadband services in the area. A fibre optic cable distribution network will be installed with a separate incoming fibre infrastructure and provided to each building via underground fibre ducts.

There are existing underground carrier ducts adjacent to the site that will be utilised for the development.

15.4 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

15.4.1 Land Use, Property, and Access

- 15.23 During the construction phase there are potential short-term nuisances such as dust, noise, as well as the potential for pollution of groundwater or surface water associated with demolition, excavations and construction. In advance of work starting on site, the works contractor will prepare a detailed Construction Environmental Management Plan (CEMP) to manage potential nuisance impacts on nearby residential receptors. The potential impact associated with land use and property for the construction phase will be **localised, negative, not significant** and **short term**.
- 15.24 During the operational phase the proposed development is not anticipated to generate significant air, noise or water emissions during normal operating conditions; these have been discussed further in the respective EIAR chapters, Chapter 7 (Hydrology), Chapter 9 (Air Quality & Climate) and Chapter 10 (Noise and Vibration).
- 15.25 The proposed development represents a loss of light-industrial land however in the overall context of Ireland's available industrial land the loss is negligible. Due to the zoning of these lands, the overall potential impact associated with land use and property for the operational phase will be a localised **neutral, slight**, and **long term**.

15.4.2 Power and Electrical Supply

- 15.26 Any excavations within the vicinity of existing electrical services will be carried out in consultation with ESB Networks to ensure there is no impact on existing users. The electrical connection should have no disruptions to the national grid during connection works. The potential impact associated with power and electrical supply for the construction phase will be a **neutral, imperceptible** and **short term**.
- 15.27 All utilities work shall be carried out in accordance with the relevant requirements of the respective service providers. These works will be carried out in a manner that is safe, and which minimises interruptions of service which might affect local residents and businesses, and adjacent development.
- 15.28 During the operational phase, maintenance of utilities infrastructure on the Site will be carried out in accordance with the relevant requirements of the various utilities providers / authorities. As such, no significant impacts on services or utilities themselves are predicted to occur as a result of the operational phase.
- 15.29 As detailed in Chapter 2 (Description of the Proposed Development) the sustainable energy measures have been considered and incorporated into the design of the proposed development. There is a potential impact on material assets during the operational phase of the proposed development which is **neutral, slight** and **long term**.

15.4.3 Surface Water Infrastructure

- 15.30 During the construction phase, there is potential for an increase in run-off due to the removal of existing impermeable surfaces and the excavation of soils. The potential impact of this is a possible increase in the sediment loading from surface water run off

which could potentially impact local drainage. Run-off containing large amounts of silt can cause damage to surface water systems and receiving watercourses.

- 15.31 With appropriate and standard mitigation in place, as outlined in the CEMP, the potential impact on surface water for the construction phase is **neutral, imperceptible, and short term**.
- 15.32 The proposed new storm water drainage arrangements will be designed and carried out in accordance with:
- The Greater Dublin Strategic Drainage Study Volume 2
 - The Greater Dublin Regional Code of Practice for Drainage Works
 - BS EN – 752:2008, Drains & Sewer Systems Outside Buildings
 - The requirements and specifications of Dublin City Council (FCC)
 - Part H (Building Drainage) of the Building Regulations
- 15.33 SuDS measures will be incorporated into the stormwater drainage network to improve the quality of stormwater leaving the Site. These will include green roofs, attenuation, permeable paving, hydrobrake and permeable reinforced grass. Petrol interceptors will also be provided in car parking areas.
- 15.34 The new network will connect to a constructed wetland and associated upstream surface water network. The potential impact associated with surface water for the operational phase is **neutral, imperceptible, and long term**.

15.4.4 Foul Drainage Infrastructure

- 15.35 Welfare facilities will be provided for the construction workers on site during the construction works and wastewater will be of domestic origin only. The works contractor will be required to apply to Irish Water for connection to discharge any contaminated surface water which collects in excavations, if it is required. The works contractor will be obliged to comply with any conditions of the discharge license to control discharge quality and rate of flow. The potential impact on foul drainage for the construction phase is **negative, imperceptible, and short term**.
- 15.36 During the operational phase the wastewater discharged from the site will ultimately discharge to the Ringsend wastewater treatment plant. Irish water have confirmed via a COF (Appendix 15.1) that there is available capacity in the network (subject to planned upgrade works). The potential impact on foul drainage for the operational phase is **neutral, imperceptible, and long term**.

15.4.5 Water Supply

- 15.37 Irish Water have confirmed via a COF that there is available supply within the network (Appendix 15.1). Irish Water is the National Authority for water management and should therefore have an inadequate supply which has been confirmed to the developer during consultation. The proposed development has considered the sustainable use of water within its design. Measures are proposed to minimise water use during the operational phase, including low consumption sanitary fittings, leak detection systems and rainwater harvesting. The potential impact on potable water infrastructure for the operational phase is **neutral, imperceptible, and long term**.

15.4.6 Telecommunications

- 15.38 The location of existing services (underground and overhead, where applicable) will be confirmed prior to the commencement of on-Site works. The potential impact on telecommunications infrastructure for the construction phase is **neutral, imperceptible, and short term.**
- 15.39 New electricity supply, telecommunications and broadband infrastructure will be put in place at the Site, tying in with existing infrastructure in neighbouring areas. The installation of a new fibre optic cable network on the site will be carried out in accordance with best practice standards. The connection into the wider telecommunications network will be undertaken by a statutory telecommunications operator. The potential impact on telecommunications infrastructure for the operational phase is **neutral, imperceptible, and long term.**

15.5 REMEDIAL AND MITIGATION MEASURES

15.5.1 Construction Phase

- 15.40 No significant impacts are predicted to occur as a result of the construction or operation of the proposed development. However, in order to minimise impacts insofar as practicable, the following mitigation measures shall be implemented during the construction phase:
- The exact locations of all existing on-Site services (underground and overhead, where applicable) will be confirmed, e.g., using slit trenches at key areas, prior to the commencement of on-Site works.
 - In planning and executing the proposed works, due reference shall be had to the Gas Networks Ireland (GNI) Guidelines for Designers and Builders – Industrial and Commercial (Non-Domestic) Sites (2018) and the Health & Safety Authority (HSA) Code of Practice for Avoiding Danger from Underground Services (2016).
 - All possible precautions shall be taken to avoid unplanned disruptions to any services / utilities during the proposed works.
 - Consultation with all relevant service providers shall be undertaken in advance of works, ensuring all works are carried out to the relevant standards and in a safe manner.
 - There will be an interface established between the Contractor and the relevant utilities service providers / authorities during the construction phase of the proposed development. This interface will be managed to ensure a smooth construction schedule with no / minimal disruption to the local residential and business community.
 - All new infrastructure will be installed in accordance with the applicable standards, guidelines and codes of practice.
 - All mitigation measures in relation to Site access / egress and construction traffic management set out in Chapter 14 of this EIAR (Traffic & Transportation) and in the finalised Construction Traffic Management Plan to be finalised by the Contractor in agreement with DCC, as stipulated in the Outline Construction Management Plan (submitted under separate cover as part of the planning application) shall be fully implemented by the Site contractors.
 - Prior to the operational phase of the proposed development, utilities infrastructure connections will be tested by a suitably qualified person using an appropriate methodology, approved by the relevant service provider, and under the supervision of DCC. The proposed development water supply will be tested

to the satisfaction of DCC and Irish Water prior to the connection to the public potable water.

- The successful contractor will ensure that the drainage and water supply networks are kept clear and free from materials which could cause diminished capacity or blockages. Routine visual inspections shall be carried out to this end.

15.5.2 Operational Phase

- 15.41 No significant impacts are predicted to occur as a result of the construction or operation of the proposed development. However, in order to minimise impacts insofar as practicable, any necessary maintenance or upgrades of on-Site utilities infrastructure during the operational phase of the proposed development, will be carried out in accordance with the specifications of the relevant service providers and facilitated by the estate manager.

15.6 RESIDUAL IMPACTS OF THE PROPOSED DEVELOPMENT

15.6.1 Construction Phase

- 15.42 The works contractor will be obliged to put best practice measures in place and work in accordance with the CEMP. The implementation of mitigation measures within each chapter and detailed in Section 15.5.1 will ensure that the predicted impacts on the material assets during the construction phase will be **neutral, imperceptible** and **short-term**.

15.6.2 Operational Phase

- 15.43 The implementation of mitigation measures within each chapter and detailed in Section 15.5.2 will ensure that the predicted impacts on the material assets during the operational phase will be **neutral, imperceptible** and **long-term**.

15.7 MONITORING AND/OR REINSTATEMENT

- 15.44 No additional monitoring or reinstatement is required.

APPENDIX 15.1

CONFIRMATION OF FEASIBILITY LETTER FROM IRISH WATER

Thomas Byrne

Eireng Consulting Eng
2 Rogans Court
Patrick Street
Dun Laoghaire
Co 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

1 December 2021

Re: CDS21003688 pre-connection enquiry - Subject to contract | Contract denied

Connection for Multi/Mixed Use Development of 484 unit(s) at Lands at Northwest of Omni Park Shopping Centre, Swords Road, Dublin

Dear Sir/Madam,

Irish Water has reviewed your pre-connection enquiry in relation to a Water & Wastewater connection at Lands at Northwest of Omni Park Shopping Centre, Swords Road, Dublin (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 Subject to upgrades
SITE SPECIFIC COMMENTS	
Water Connection	In order to connect the development, the connection must be made to the existing 12" watermain on Swords Road. A DMA meter will need to be installed on the service connection.
Wastewater Connection	In order to accommodate the proposed connection at the Premises, upgrade works are required to increase the capacity of the Irish Water network. Irish Water currently has a project on our current investment plan which will provide the necessary upgrade and capacity. This upgrade project is scheduled to be completed by 2026 (this may be subject to change) and the proposed connection could be completed as soon as possibly practicable after this date.

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.

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 Paul Fuller from the design team on (087) 718-6226 or email PFuller@water.ie For further information, visit **www.water.ie/connections**.

Yours sincerely,



Yvonne Harris

Head of Customer Operations

Thomas Byrne
Eireng Consulting Eng
2 Rogans Court
Patrick Street
Dun Laoghaire, Co Dublin

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
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Cathair Chorcaí

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

www.water.ie

7 July 2022

Re: Design Submission for Lands at Northwest of Omni Park Shopping Centre, Swords Road, Dublin (the “Development”) (the “Design Submission”) / Connection Reference No: CDS21003688

Dear Thomas Byrne,

Many thanks for your recent Design Submission.

We have reviewed your proposal for the connection(s) at the Development. Based on the information provided, which included the documents outlined in Appendix A to this letter, Irish Water has no objection to your proposals.

This letter does not constitute an offer, in whole or in part, to provide a connection to any Irish Water infrastructure. Before you can connect to our network you must sign a connection agreement with Irish Water. This can be applied for by completing the connection application form at www.water.ie/connections. Irish Water's current charges for water and wastewater connections are set out in the Water Charges Plan as approved by the Commission for Regulation of Utilities (CRU) (https://www.cru.ie/document_group/irish-waters-water-charges-plan-2018/).

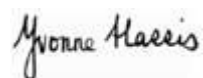
You the Customer (including any designers/contractors or other related parties appointed by you) is entirely responsible for the design and construction of all water and/or wastewater infrastructure within the Development which is necessary to facilitate connection(s) from the boundary of the Development to Irish Water's network(s) (the “**Self-Lay Works**”), as reflected in your Design Submission. Acceptance of the Design Submission by Irish Water does not, in any way, render Irish Water liable for any elements of the design and/or construction of the Self-Lay Works.

If you have any further questions, please contact your Irish Water representative:

Name: Dario Alvarez

Email: dalvarez@water.ie

Yours sincerely,



Yvonne Harris
Head of Customer Operations

Appendix A

Document Title & Revision

- 201121-C1010-Proposed Watermain Layout
- 201121-C1000-Proposed Foul Water Drainage Layout
- 201121-C1001-Longitudinal Sections Sheet 1
- 201121-C1002-Longitudinal Sections Sheet 2
- 201121-C1003-Proposed Basement Drainage Layout

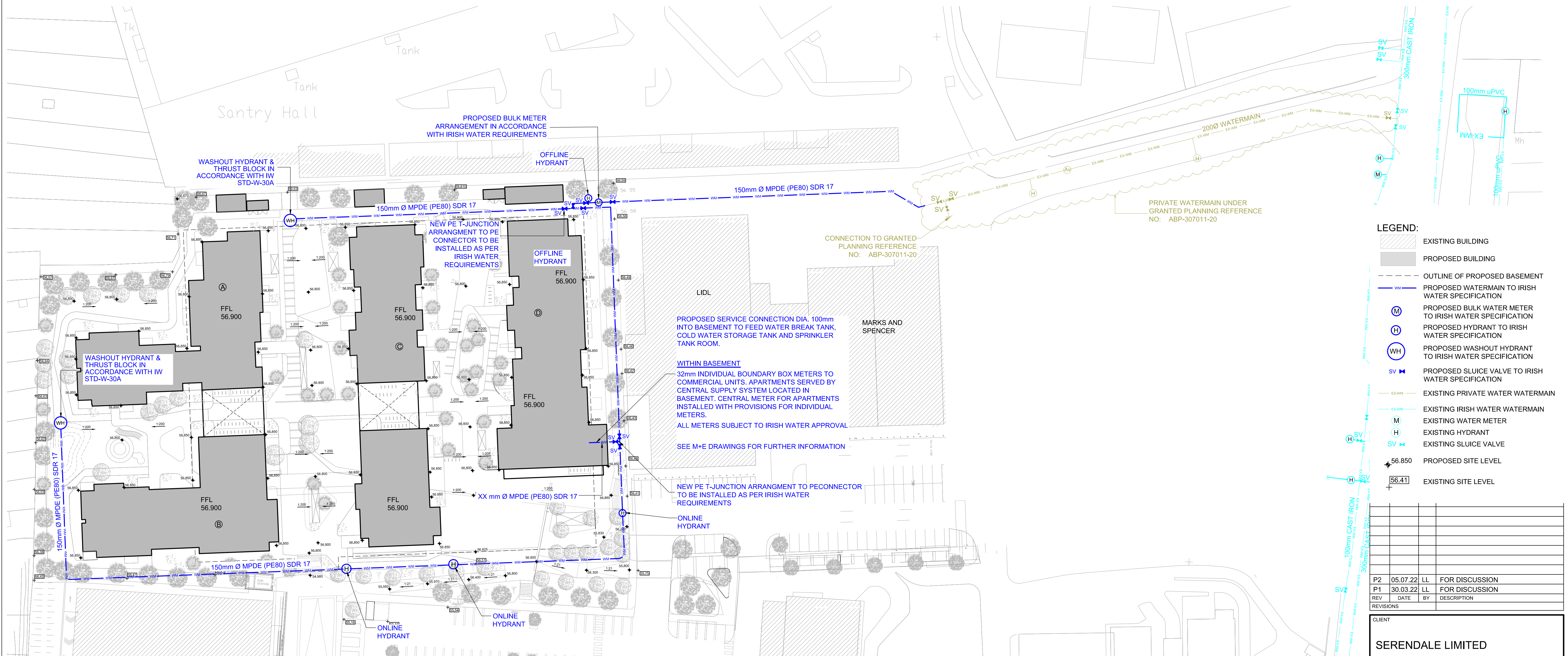
Standard Details/Code of Practice Exemption:

While Irish Water notes that the water and wastewater services infrastructure will remain private and not be vested, we have the following comments:
















- *It is recommended that the watermain is laid within 3 m of the proposed structure (between the basement and the substation).*

For further information, visit www.water.ie/connections

Notwithstanding any matters listed above, the Customer (including any appointed designers/contractors, etc.) is entirely responsible for the design and construction of the Self-Lay Works. Acceptance of the Design Submission by Irish Water will not, in any way, render Irish Water liable for any elements of the design and/or construction of the Self-Lay Works.



1. If this drawing has been received electronically it is the recipients responsibility to print the document to the correct scale.
2. All dimensions are in (m) unless otherwise noted.
3. All levels are in meters above datum unless otherwise noted.
4. This drawing is to be read in conjunction with all the relevant Engineers', Services Engineers, Manufacturers & Architects drawings and specifications.

	EXISTING BUILDING
	PROPOSED BUILDING
	OUTLINE OF PROPOSED BASEMENT
	PROPOSED WATERMAIN TO IRISH WATER SPECIFICATION
	PROPOSED BULK WATER METER TO IRISH WATER SPECIFICATION
	PROPOSED HYDRANT TO IRISH WATER SPECIFICATION
	PROPOSED WASHOUT SPECIFICATION TO IRISH WATER SPECIFICATION
	PROPOSED SLUICE VALVE TO IRISH WATER SPECIFICATION
	EXISTING PRIVATE WATER WATERMAIN
	EXISTING IRISH WATER WATERMAIN
	EXISTING WATER METER
	EXISTING HYDRANT
	EXISTING SLUICE VALVE
	PROPOSED SITE LEVEL
	EXISTING SITE LEVEL

P2	05.07.22	LL	FOR DISCUSSION		
P1	30.03.22	LL	FOR DISCUSSION		
REV	DATE	BY	DESCRIPTION		
REVISIONS					

CLIENT

SERENDALE LIMITED

PROJECT TITLE
MIXED USE DEVELOPMENT
SITE LOCATED TO THE NORTH WEST CORNER OF THE OMNI PARK SHOPPING CENTRE, SANTRY AND AT SANTRY HALL INDUSTRIAL ESTATE.
DRAWING TITLE
PROPOSED WATERMAIN LAYOUT

2 Rogan's Court, Dun Laoghaire, Co.Dublin, Ireland.
Tel: +353 1 6638957 Email: info@eireng.ie

DRAWN BY L Lonergan		DATE 25.06.2021
ENG CHECK T Byrne		DATE 25.06.2021
APPROVED E Deasy		DATE 25.06.2021
SCALE 1:500		SHEET A1
STATUS PRELIMINARY		
JOB NO. 201121		DWG NO. C1010
		REVISION P2

EIRENG CONSULT ENG Ltd.
ORDNANCE SURVEY IRELAND
LICENCE NO. EN0073622 ©
ORDNANCE SURVEY IRELAND

- WATERMAIN NOTES:**

1/ ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING OUT JUNCTION BOXES, CHAMBERS, MANHOLES, GULLIES TO ENSURE NO CLASHES WITH SERVICE DUCTS AND PIPES.

2/ ALL LEVELS ARE IN METRES ABOVE DATUM UNLESS OTHERWISE NOTED.

3/ THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S, ENGINEER'S AND MANUFACTURERS' DRAWINGS AND SPECIFICATIONS

4/ ALL PIPE DIAMETERS ARE NOMINAL.

5/ THE CONTRACTOR MUST CONTACT THE RELEVANT AUTHORITIES PRIOR TO CONSTRUCTION WORK, AND SATISFY HIMSELF IN RESPECT TO THE LOCATION OF ALL EXISTING SERVICES.

6/ ALL ROCKER PIPES SHALL BE NO MORE THAN 150mm FROM THEIR ASSOCIATED MANHOLE, PUMPING STATION, CONCRETE ENCASED SECTION OR VALVE CHAMBER.

7/ WHERE PIPE RUNS PASS UNDER FOUNDATIONS, PIPE TRENCH TO BE BACKFILLED TO FORMATION LEVEL WITH CLASS 15/20 CONCRETE.

8/ PROVIDE ANCHOR/THRUST BLOCKS ON ALL BENDS EQUAL TO OR IN EXCESS OF 22.5°. DEAD ENDS AND TEES ON ALL PIPES. ANCHOR/THRUST BLOCKS TO BE IN ACCORDANCE WITH SECTION 4.6 OF IRISH WATER CODE OF PRACTICE.

9/ FIRE HYDRANT LOCATIONS TO BE CONFIRMED WITH FIRE OFFICER AND DETAILED TO COMPLY WITH FIRE CERTIFICATE.

10/ FURTHER INVESTIGATION TO BE CARRIED OUT ON SITE TO TRACE AND LOCATE EXISTING WATER MAIN. LAYOUT AS DETAILED TO BE CONSIDERED INDICATIVE.

11/ ALL EXISTING HYDRANTS WILL BE RELOCATED OUTSIDE PARKING BAYS AND LOCATED IN ACCORDANCE WITH THE BUILDING REGULATIONS TECHNICAL GUIDANCE DOCUMENT B.

NOTES:

ALL WATERMAIN CONNECTIONS SHOWN INDICATIVELY ONLY. EXACT CONNECTION TO BE DETERMINED DURING IRISH WATER CONNECTION APPLICATION.

ALL WATERMAIN WORKS TO BE IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE FOR WATER SUPPLY AND ASSOCIATED STANDARD DETAILS

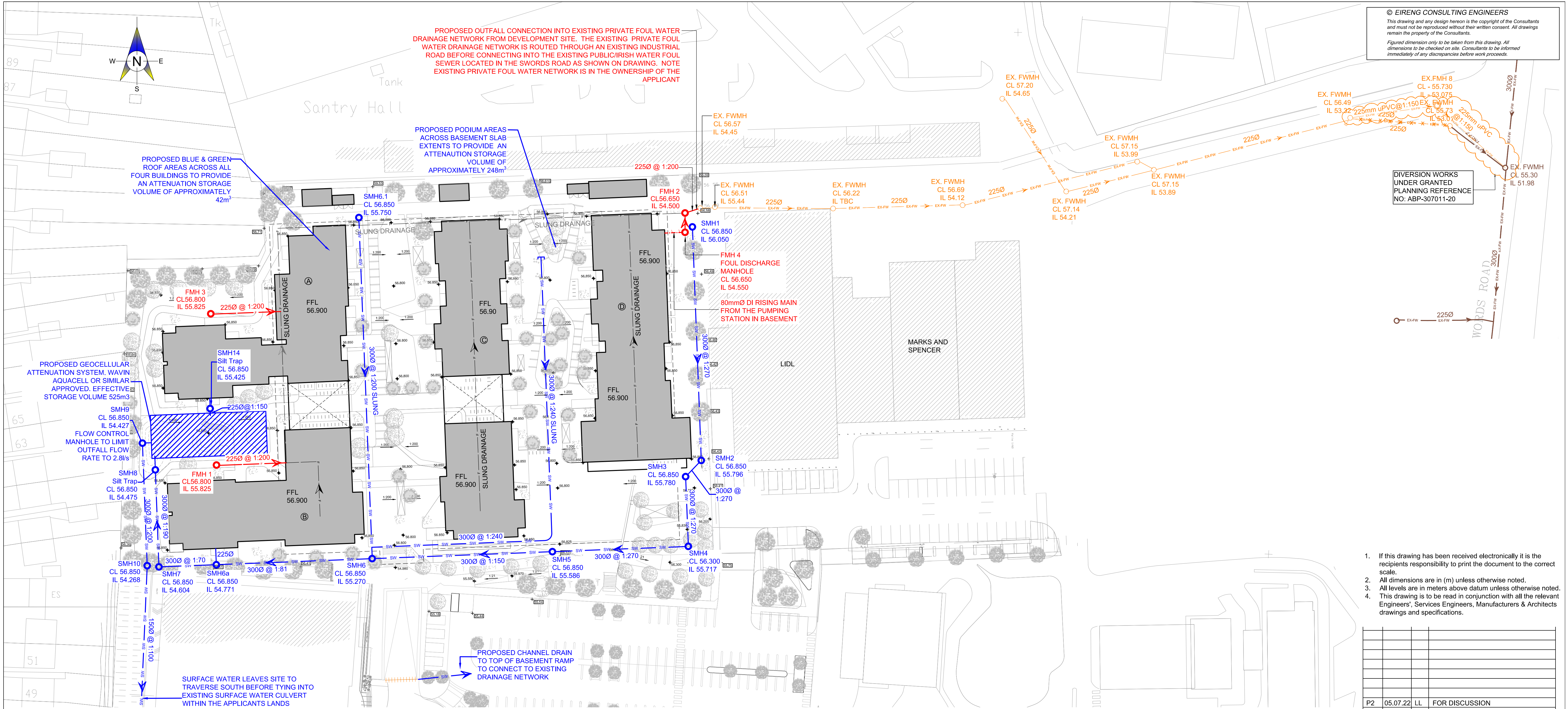
NOTES:

FINAL FIRE STRATEGY AND SERVICE CONNECTIONS TO BE CONFIRMED DURING DETAILED DESIGN.

FINAL LOCATION AND NUMBER OF FIRE HYDRANTS TO BE IN ACCORDANCE WITH THE REQUIREMENT OF THE BUILDING REGULATIONS PART B

NOTE:

THE PROPOSED DEVELOPMENT CONSISTS OF 480 APARTMENT UNITS.



DRAINAGE NOTES

- 1/ ALL DIMENSIONS ARE IN (mm.) UNLESS OTHERWISE NOTED. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING OUT JUNCTION BOXES, CHAMBERS, MANHOLES, GULLIES TO ENSURE NO CLASHES WITH SERVICE DUCTS AND PIPES.
- 2/ ALL LEVELS ARE IN METRES ABOVE DATUM UNLESS OTHERWISE NOTED.
- 3/ THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEER'S AND MANUFACTURERS' DRAWINGS AND SPECIFICATIONS.
- 4/ ALL PIPE DIAMETERS ARE NOMINAL.
- 5/ THE CONTRACTOR MUST CONTACT THE RELEVANT AUTHORITIES PRIOR TO CONSTRUCTION WORK, AND SATISFY HIMSELF IN RESPECT TO THE LOCATION OF ALL EXISTING SERVICES.
- 6/ ALL STORMWATER PIPES TO BE POLYPIPE RIGIDRAIN OR SIMILAR APPROVED. ALL FOUL PIPES TO BE WAVIN UPVC PIPES OR SIMILAR APPROVED IN ACCORDANCE WITH WIS 4-35-01 AND IS EN 13476
- 7/ ALL ROAD GULLY DRAINS ARE 150mm.
- 8/ 600mm MAX. LENGTH ROCKER PIPES ARE TO BE PROVIDED ON SEWERS WHERE:
(A). A PIPE ENTERS A MANHOLE OR PUMPING STATION.
(B). A PIPE LEAVES A MANHOLE.
(C). A PIPE ENTERS CONCRETE ENCASEMENT.
(D). A PIPE LEAVES CONCRETE ENCASEMENT.
(E). ANY OTHER LOCATION AS DIRECTED BY THE ENGINEER.
- 9/ ALL SEWER ROCKER PIPES ARE TO BE FORMED BY CUTTING AND TRIMMING A LENGTH OF SPIGOT & SOCKET PIPE TO FORM A SPIGOT AT THE CUT END, THEREBY FORMING SPIGOT & SOCKET JOINTS AT BOTH ENDS OF THE ROCKER PIPE.
- 10/ ALL ROCKER PIPES SHALL BE NO MORE THAN 150mm FROM THEIR ASSOCIATED MANHOLE, PUMPING STATION, CONCRETE ENCASED SECTION OR VALVE CONNECTION.

- 11/ WHERE SEWER PIPES, RISING MAINS OR ROAD GULLY DRAINS CROSS EXISTING ROADS, THE CONTRACTOR IS REQUIRED TO:
(A) CONTACT THE RELEVANT AUTHORITIES PRIOR TO COMMENCING WORK.
(B) MAKE GOOD THE EXISTING ROAD TO ITS ORIGINAL SPECIFICATION AS APPROVED BY THE ENGINEER.
(C) UNDERTAKE WORK TO THE STANDARDS OF THE RELEVANT LOCAL AUTHORITY SPECIFICATION.
- 12/ ALL EXISTING FOUL & SURFACE WATER RUNS SERVING THE BUILDING THAT BECOMES REDUNDANT DUE TO THE NEW DEVELOPMENT TO BE BROKEN OUT AND TRENCH/MANHOLES TO BE BACKFILLED WITH CL16/20 LEAN MIX CONCRETE
- 13/ WHERE PIPES PASS UNDER FOUNDATIONS PIPE TRENCH TO BE BACKFILLED TO FORMATION LEVEL WITH CL16/20 CONCRETE.
- 14/ WHERE PIPES ARE LOCATED WITHIN 3m OF PAD FOUNDATIONS CONCRETE SURROUND CL16/20 REQUIRED TO A LEVEL ABOVE THE PAD FOUNDATIONS. WHERE PIPES PASS UNDER FLOOR SLABS, PIPES TO BE SURROUND WITH 150mm CONCRETE +50mm COMPRESSIBLE FILL BOARD/SAND SHOULD DIVIDE UNDERSIDE OF SLAB & TOP OF CONCRETE SURROUND (DETAIL TO BE AGREED WITH STRUCTURAL ENGINEER)
- 15/ ALL EXISTING MAIN SEWER RUNS TO BE JETTED TO REMOVE BLOCKAGES/DEBRIS, ALL EXISTING DRAINAGE RUNS & MANHOLES TO BE CLEARED OF DEBRIS, CLEANED, JETTED AND CCTV CARRIED OUT. INTERPRETIVE REPORT, DVD & DRAWINGS TO BE INCLUDED & ISSUED TO DESIGN ENGINEER PRIOR TO CONSTRUCTION.
- 16/ CCTV SURVEY TO BE CARRIED OUT ON ALL NEW DRAINAGE RUNS & CCTV SURVEY INTERPRETIVE REPORT.
- 17/ ALL COVERS OF EXISTING MANHOLES TO BE BUILT TO FINAL FINISHED PAVEMENT OR DRAINAGE LEVELS.
- 18/ COVER LEVELS DETAILED ARE INDICATIVE. COVER LEVELS TO TIE IN FLUSH WIT PROPOSED PAVEMENT & LANDSCAPING LEVELS.
- 19/ INTERNAL DRAINAGE TO ARCHITECT & M&E DETAILS
- 20/ GULLY LAYOUT TO BE CONFIRMED WITH ARCHITECT PRIOR TO DETAILED DESIGN

- 21/ RODDING EYES REQUIRED ON ALL SUSPENDED DRAINAGE RUNS AT MAX. 22m INTERVALS AND AT ALL JUNCTIONS OR CHANGES IN PIPE DIRECTIONS.
- 22/ LEVELS ON ALL EXISTING DRAINAGE TO BE CONFIRMED ONSITE.
- 23/ ALL EXISTING DRAINS TO BE INVESTIGATED FOR LIVE CONNECTIONS PRIOR TO CONSTRUCTION. LIVE CONNECTIONS TO BE MAINTAINED TO SEWERS
- 24/ ALL SURFACE WATER MANHOLE COVER TO BE SQUARE IN SHAPE. ALL FOUL WATER MANHOLES TO BE CIRCULAR IN SHAPE.
- 25/ CONTRACTOR TO COORDINATE ALL ROOF DRAINAGE AND DOWNPIPES LOCATIONS TO BE AGREED WITH THE ENGINEER AND ARCHITECT.
- 26/ CONTRACTOR TO PROVIDE IL, PIPE DIAMETER AND DIRECTION OF FLOW IN EXISTING MANHOLE ON COMMENCEMENT OF THE WORKS TO DESIGN ENGINEER.
- 27/ ALL SLUNG GRAVITY DRAINAGE PIPEWORK TO WIS 4-35-01 AND IS EN 13476. SLUNG DRAINAGE, PROPRIETARY CONNECTIONS, SEALING AND FIXINGS TO BE DESIGNED BY OTHERS TO MANUFACTURERS REQUIREMENTS. DETAILS TO BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO WORKS COMMENCING.
- 28/ PUMPED RISING MAIN TO BE DUCTILE IRON PIPE WORK AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 598
- 29/ FOUL SEWER MANHOLES TO BE PRE-CAST, ALL SURFACE WATER AND COMBINED MANHOLES TO BE BLOCKWORK AS PER GDSDS V6.0
- 30/ ALL MANHOLE COVERS LOCATED IN PAVING AREAS TO BE RECESSED TYPE WITH GALVANISED STEEL TRIMMING ALLOWING FOR PAVING INSERTS TO LANDSCAPE ARCHITECTS DETAIL. MANHOLE COVER LOADINGS TO COMPLY WITH RELEVANT MANHOLE BUILDUP.
- 31/ ALL DRAINAGE PIPEWORK & MANHOLE CONSTRUCTION TO BE WATERTIGHT. ALL PIPEWORK MUST BE TESTED TO THE APPROPRIATE AIR TIGHTNESS TEST AND TEST RESULTS SUBMITTED TO ENGINEER FOR APPROVAL.

NOTES:
ALL FOUL WATER WORKS TO BE IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER SUPPLY AND ASSOCIATED STANDARD DETAILS.

NOTE:
THE PROPOSED DEVELOPMENT CONSISTS OF 480 APARTMENT UNITS.

NOTE
EXTENTS OF GREEN ROOF, BLUE ROOF AND PERMAVOID PODIUM ATTENUATION AREAS ARE NOT SHOWN ON THIS DRAWING FOR CLARITY PURPOSES

LEGEND:

- EXISTING BUILDING
- PROPOSED BUILDING
- OUTLINE OF PROPOSED BASEMENT
- PROPOSED FOUL SEWER
- PROPOSED FOUL SEWER MANHOLE
- PROPOSED FOUL SEWER RISING MAIN
- PROPOSED SLUNG DRAINAGE TO M&E DESIGN
- EXISTING PUBLIC FOUL SEWER
- EXISTING PUBLIC FOUL SEWER MANHOLE
- EXISTING PRIVATE FOUL SEWER
- EXISTING PRIVATE FOUL SEWER MANHOLE
- PROPOSED SURFACE WATER SEWER (SHOWN INDICATIVELY)
- PROPOSED SURFACE WATER SEWER MANHOLE (SHOWN INDICATIVELY)
- PROPOSED SURFACE WATER CHANNEL (SHOWN INDICATIVELY)
- EXISTING SURFACE WATER SEWER (SHOWN INDICATIVELY)
- PROPOSED BASEMENT OUTLINE
- PROPOSED SITE LEVEL
- EXISTING SITE LEVEL

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PLANNING REFERENCE
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P2	05.07.22	LL	FOR DISCUSSION
P1	30.03.22	LL	FOR DISCUSSION
REV	DATE	BY	DESCRIPTION
REVISIONS			

CLIENT

SERENDALE LIMITED

PROJECT TITLE

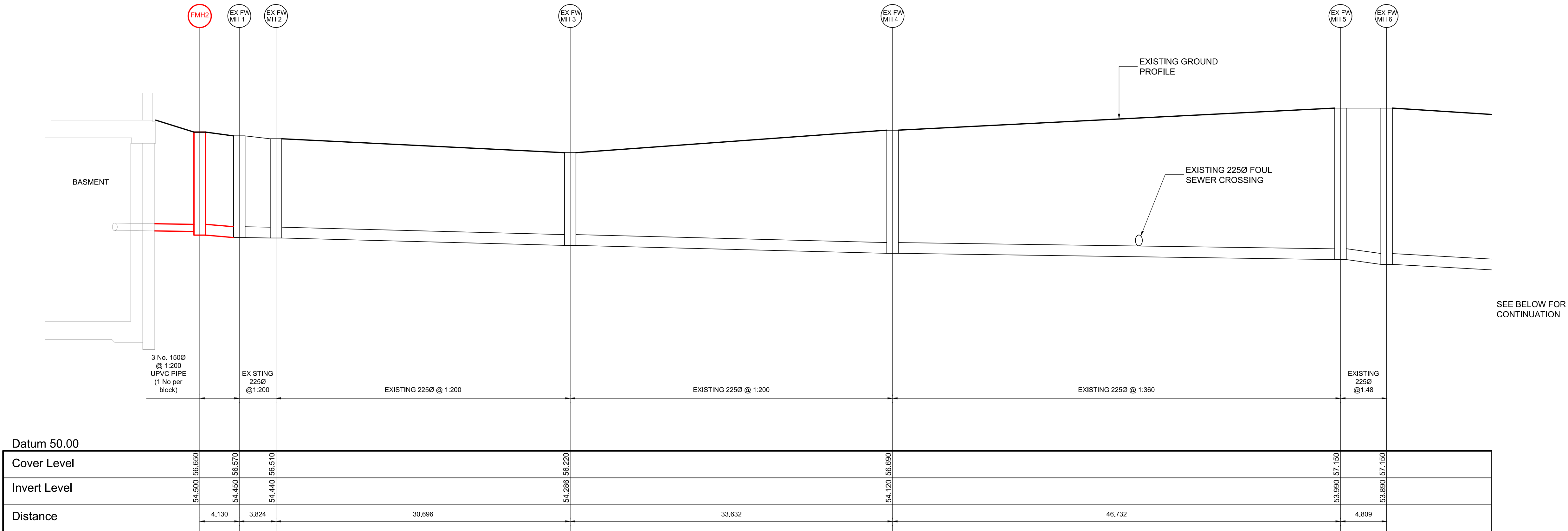
MIXED USE DEVELOPMENT

SITE LOCATED TO THE NORTH WEST CORNER OF THE OMNI PARK SHOPPING CENTRE, SANTRY AND AT SANTRY HALL INDUSTRIAL ESTATE.

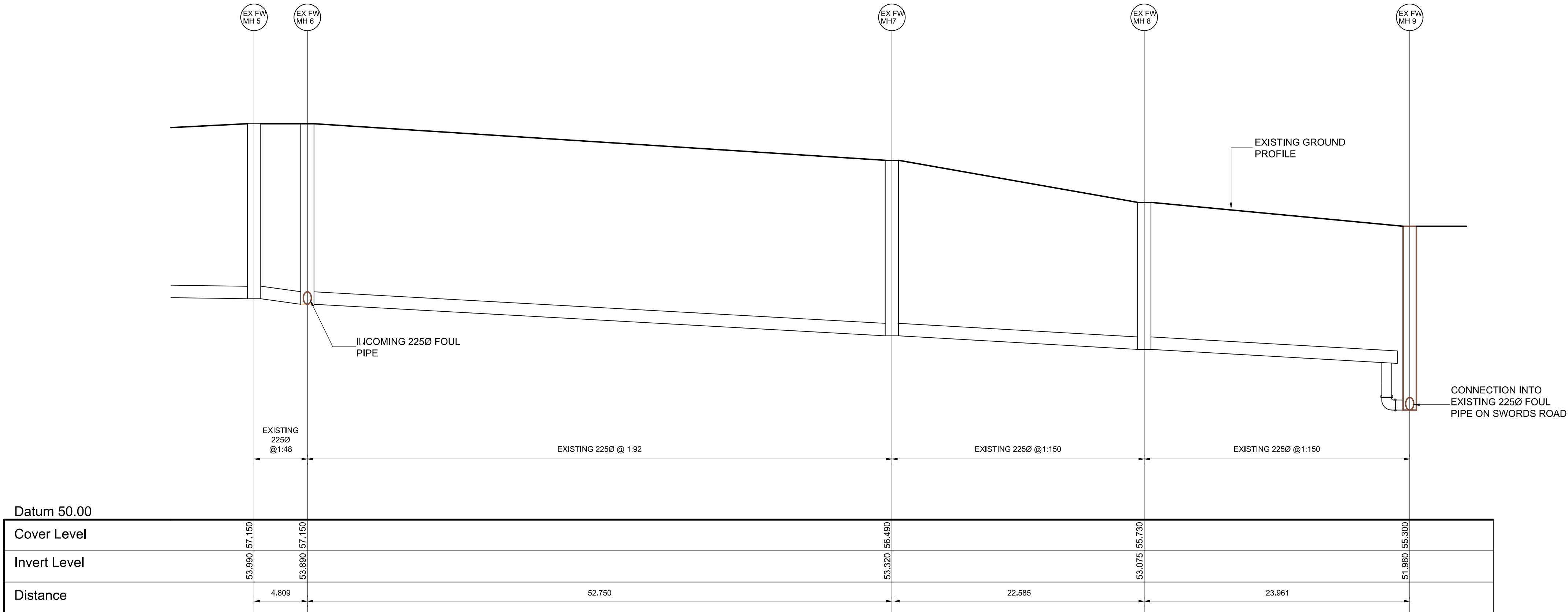
DRAWING TITLE

PROPOSED FOUL WATER DRAINAGE LAYOUT

2 Rogan's Court, Dun Laoghaire, Co.Dublin, Ireland. Tel: +353 1 6638957 Email: info@eireng.ie	
DRAWN BY L Loneragan	DATE 25.06.2021
ENG CHECK T Byrne	DATE 25.06.2021
APPROVED E Deasy	DATE 25.06.2021
SCALE 1:500	SHEET A1
STATUS PRELIMINARY	
JOB NO. 201121	DWG NO. C1000
REVISION P2	



FOUL LONGITUDINAL SECTION FMH2 TO EX FMH 6
Scale Horizontal 1/250, Vertical 1/50



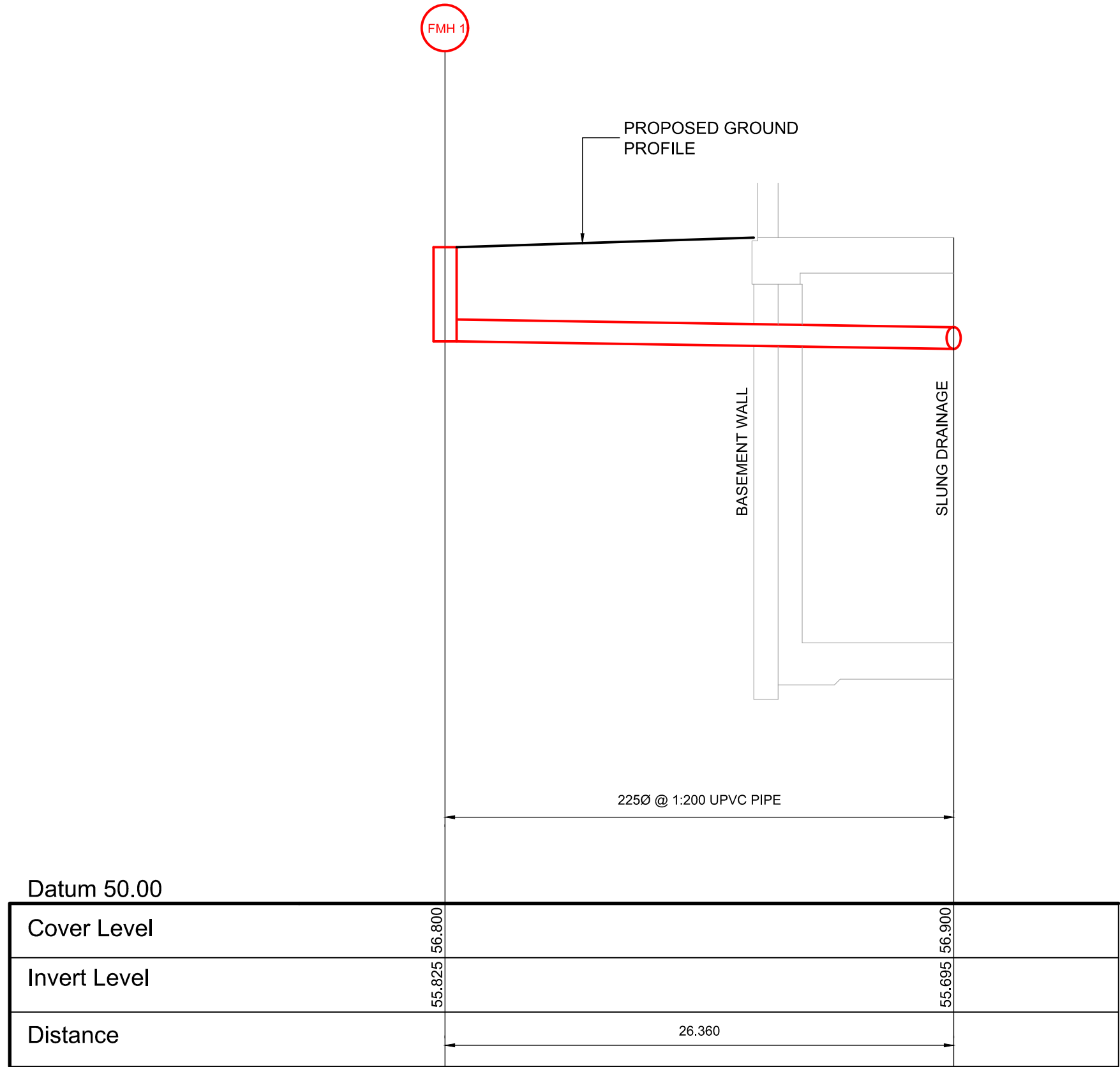
FOUL LONGITUDINAL SECTION EX FMH 6 TO EX FMH 9
Scale Horizontal 1/250, Vertical 1/50

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P2	05.07.22	LL	FOR DISCUSSION
P1	30.03.22	LL	FOR DISCUSSION
REV	DATE	BY	DESCRIPTION
REVISIONS			

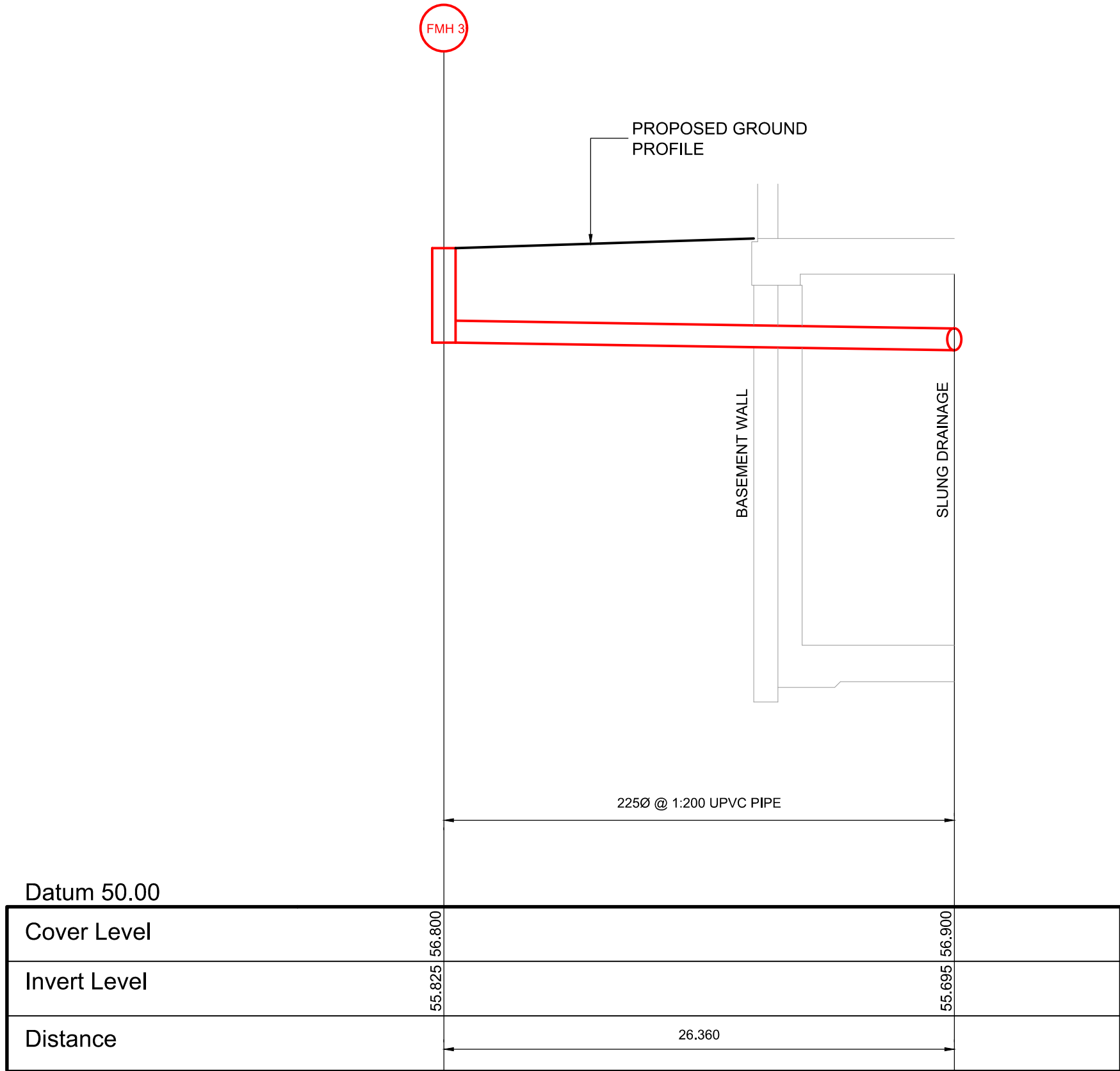
CLIENT
SERENDALE LIMITED
PROJECT TITLE
MIXED USE DEVELOPMENT
SITE LOCATED TO THE NORTH WEST CORNER OF THE OMNI PARK SHOPPING CENTRE, SANTRY AND AT SANTRY HALL INDUSTRIAL ESTATE.
DRAWING TITLE
LONGITUDINAL SECTIONS SHEET 1

<div><div>eireng</div><div>CONSULTING ENGINEERS</div><div>2 Rogan's Court, Dun Laoghaire, Co.Dublin, Ireland. Tel: +353 1 6638957 Email: info@eireng.ie</div></div>			
DRAWN BY	L Loneragan	DATE	04.02.2022
ENG CHECK	T Byrne	DATE	04.02.2022
APPROVED	E Deasy	DATE	04.02.2022
SCALE	AS SHOWN	SHEET	A1
STATUS			
PRELIMINARY			
JOB NO.	201121	DWG NO.	C1001
		REVISION	P2



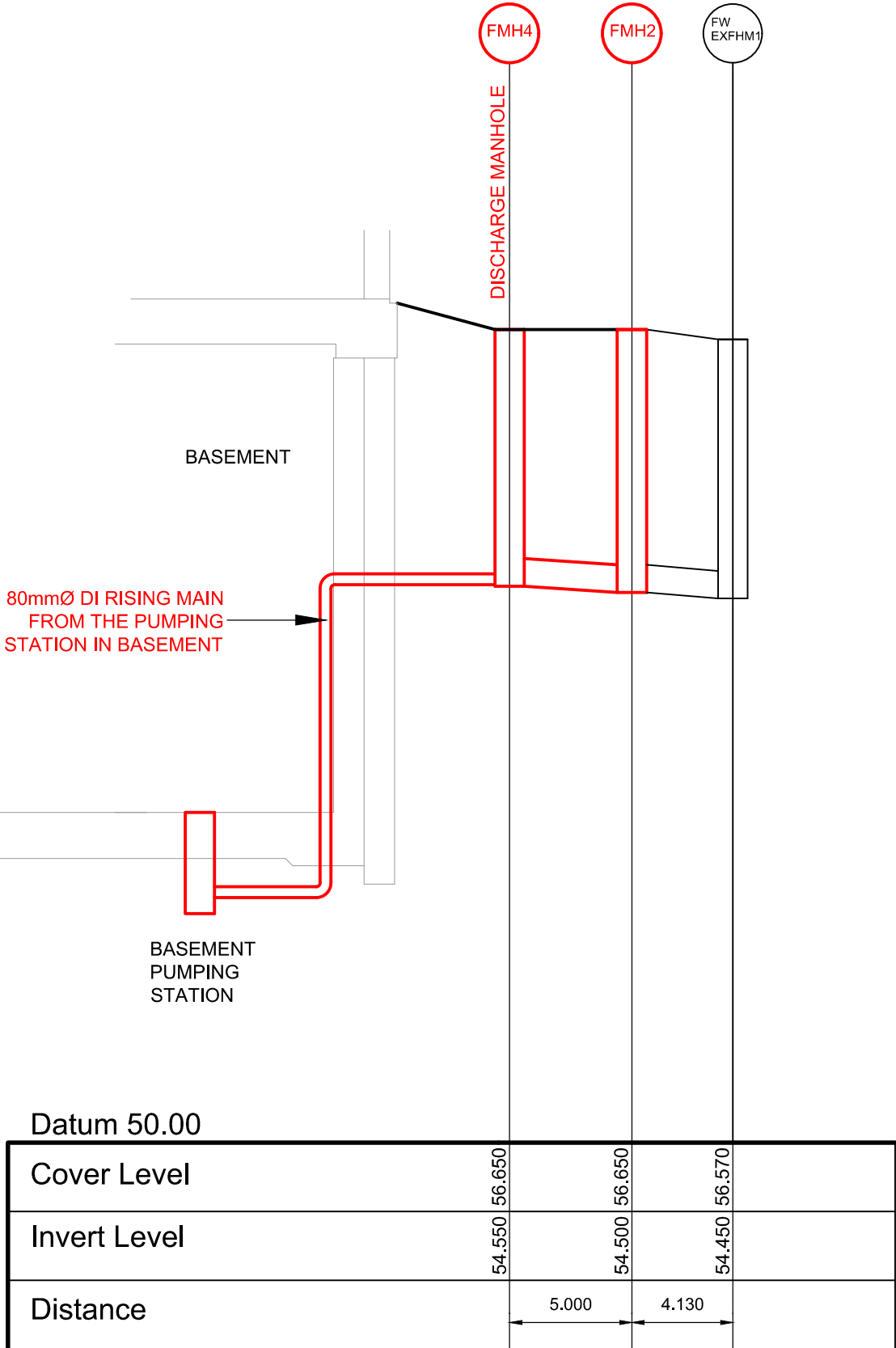
FOUL LONGITUDINAL SECTION FMH 1 TO SLUNG DRAINAGE

Scale Horizontal 1/250, Vertical 1/50



FOUL LONGITUDINAL SECTION FMH 3 TO SLUNG DRAINAGE

Scale Horizontal 1/250, Vertical 1/50



FOUL RISING MAIN LONGITUDINAL BASEMENT TO EX FMH 1

Scale Horizontal 1/250, Vertical 1/50

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P2	05.07.22	LL	FOR DISCUSSION
P1	30.03.22	LL	FOR DISCUSSION
REV	DATE	BY	DESCRIPTION
REVISIONS			


CLIENT
SERENDALE LIMITED
PROJECT TITLE
MIXED USE DEVELOPMENT
SITE LOCATED TO THE NORTH WEST CORNER OF THE OMNI PARK SHOPPING CENTRE, SANTRY AND AT SANTRY HALL INDUSTRIAL ESTATE.
DRAWING TITLE
LONGITUDINAL SECTIONS SHEET 2

eireng

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DRAWN BY	L Loneragan	DATE	04.02.2022
ENG CHECK	T Byrne	DATE	04.02.2022
APPROVED	E Deasy	DATE	04.02.2022
SCALE	AS SHOWN	SHEET	A1
STATUS			
PRELIMINARY			
JOB NO.	201121	DWG NO.	C1002
		REVISION	P2



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DRAWN BY	DATE	
L Loneragan	25.06.2021	
ENG CHECK	DATE	
T Byrne	25.06.2021	
APPROVED	DATE	
E Deasy	25.06.2021	
SCALE	SHEET	
1:250	A1	
STATUS		
<p style="font-size: 24px; margin: 0;">PRELIMINARY</p>		
JOB NO.	DWG NO.	REVISION
201121	C1003	P1

27.06.2022

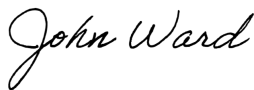
To whom it may concern,
Irish Water

RE: Development at Molloy and Sherry Site, OMNI Park, Santry, Dublin 9

This letter is to confirm that where the proposed watermain passes within 3 metres of proposed or existing trees that the Irish Water standards in relation to the construction of watermain in proximity to existing and proposed trees will be adhered to, namely:

Water Infrastructure Standard Details
Code of Practice for Water Infrastructure

Yours sincerely,



John Ward, Director

For & on behalf of Murray & Associates

murray & associates
landscape architecture

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