Marshall Yards Development Company Limited

Lands at Gortnahomna, Castlemartyr, Co. Cork

Infrastructure Design Report

(Planning Submission)

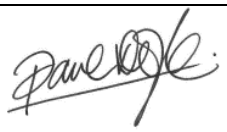
2411-DOB-XX-SI-RP-C-0001-S2.P04

November 2024

Document Control

Document:	Infrastructure Design Report (Planning Submission)
Project:	Lands at Gortnahomna, Castlemartyr, Co. Cork.
Client:	Marshall Yards Development Company Limited
Job Number:	DOBA2411
File Origin:	Z:\Projects\DOB&A Projects\2023 Projects\DOBA 2411 – Castlemartyr LRD\08 Reports & Specifications\8.1 Reports

Document Checking:			
Author:	Alan Lambe	Signed:	

Issue	Date	Status	Issued to	Copies	Checked for Issue
S2.P01	26/07/2024	Issue 1	Client, Design Team	1E	
S2.P02	08/08/2024	Issue 2	Cork Co. Co.	1E + 2H	
S2.P03	05/11/2024	Issue 3	Client, Design Team	1E	
S2.P04	07/11/2024	Issue 4	Cork Co. Co.	1E + 2H	

Contents

1 Introduction

Donnachadh O'Brien & Associates Consulting Engineers Ltd. (DOBA) have been instructed by the Client, Marshall Yards Development Company Limited, to prepare an Infrastructure Design Report (IDR) to accompany a Planning submission to Cork County Council (CCC) for the proposed Large Scale Residential Development (LRD) on lands at Gortnahomna, Castlemartyr, Co. Cork. This Infrastructure Design Repot is structured as follows;

- **Section 2** summarises the attributes of the **Existing Site**,
- **Section 3** provides a description of the **Proposed Development**,
- **Section 4** addresses existing and proposed **Surface Water** arrangements,
- **Section 5** addresses existing and proposed **Wastewater Drainage** arrangements,
- **Section 6** addresses the existing and proposed **Water Supply** proposals to the development, and finally,
- **Section 7** outlines the **Roads Infrastructure** arrangements for the proposed development and describes the existing infrastructure, pre-planning consultations held with CCC Transportation Department and proposed development access. This section also summarises the Road Safety Audit, Transport Assessment and Mobility Management Plans,

2 Existing Site

The subject site comprises a 6.88Ha greenfield site as illustrated in **Figure 1** below (with a net developable area of 4.0 hectares) and is located on lands at Gortnahomna, Castlematyr, Co. Cork. The site itself is zoned residential and is bound to the north by the N25, to the east and south by agricultural lands and to the west an existing residential development. The existing site topography, as illustrated on DOBA Engineering drawing C-0001, is relatively steep in the southern portion of the application lands with levels ranging from +22mOD at the south-west corner to +11.0mOD at an average gradient of approx. 1 in 12 in places. The northern portion of the lands are generally gently sloping. The finished road levels of the N25 to the north of the site vary from +15.30mOD to 11.80mOD. The existing site is illustrated on **Engineering drawing C-0001**.

Figure 1 Site location (highlighted in red) Source: Google Maps

3 Proposed Development Description

The proposed large-scale residential development (LRD) is located at Gortnahomna, Castlemartyr, Co. Cork. The proposed development will include 150 residential units as follows:

- 4 no. two-bed bungalows;
- 56 no. two-bed townhouses;
- 43 no. three-bed townhouses;
- 39 no. three-bed semi-detached;
- 1 no. four-bed townhouse; and
- 7 no. four-bed semi-detached houses.

The proposed development includes a crèche facility for 68 child spaces, 2 no. ESB substations and all related site development works including car and bicycle parking, bin and bicycle storage, landscaping/amenity areas, public lighting and all other necessary services. Assess to the site will be via a new entrance from the existing N25.

Figure 2 Proposed development (source: DGA)

4 Surface Water

The existing surface water infrastructure adjacent to the site and the design of the proposed surface water network and SuDS features have been discussed in detail in the Drainage Impact Assessment, **2411-DOB-XX-SI-RP-C-005**, which is submitted as a separate report as part of this planning submission to Cork County Council.

The responses to the pre planning discussions with Cork Co. Co. have been addressed as follows:

- s247 Meeting Comments - **Appendix D** of this report
- LRD Opinion under S.32D Comments - **Appendix F** of this report

5 Wastewater Drainage

5.1 Existing Wastewater Drainage

The Applicant commissioned Metroscan to carry out Topographical and Gound Penetrating Radar (GPR) surveys to confirm the extents and size of the existing wastewater network along the N25 downstream of the proposed connection point. The surveys confirmed 2 No. existing wastewater networks along the N25 discharging to the west towards the Castlemartyr Bridge WwPS as follows;

- A 225mm diameter pipe along the northern side of the N25 which appears to correlate with the existing wastewater network illustrated on the current Uisce Eireann maps. This network appears to serve the existing developments along the N25 according to the GPR survey drawing;
- A 300mm diameter pipe along the southern side of the N25 which appears to commence at the site boundary.

The Topographical and GPR survey drawings confirm that both existing wastewater sewers discharge towards the existing Castlemartyr Bridge WwPS (refer to Existing Services drawings C-0010 & C-0011). Based on the as-constructed invert levels of the existing networks, the existing 300mm wastewater network is more suitable to serve the proposed application development.

5.2 Uisce Eireann Confirmation of Feasibility

The Applicant has liaised with Uisce Eireann (UE) in relation to the proposed development and submitted a pre-connection enquiry (PCE) to which UE responded. The Connection & Developer Services (CDS) Response states that a wastewater connection is "feasible subject to upgrades" and "*in order to accommodate the proposed connection at the Development, upgrade works are required to increase the capacity of Castlemartyr WWTP. Uisce Éireann currently has a project underway which will provide the necessary upgrade and capacity. This upgrade project is scheduled to be completed in 2026 (may be subject to change) and the proposed connection could be facilitated as soon as possibly practicable after this date".*

The Confirmation of Feasibility is included in **Appendix A** of this report.

5.2.1 Statement of Design Acceptance

The applicant has received a Statement of Design Acceptance from Uisce Eireann for the proposed development and a copy of the same is included in **Appendix B** of this report.

5.3 Proposed Wastewater Drainage

The proposed wastewater drainage will collect effluent from the residential units via a main wastewater drainage network located within the development's access roads and discharge by gravity to the existing wastewater network to the north of the site as illustrated on DOBA Engineering drawing

C-0300. The new wastewater network will be designed in accordance with the principles and methods set out in Irish Water's Code of Practice for Wastewater Infrastructure IW-CDS-5030-03, IS EN 752 Drain & Sewer Systems outside Buildings, IS EN 12056 Gravity Drainage Systems inside Buildings and the Building Regulations Technical Guidance Document Part H Drainage & Wastewater. The estimated peak Wastewater loading generated by the proposed development's Dry Weather Flow is estimated at 0.75 l/s while the Design Wastewater Flow of 6DWF is 4.50 l/s as illustrated in **Table 1** below. Engineering calculations have been included in **Appendix C**.

Table 1 Proposed Post-Development Wastewater Flows

RESIDENTIAL						
Proposed Development Foul Flows						
Use Type	**No. of Units**	**Occupancy Rate (persons/ dwelling)**	**Population (P)**	**Loading (l/ person/ day)**	**Daily Loading (l/ day)**	**Daily Loading (l/s)**
Residential	150	2.7	405	150	60750	0.70
Dry Weather Flow (1 DWF)						**0.70**
COMMERCIAL						
Proposed Development Foul Flows						
Use Type			**Population (P)**	**Loading (l/ person/ day)**	**Daily Loading (l/ day)**	**Daily Loading (l/s)**
Creche			68	60	4080	0.05
Dry Weather Flow (1 DWF)						**0.05**
Total Daily Foul Flow (1 DWF)						**0.75**
Total Proposed Peak Foul Flow (6 DWF)*						**4.50**

6 Water Supply

6.1 Existing Water Supply

Following discussions with Cork Co. Co. and Uisce Eireann, it was confirmed that an existing 150mm DI watermain was installed along the N25 adjacent to the application site as part of the N25 pavement strengthening scheme undertaken in 2018. The applicant commissioned Metroscan to carry out topographical and Gound Penetrating Radar (GPR) surveys to locate the existing 150mm watermain along the N25. The GPR identified an existing spur off the new watermain extending to the boundary of the application site (refer to Existing Services drawings C-0010 & C-0011).

6.2 Uisce Eireann Confirmation of Feasibility

DOBA have liaised with Uisce Eireann (UE) in relation to the proposed development and submitted a pre-connection enquiry to which UE responded with a Confirmation of Feasibility (CoF). The Connection & Developer Services (CDS) Response noted that a new water connection is "*Feasible without infrastructure upgrade by Uisce Éireann*". The Confirmation of Feasibility is included in **Appendix A** of this report.

6.2.1 Statement of Design Acceptance

The applicant has received a Statement of Design Acceptance from Uisce Eireann for the proposed development and a copy of the same is included in **Appendix B** of this report.

6.3 Proposed Water Supply

The proposed water supply networks within the subject site will include a 150mm dia. watermain with 100mm dia. loops, associated connections, valves, hydrants, meters etc. designed in accordance with Irish Water's Code of Practice for Water Infrastructure IW-CDS-5020-03/ Standard Details and the Department of the Environment's Building Regulations "Technical Guidance Document Part B Fire Safety". The site watermain network will adequately serve the firefighting requirements with Fire Hydrants provided on the loop main in accordance with Part B of the Building Regulations. The proposed watermains are illustrated on the DOBA Engineering C-0400 drawing series. The estimated peak hour water demand generated by the proposed development is 4.69 l/s as illustrated in **Table 4** below. The proposed watermains are illustrated on **DOBA Engineering drawing C-0400**.

Table 2 Post-Development Peak Water Demand

Proposed Development Water Demand								
Use Type	**No. of Units**	**Occupancy Rate (persons/ dwelling)**	**Population (P)**	**Per Capita Consumption (l/ person/ day)**	**Average Daily Domestic Demand (l/ day)**	**Average Daily Domestic Demand (l/s)**	**Average Day/peak week Demand (l/s)**	**Peak hour water demand (l/s)**
Residential	150	2.7	405	150	60750	0.70	0.88	4.39
Peak Hour Water Demand								**4.39**
COMMERCIAL								
Proposed Development Water Demand								
Use Type			**Population (P)**	**Per Capita Consumption (l/ person/ day)**	**Average Daily Domestic Demand (l/ day)**	**Average Daily Domestic Demand (l/s)**	**Average Day/peak week Demand (l/s)**	**Peak hour water demand (l/s)**
Creche			68	60	4080	0.05	0.06	0.30
Peak Hour Water Demand								**0.30**
Total Proposed Peak Water Demand								**4.69**

7 Roads Infrastructure

The structure of this section of the report is as follows;

- **Section 7.1** outlines the **existing road infrastructure** present adjacent to the proposed development,
- **Section 7.2** outlines the **local authority consultations** carried out,
- **Section 7.3** describes the **proposed development access** and sightlines, through the provision of a new access off the N25,
- **Section 7.4** summarises the **DMURS Statement of Consistency**,
- **Section 7.5** outlines the **Traffic & Transport Assessment and Mobility Management Plan**,
- **Section 7.6** describes the **Stage 1 Road Safety Audit** completed by Traffico

7.1 Existing Roads Infrastructure

The subject site is located on lands at Gortnahomna, Castlemartyr, Co. Cork. The site itself is zoned residential and is bound to the north by the N25, to the east by agricultural lands, to the west by existing residential developments and to the south by agricultural lands. The existing roads infrastructure are illustrated in **Figure 3** below. The Existing Site is illustrated on **DOBA Engineering drawing C-0001.**

Figure 3 Existing roads infrastructure (Source: Google maps)

7.2 Local Authority Consultations

The applicant formally engaged with the Cork Co. Co. regarding the proposed development as summarised in **Table 6** below:

Table 6 Applicant's engagement with Cork Co. Co

Engagement with MCC TD	Applicant's Responses to MCC Comments
S247 Meeting with CCC dated 23.05.2024	Refer to **Appendix E**
LRD Meeting with CCC dated 28.08.2024 (LRD Opinion and Record of Meeting issued on 09.10.2024)	Refer to **Appendix F**

7.3 Proposed Development Access & Sightlines

It is proposed to access the development via the construction of a priority-controlled junction off the existing N25 with a new dedicated right hand turning lane in accordance with the TII guidelines. 65m Sightlines based on the posted speed limit of 60kph have been achieved in both directions in accordance with Table 4.2 of DMURS. The sightlines are illustrated on **Engineering drawings 2411-DOB-XX-SI-DR-C-0500 & C-0550**.

7.4 DMURS Statement of Consistency

The proposed infrastructure to serve the development in accordance with the Design Manual for Urban Roads and Streets (DMURS) is illustrated on **Engineering drawing 2411-DOB-XX-SI-DR-C-0500**. The proposed scheme provides 6.0m wide and 5.5m wide Arterial / Link and Local streets with min. 2.0m raised footpaths and both on street perpendicular and parallel car parking and also 4.8m wide shared surface home zones with 1.2m wide pedestrian refuge areas. Psychological and physical traffic calming measures have been adopted within the proposed site layout to balance the functional needs of various carriageway users in particular Vulnerable Roads Users (VRUs) as follows;

- The creation of a self-regulating street environment through the introduction of shared surfaces, on-street parking, reduced corner radii and reduced visibility splays,
- Limiting straight sections of roads to a maximum of 70m through the introduction of horizontal deflections coupled with vertical deflections in the form of raised table tops where required,
- The use of minimal signage and line markings along internal streets with such treatments used sensitively throughout and predominately at key nodes and transition areas with adjoining streets,
- The provision of footpath widths no less than 2.0m are proposed throughout the scheme with tie-ins provided to existing external pedestrian routes, in particular along the northern boundary of the subject site,

- Appropriate clear unobstructed visibility splays are provided at all internal nodes which have been fully coordinated with the Architect, Landscape Architect and Public Lighting designer,
- Well designed and frequently provided pedestrian crossing facilities are provided along key travel desire lines throughout the scheme. All uncontrolled crossings are provided with either dropped kerbs and tactile paving or flat raised table top treatments thereby allowing pedestrians to informally assert a degree of priority,
- All uncontrolled informal pedestrian crossing facilities will be a minimum of 2.0m wide coupled with tactile paving and dropped kerbs,
- The materials used in shared surface areas will be varied to indicate that the carriageway is an extension of the pedestrian domain,
- A vertical deflection in the form of raised tables is strategically placed across the access to the proposed development to promote lower speeds and enable pedestrians to cross at grade. The maximum height of the raised flat top treatment is deigned to be 75mm.
- The vertical deflection across the development entrance shall be provided with a different surface material treatment to alert and subsequently influence driver behaviour and associated vehicle speeds,
- Kerb heights will be maintained at 75mm internally within the development,
- Cyclists will use the on-road cycle facilities or the dedicated 3m wide shared cycle and footpath route through the site in accordance with the National Transport Authority's Cycle Design Manual,

7.5 Traffic & Transport Assessment and Mobility Management Plan

Transport Insights have been commissioned by the Applicant to provide traffic engineering design advice and to prepare a Traffic & Transport Assessment (TTA) including a Framework Mobility Management Plan (MMP) in relation to a proposed large scale residential development at Gortnahomna, Castlemartyr, Co. Cork. The Traffic Insights report is submitted with the LRD planning submission documentation.

7.6 Stage 1 Road Safety Audit

A Stage 1 Road Safety Audit has been completed by Traffico and is submitted with the planning application. The signed audit feedback form is included in **Appendix G**.

Appendix A Uisce Éireann Confirmation of Feasibility

CONFIRMATION OF FEASIBILITY

Alan Lambe

Unit 5C
Elm House
Millenium Park
Naas
Co. Kildare
W91 P9P8

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

4 October 2024

Our Ref: CDS24007511 Pre-Connection Enquiry
Gortnahomna More, Castlemartyr, Co. Cork

Dear Applicant/Agent,

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

Uisce Éireann has reviewed the pre-connection enquiry in relation to a Water & Wastewater connection for a Multi/Mixed Use Development of 151 unit(s) at Gortnahomna More, Castlemartyr, Co. Cork **(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
- **Wastewater Connection** - Feasible Subject to upgrades:

  In order to accommodate the proposed connection at the Development, upgrade works are required to increase the capacity of Castlemartyr WWTP. Uisce Éireann currently has a project underway which will provide the necessary upgrade and capacity. This upgrade project is scheduled to be completed in 2026 (may be subject to change) and the proposed connection could be facilitated as soon as possibly practicable after this date.

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

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

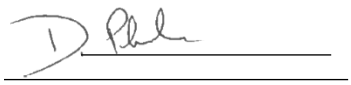
Where can you find more information?

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

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

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

Yours sincerely,



Dermot Phelan
Connections Delivery Manager

Appendix B UE Statement of Design Acceptance

Alan Lambe
Donnachadh O' Brien & Associates Consulting Engineers
Unit 5C
Elm House
Millenium Park
Naas, Kildare W91 P9P8

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

31 October 2024

Re: Design Submission for Gortnahomna More, Castlemartyr, Castlemartyr, Cork (the "Development")
(the "Design Submission") / Connection Reference No: CDS24007511

Dear Alan Lambe,

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, Uisce Éireann has no objection to your proposals.

This letter does not constitute an offer, in whole or in part, to provide a connection to any Uisce Éireann infrastructure. Before you can connect to our network you must sign a connection agreement with Uisce Éireann. This can be applied for by completing the connection application form at www.water.ie/connections. Uisce Éireann'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 Uisce Éireann's network(s) (the "**Self-Lay Works**"), as reflected in your Design Submission. Acceptance of the Design Submission by Uisce Éireann does not, in any way, render Uisce Éireann liable for any elements of the design and/or construction of the Self-Lay Works.

If you have any further questions, please contact your Uisce Éireann representative:
Name: Alicia Ros Bernal
Email: ailciarosbernal.bernal@water.ie

Yours sincerely,

Dermot Phelan
Connections Delivery Manager

Appendix A

Document Title & Revision

- 2411-DOB-XX-SI-DR-C-0010_Ex Site Services Layout - Sheet 1
- 2411-DOB-XX-SI-DR-C-0011_Ex Site Services Layout - Sheet 2
- 2411-DOB-XX-SI-DR-C-0400_Pr Watermain Layout
- 2411-DOB-XX-SI-DR-C-0300_Pr WW and SW Drainage Layout
- 2411-DOB-XX-SI-DR-C-1450_Pr.WW Long Sections-Sheet 1
- 2411-DOB-XX-SI-DR-C-1451_Pr.WW Long Sections-Sheet 2

Additional Comments

The design submission will be subject to further technical review at connection application stage.

Uisce Éireann cannot guarantee that its Network in any location will have the capacity to deliver a particular flow rate and associated residual pressure to meet the requirements of the relevant Fire Authority, see Section 1.17 of Water Code of Practice.

*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 Uisce Éireann will not, in any way, render Uisce Éireann liable for any elements of the design and/or construction of the Self-Lay Works.

N

0 5 10 15 20 25 m
SCALE 1:500 @ A0

REFER TO SHEET 2

EXISTING 150mm DUCTILE IRON PUBLIC WATERMAIN
EX 225Ø PIPE
EX 600Ø PIPE
EX 300Ø PIPE
Ex.WwMH
Ex SMH
Ex WwMH CL:11.57 IL:8.51
Ex WwMH CL:11.70 IL:8.69
Ex WwMH CL:11.60 IL:9.05
EXISTING 75mm CAST IRON PUBLIC WATERMAIN
EX 300Ø PIPE
EX 225Ø PIPE
EXISTING 150mm DUCTILE IRON PUBLIC WATERMAIN
Ex WwMH
EX SMH
EX 300Ø PIPE
EX 225Ø PIPE

THE MAPLES
TUARINN ALAINN
CURT NA GREINE
seph Morrissey Place

STUB FOR FUTURE CONNECTION (CAPACITY OF NETWORK DESIGNED FOR FUTURE FLOWS)

REFER TO SHEET 2

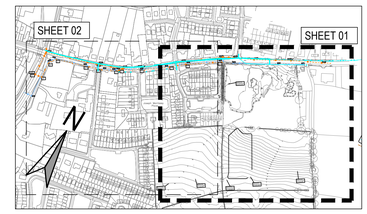
SURVEY NOTES

- TOPOGRAPHICAL SURVEY BASED ON EXISTING LEVELS FROM 3rd PARTY SPECIALIST. DOB & ASSOCIATES TAKES NO RESPONSIBILITY FOR ACCURACY OF SURVEY INFORMATION.
- MAIN CONTRACTOR TO ESTABLISH INDEPENDENTLY ORDANCE DATUM ON SITE FOR LEVELS TO MAILN HEAD DATUM AND CO-ORDINATES FOR SETTING OUT TO NATIONAL GRID.
- MAIN CONTRACTOR TO VERIFY ALL UNDERGROUND SERVICES ON THE SITE INCLUDING ALL ANOMALIES NOTED ON THE GPR SURVEY AND TO TAKE ALL NECESSARY PRECAUTIONS PRIOR TO ANY EXCAVATIONS ON THE SITE.
- REFER TO M&E ENGINEERS DRAWINGS FOR DIVERSION / DEMOLITION OF ALL UNDERGROUND ELECTRICAL CABLES / DUCTS, TELECOM DUCTS, LIGHTING DUCTS, OIL LINES ETC.

EX. STORM WATER LEGEND:
- EXISTING STORM WATER SEWER
- EXISTING STORM WATER MH
- EXISTING STORM WATER AJ

EX. WASTEWATER LEGEND:
- EXISTING WASTEWATER SEWER
- Ex FMH — EXISTING WASTEWATER MH
- Ex FAJ — EXISTING WASTEWATER AJ

EX. WATERMAIN LEGEND:
- EXISTING WATERMAIN



KEY PLAN
SCALE N.T.S.

ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE

Rev.	Note	Date	Drawn	Check
S2.P01	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	09.10.2024	RR	AL

DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
UNIT 5C ELM HOUSE MILLENNIUM PARK NAAS CO. KILDARE
PHONE +353 45 984 042
INFO@DOBRIEN-ENGINEERS.IE
WWW.DOBRIEN-ENGINEERS.IE

Client:	MARSHALL YARDS DEVELOPMENT COMPANY LIMITED
Project:	LANDS AT GORTNAHOMNA, CASTLEMARTYR Co. CORK
Drawing Title:	EXISTING SITE SERVICES - SHEET 1

Drawn By:	Checked By:	Approved By:	Date:	Scale:	Sheet Size:
JC	AL	PD	JUN 2024	1:500	A0

Project Number:	Drawing Number:	Status Code:	Rev Number:
DOBA2411	2411-DOB-XX-SI-DR-C-0010	S2	P01

N

0 5 10 15 20 25 m
SCALE 1:500 @ A0

Ex.WwMH
EX SMH
EX 225Ø PIPE
EXISTING 75mm CAST IRON PUBLIC WATERMAIN
EX 600Ø PIPE
EX 300Ø PIPE
Ex WwMH CL:9.80 IL:7.55
Ex WwMH CL: 9.91 IL:7.43
Ex WwMH CL:10.21 IL:7.81
Ex WwMH CL:11.26 IL:7.92
Ex WwMH CL:11.94 IL:8.08
Ex WwMH CL:12.00 IL:8.15
Ex WwMH CL:12.32 IL:8.29
EXISTING 150mm DUCTILE IRON PUBLIC WATERMAIN
Ex WwMH CL:11.87 IL:8.51
CASTLEMARTYR BRIDGE WwPS
Ex WwMH CL:10.28 IL:7.25
Ex WwMH CL:9.82 IL:7.33
EX 600Ø PIPE
EX SMH
Joseph Morrissey Place
REFER TO SHEET 1
REFER TO SHEET 1
STUB FOR FUTURE CONNECTION (CAPACITY OF NETWORK DESIGNED FOR FUTURE FLOWS)

SURVEY NOTES

- TOPOGRAPHICAL SURVEY BASED ON EXISTING LEVELS FROM 3rd PARTY SPECIALIST. DOB & ASSOCIATES TAKES NO RESPONSIBILITY FOR ACCURACY OF SURVEY INFORMATION.
- MAIN CONTRACTOR TO ESTABLISH INDEPENDENTLY ORDANCE DATUM ON SITE FOR LEVELS TO MAILN HEAD DATUM AND CO-ORDINATES FOR SETTING OUT TO NATIONAL GRID.
- MAIN CONTRACTOR TO VERIFY ALL UNDERGROUND SERVICES ON THE SITE INCLUDING ALL ANOMALIES NOTED ON THE GPR SURVEY AND TO TAKE ALL NECESSARY PRECAUTIONS PRIOR TO ANY EXCAVATIONS ON THE SITE.
- REFER TO M&E ENGINEERS DRAWINGS FOR DIVERSION / DEMOLITION OF ALL UNDERGROUND ELECTRICAL CABLES / DUCTS, TELECOM DUCTS, LIGHTING DUCTS, OIL LINES ETC.

EX. STORM WATER LEGEND:

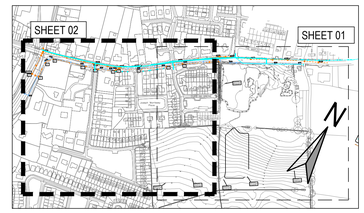
- EXISTING STORM WATER SEWER
- EXISTING STORM WATER MH
- EXISTING STORM WATER AJ

EX. WASTEWATER LEGEND:

- EXISTING WASTEWATER SEWER
- Ex FMH — EXISTING WASTEWATER MH
- Ex FAJ — EXISTING WASTEWATER AJ

EX. WATERMAIN LEGEND:

- EXISTING WATERMAIN



KEY PLAN
SCALE N.T.S.

ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE

Rev.	Note	Date	Drawn	Check
S2.P01	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	09.10.2024	RR	AL

DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
UNIT 5C ELM HOUSE MILLENNIUM PARK NAAS CO. KILDARE
PHONE +353 45 984 042
INFO@DOBRIEN-ENGINEERS.IE
WWW.DOBRIEN-ENGINEERS.IE

Client:	MARSHALL YARDS DEVELOPMENT COMPANY LIMITED
Project:	LANDS AT GORTNAHOMNA, CASTLEMARTYR Co. CORK
Drawing Title:	EXISTING SITE SERVICES - SHEET 2

Drawn By:	Checked By:	Approved By:	Date:	Scale:	Sheet Size:
JC	AL	PD	JUN 2024	1:500	A0

Project Number:	Drawing Number:	Status Code:	Rev Number:
DOBA2411	2411-DOB-XX-SI-DR-C-0011	S2	P01

NOTES:

1. FOR STANDARD DOBA NOTES REFER TO DRAWING 2411-DOB-XX-SI-DR-S-0001 & S-0002
2. REFER TO ARCHITECTS DRAWINGS FOR ALL SITE & APPLICATION BOUNDARIES.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECT'S & ENGINEER'S DRAWINGS AND SPECIFICATIONS.
4. USE FIGURED DIMENSIONS ONLY. DO NOT SCALE
5. REFER TO SURVEY DRAWINGS FOR EXISTING SERVICES LAYOUTS AND MANHOLE INFORMATION
6. ALL EXISTING SURFACES TO BE REINSTATED FOLLOWING DIVERSION OF SERVICES/CONSTRUCTION OF NEW SERVICES
7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LEVELS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES TO BE NOTIFIED TO THE ENGINEER & ARCHITECT FOR RESOLUTION
8. CONTRACTOR TO ENSURE ALL WATER & WASTEWATER RELATED WORKS ARE IN ACCORDANCE WITH THE IRISH WATER WATER INFRASTRUCTURE & WASTEWATER INFRASTRUCTURE CODE OF PRACTICE & STANDARD DETAILS DOCUMENTS
9. TESTING OF ALL GRAVITY SEWERS AND MANHOLES TO BE IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE SECTION 4.10 TESTING OF GRAVITY SEWERS & MANHOLES
10. THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.

WATER SUPPLY LEGEND:

- EX. WATERMAIN
- PR. 100mm DIA. WATERMAIN
- PR. 150mm DIA. WATERMAIN
- PR. 200mm DIA. WATERMAIN
- (H) PR. HYDRANT
- (BM) PR. BULK METER
- (M) PR. BOUNDARY BOX
- AV PR. AIR VALVE
- SV PR. SUILCE VALVE
- ScV PR. SCOUR VALVE
- PRV PR. PRESSURE REDUCING VALVE
- TB THRUST BLOCKS (OMITTED FOR FOR CLARITY, TO BE INSTALLED AS PER I.W. TYPICAL DETAILS
- EXISTING ROAD
- PROPOSED ROAD

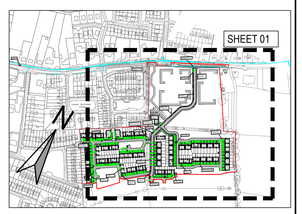
NOTE 1: MANHOLE COVER LEVELS ARE APPROXIMATE. ACTUAL COVER LEVELS SHOULD MATCH SURROUNDING FINISHED GROUND LEVELS U.N.O.

NOTE 2: ALL WATERMAINS TO BE PROVIDED WITH COVER IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL STD-W-13 AND CLAUSE 3.11 OF IW-CDS-5020-03.

NOTE 3: ALL MANHOLE COVERS LOCATED IN GRASS AREAS TO BE SURROUNDED (Min. 200mm SURROUND) IN 100mm THK C20/25 CONCRETE APRON

WATERMAIN MATERIAL TO BE IN ACCORDANCE WITH IW-CDS-5020-03 SECTION 3.9.2

3.9.2 MDPE & HDPE PIPES SHALL BE OF A TYPE PE-80 & HAVE AN SDR-11 OR SDR-17 RATING. THEY SHALL CONFORM TO IS EN 12201 PART 1 & PART 2 (PLASTIC SYSTEMS FOR WATER SUPPLY, DRAINAGE & SEWERAGE UNDER PRESSURE - PART 1, GENERAL, & PART 2, PIPES) & I.S. EN 12201-3 (PLASTIC SYSTEMS FOR WATER SUPPLY, DRAINAGE & SEWERAGE UNDER PRESSURE - PART 3: FITTINGS).



KEY PLAN
SCALE N.T.S.

ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE

Rev.	Note	Date	Drawn	Check
S2.P02	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	29.10.2024	EC	AL
S2.P01	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	09.10.2024	RR	AL

DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
UNIT 5C ELM HOUSE MILLENNIUM PARK NAAS CO. KILDARE
PHONE +353 45 984 042
INFO@DOBRIEN-ENGINEERS.IE WWW.DOBRIEN-ENGINEERS.IE

Client:	MARSHALL YARDS DEVELOPMENT COMPANY LIMITED
Project:	LANDS AT GORTNAHOMNA, CASTLEMARTYR Co. CORK
Drawing Title:	PROPOSED WATERMAIN LAYOUT

Drawn By:	Checked By:	Approved By:	Date:	Scale:	Sheet Size:
EC	PD	PD	APR' 2024	1:500	A0

Project Number:	Drawing Number:	Status Code:	Rev Number:
DOBA2411	2411-DOB-XX-SI-DR-C-0400	S2	P02

N

SCALE 1:500 @ A0

EXISTING WASTEWATER NETWORK CONFIRMED VIA TOPOGRAPHICAL, GPR & CCTV SURVEYS

LANDS SUBJECT TO SEPARATE PLANNING APPLICATION

TEMPORARY DEAD END WITH BLIND MANHOLE FOR FUTURE CONNECTION (CAPACITY OF NETWORK DESIGNED FOR FUTURE FLOWS)

PR. WW SEWER Min. 3.0m FROM BUILDING AND 1m FROM BOUNDARY I.A.W. STD-WW-05

TYP. WW SEWER IN ROAD AREAS I.A.W. IW DRG STD-WW-07

TYPICAL WW MH CHAMBER I.A.W. IW DRG STD-WW-10A

WASTEWATER LEGEND:

- EX. WASTEWATER SEWER
- FMH — EX. WASTEWATER MANHOLE
- FIC — EX. WASTEWATER INSPECTION CHAMBER
- FAJ — EX. WASTEWATER ACCESS JUNCTION
- EX. COMBINED SEWER
- FMH — EX. COMBINED MANHOLE
- EX. WASTEWATER RISING MAIN
- EX. WASTEWATER SEWER TO BE DECOMMISSIONED
- PR. WASTEWATER SEWER
- PR. WASTEWATER MANHOLE
- PR. WASTEWATER INSPECTION CHAMBER
- PR. WASTEWATER ACCESS JUNCTION
- PR. WASTEWATER RISING MAIN
- PR. BACKDROP IN MH
- FIC — PR. LOCAL FOUL DRAINAGE
- EXISTING ROAD
- PROPOSED ROAD

NOTE 1: MANHOLE COVER LEVELS ARE APPROXIMATE. ACTUAL COVER LEVELS SHOULD MATCH SURROUNDING FINISHED GROUND LEVELS U.N.O.

NOTE 2: ALL WASTEWATER SEWERS TO BE PROVIDED WITH COVER (WITHOUT PROTECTION) IN ACCORDANCE WITH IRISH WATER STANDARD DETAIL STD-WW-07 AND CLAUSE 3.9 OF IW-CDS-5030-03.

NOTE 3: FOR WASTEWATER SEWERS REQUIRING PROTECTION, REFER TO IRISH WATER STANDARD DETAIL STD-WW-08 AND CLAUSE 3.9 OF IW-CDS-5030-03.

NOTE 4: ALL MANHOLE COVERS LOCATED IN GRASS AREAS TO BE SURROUNDED (Min. 200mm SURROUND) IN 100mm THK C20/25 CONCRETE APRON

FOUL PIPE MATERIAL TO BE IN ACCORDANCE WITH IW-CDS-5030-03 SECTION 3.13.2

3.13.2 THERMOPLASTIC STRUCTURAL WALL PIPES; THERMOPLASTIC STRUCTURED WALL PIPES SHALL COMPLY WITH THE PROVISIONS OF IS EN 13476 (2007/2009). PIPES TO BE OF STIFFNESS CLASS 8kN/m² & TO BE CAPABLE OF DEMONSTRATING A JETTING RESISTANCE OF 2,600 PSI (180 BAR) WITHOUT DAMAGE WHEN TESTED IN ACCORDANCE WITH SECTION 3.3 OF WIS 4-35-01 (2008). (SEWER DIAMETERS 150mm UP TO 450mm, SERVICE CONNECTIONS OF 100mm DIAMETER).

SURFACE WATER LEGEND:

- EX. SURFACE WATER SEWER
- SMH — EX. SURFACE WATER MANHOLE
- SIC — EX. SURFACE WATER INSPECTION CHAMBER
- SAJ — EX. SURFACE WATER ACCESS JUNCTION
- EX. WATER COURSE
- EX. COMBINED SEWER
- SMH — EX. COMBINED MANHOLE
- EX. SURFACE WATER SEWER TO BE DECOMMISSIONED
- PR. SURFACE WATER SEWER
- SMH — PR. SURFACE WATER MANHOLE
- SIC — PR. SURFACE WATER INSPECTION CHAMBER
- SAJ — PR. SURFACE WATER ACCESS JUNCTION
- PR. RAINWATER HARVESTING SEWER
- SMH — PR. RAINWATER HARVESTING MANHOLE
- SIC — PR. RAINWATER HARVESTING INSPECTION CHAMBER
- SAJ — PR. RAINWATER HARVESTING ACCESS JUNCTION
- RG — PR. ROAD GULLY
- PR. ATTENUATION TANK
- PR. PERMEABLE PAVING
- PR. FILTER DRAIN
- PR. DRAINAGE CHANNEL
- PR. BIORETENTION AREA/SWALE
- PI — PR. PETROL INTERCEPTOR
- RWT — PR. RAINWATER HARVESTING TANK
- KD — KD — PR. KERB DRAIN
- DK — DK — PR. DROPPED KERB
- PR. TREE PIT DISCHARGING TO MAIN SW DRAINAGE
- EXISTING ROAD
- PROPOSED ROAD

WASTEWATER DRAINAGE MANHOLE SCHEDULE

REF:	CL:	IL:	NOTES:
WwMH 1.00	16.963	15.613	
WwMH 1.01	16.706	15.105	
WwMH 1.02	16.520	14.914	
WwMH 1.03	14.932	12.818	BD FROM 1.02 @13.193 BD FROM 2.00 @13.505
WwMH 1.04	13.235	11.146	BD FROM 1.03 @11.838
WwMH 1.05	12.021	10.840	
WwMH 1.06	12.213	10.663	
WwMH 1.07	12.740	10.487	
WwMH 1.08	12.878	10.374	
WwMH 1.09	13.786	10.240	
WwMH 1.10	13.128	10.170	
WwMH 1.11	12.993	10.152	
WwMH 1.12	12.800	10.059	
WwMH 1.13	13.196	9.952	BD FROM 4.15 @11.758
WwMH 1.14	12.406	9.857	
WwMH 1.15	12.016	9.700	
WwMH 1.16	11.710	9.660	
WwMH 1.17	11.710	9.413	
WwMH 1.18	11.710	9.379	
WwMH 1.19	11.710	9.214	
WwMH 1.20	11.710	9.159	
WwMH 1.21	11.710	9.091	
WwMH 2.0	15.386	13.811	
WwMH 3.00	16.918	15.566	
WwMH 3.01	16.610	15.116	
WwMH 3.02	16.519	14.958	
WwMH 4.00	19.658	18.308	
WwMH 4.01	19.301	17.788	
WwMH 4.02	19.316	17.086	BD FROM 5.00 @17.896
WwMH 4.03	16.840	15.521	
WwMH 4.04	16.678	14.576	BD FROM 4.03 @15.476
WwMH 4.05	16.718	14.402	
WwMH 4.06	16.858	14.376	
WwMH 4.07	16.882	14.355	BD FROM 7.00 @15.045
WwMH 4.08	16.906	14.334	
WwMH 4.09	16.821	14.312	
WwMH 4.10	15.900	14.016	
WwMH 4.11	15.486	13.567	BD FROM 4.15 @13.967 BD FROM 8.01 @14.302
WwMH 4.12	15.222	13.538	
WwMH 4.13	14.922	13.180	BD FROM 4.12 @13.500
WwMH 4.14	14.402	13.000	
WwMH 4.15	14.235	12.297	BD FROM 4.14 @12.797
WwMH 5.00	20.927	19.402	
WwMH 6.00	16.003	15.063	
WwMH 6.01	16.483	14.823	
WwMH 7.00	16.700	15.350	
WwMH 8.00	18.698	16.782	
WwMH 8.01	16.322	14.672	
WwMH 9.00	20.152	18.350	
WwMH 9.01	18.653	17.261	
WwMH 9.02	18.538	16.253	
WwMH 9.03	18.287	16.135	
WwMH 9.04	16.666	13.823	BD FROM 9.03 @15.066
WwMH 10.00	18.803	17.378	
WwMH 10.01	18.782	17.238	
WwMH 10.02	18.811	16.454	
WwMH 11.00	13.248	11.812	
WwMH 11.01	13.041	11.509	
WwMH 11.02	12.490	10.690	
WwMH 11.03	12.362	10.620	
WwMH 11.04	12.238	10.566	
WwMH 11.05	12.000	10.094	BD FROM 11.04 @10.473
WwMH 1.22 (EX)	11.639	9.047	
WwMH 1.23 (EX)	11.692	8.690	
WwMH 1.24 (EX)	11.883	8.510	
WwMH 1.25 (EX)	12.363	8.290	
WwMH 1.26 (EX)	11.961	8.150	
WwMH 1.27 (EX)	11.961	8.080	
WwMH 1.28 (EX)	11.229	7.920	
WwMH 1.29 (EX)	10.276	7.810	
WwMH 1.30 (EX)	9.822	7.550	
WwMH 1.31 (EX)	9.913	7.430	
WwMH 1.32 (EX)	9.806	7.330	
WwMH 1.33 (EX)	10.192	7.250	

NOTES:

1. FOR STANDARD DOBA NOTES REFER TO DRAWING 2411-DOB-XX-SI-DR-S-0001 & S-0002
2. REFER TO ARCHITECTS DRAWINGS FOR ALL SITE & APPLICATION BOUNDARIES
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTS & ENGINEER'S DRAWINGS AND SPECIFICATIONS.
4. USE FIGURED DIMENSIONS ONLY. DO NOT SCALE
5. REFER TO SURVEY DRAWINGS FOR EXISTING SERVICES LAYOUTS AND MANHOLE INFORMATION
6. ALL EXISTING SURFACES TO BE REINSTATED FOLLOWING DIVERSION OF SERVICES/CONSTRUCTION OF NEW SERVICES
7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LEVELS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES TO BE NOTIFIED TO THE ENGINEER & ARCHITECT FOR RESOLUTION
8. CONTRACTOR TO ENSURE ALL WATER & WASTEWATER RELATED WORKS ARE IN ACCORDANCE WITH THE IRISH WATER WATER INFRASTRUCTURE & WASTEWATER INFRASTRUCTURE CODE OF PRACTICE & STANDARD DETAILS DOCUMENTS
9. TESTING OF ALL GRAVITY SEWERS AND MANHOLES TO BE IN ACCORDANCE WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE SECTION 4.10 TESTING OF GRAVITY SEWERS & MANHOLES

ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE

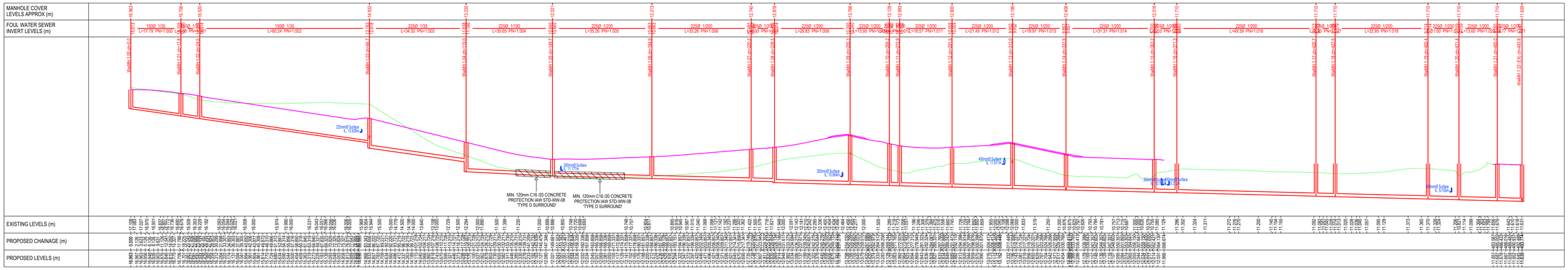
Rev.	Note	Date	Drawn	Check
S2.P02	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	29.10.2024	EC	AL
S2.P01	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	09.10.2024	EC	AL

DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
UNIT 5C ELM HOUSE MILLENNIUM PARK NAAS CO. KILDARE
PHONE +353 45 984 042
INFO@DOBRIEN-ENGINEERS.IE WWW.DOBRIEN-ENGINEERS.IE

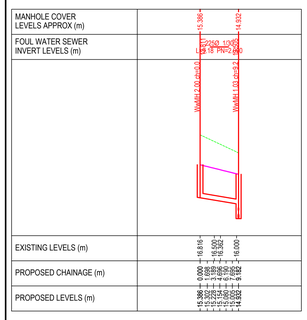
Client:	MARSHALL YARDS DEVELOPMENT COMPANY LIMITED
Project:	LANDS AT GORTNAHOMNA, CASTLEMARTYR Co. CORK
Drawing Title:	PROPOSED WASTEWATER DRAINAGE LAYOUT

Drawn By:	Checked By:	Approved By:	Date:	Scale:	Sheet Size:
EC	PD	PD	APR' 2024	1:500	A0

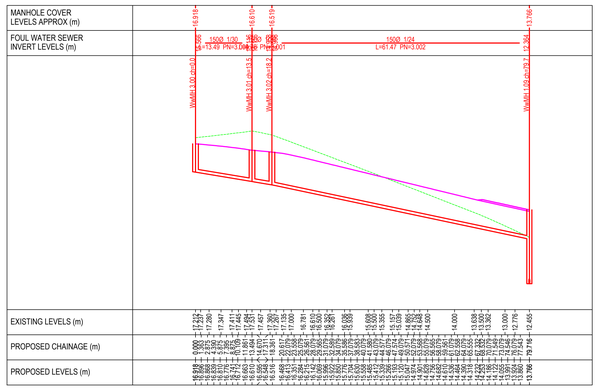
Project Number:	Drawing Number:	Status Code:	Rev Number:
DOBA2411	2411-DOB-XX-SI-DR-C-0300	S2	P02



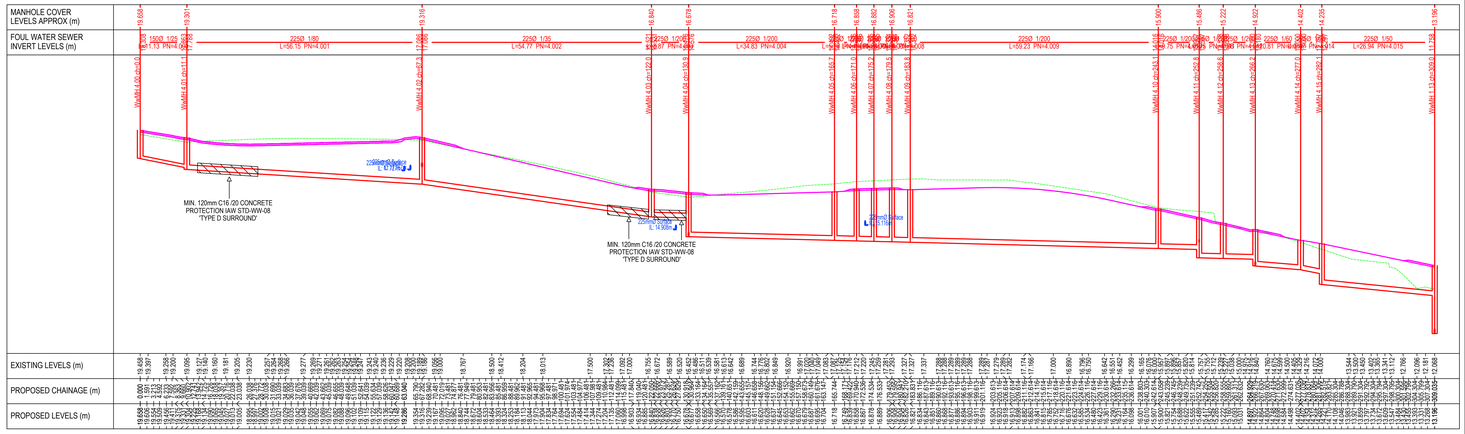
PROPOSED LONGITUDINAL SECTION WwMH 1.00 - WwMH 1.22 (EX.)
SCALE H 1:500, V 1:100



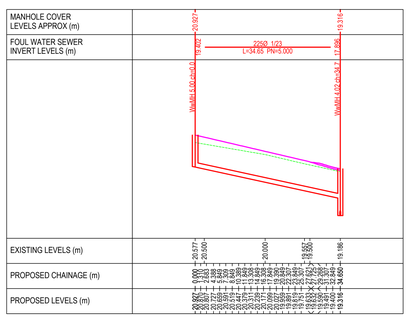
PR. LONG SECTION WwMH 2.00 - WwMH 1.03
SCALE H 1:500, V 1:100



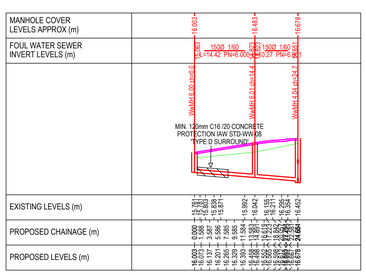
PROPOSED LONGITUDINAL SECTION WwMH 3.00 - WwMH 1.09
SCALE H 1:500, V 1:100



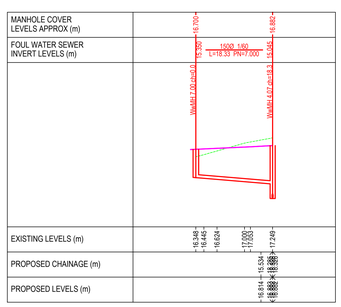
PROPOSED LONGITUDINAL SECTION WwMH 4.00 - WwMH 1.13
SCALE H 1:500, V 1:100



PROPOSED LONGITUDINAL SECTION WwMH 5.00 - WwMH 4.02
SCALE H 1:500, V 1:100



PROPOSED LONGITUDINAL SECTION WwMH 6.00 - WwMH 4.04
SCALE H 1:500, V 1:100



PROPOSED LONGITUDINAL SECTION WwMH 7.00 - WwMH 4.07
SCALE H 1:500, V 1:100

LEGEND:
- PROPOSED SURFACE WATER
- PROPOSED FOUL WATER
- EXISTING FOUL SEWER
- PROPOSED GROUND/ ROAD LEVEL
- EXISTING GROUND PROFILE

GENERAL NOTES:

1. FOR STANDARD DOBA NOTES REFER TO DRAWING 2411-S00.1
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEER'S DRAWINGS AND SPECIFICATIONS.
3. USE FIGURED DIMENSIONS ONLY. DO NOT SCALE
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LEVELS WITH ENGINEERING DRAWINGS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES TO BE NOTIFIED TO THE ENGINEER FOR RESOLUTION.
5. CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY CONDITION SURVEY OF THE WORKS AREA, PUBLIC ROADS AND RETURN TO ORIGINAL CONDITION FOLLOWING WORKS
6. CONTRACTOR TO ALLOW FOR SCANNING AND GPR SURVEY OF THE SITE FOR ANY UNDERGROUND SERVICES PRIOR TO WORKS, REFER TO PUBLIC UTILITIES DRAWINGS FOR APPROXIMATE LOCATION OF EXISTING SERVICES

ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE

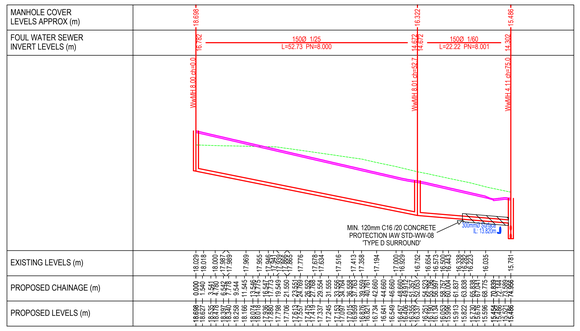
Rev.	Note	Date	Drawn	Check
S2.P02	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	29.10.2024	EC	AL
S2.P01	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	09.10.2024	EC	AL

DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
UNIT 5C ELM HOUSE MILLENNIUM PARK NAAS CO. KILDARE
PHONE +353 45 984 042
INFO@DOBRIEN-ENGINEERS.IE WWW.DOBRIEN-ENGINEERS.IE

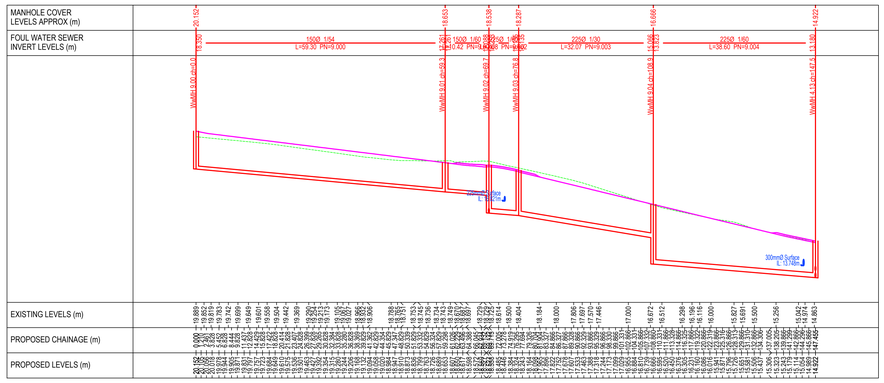
Client:	MARSHALL YARDS DEVELOPMENT COMPANY LIMITED
Project:	LANDS AT GORTNAHOMNA, CASTLEMARTYR Co. CORK
Drawing Title:	PROPOSED WW LONGITUDINAL SECTIONS SHEET 1

Drawn By:	Checked By:	Approved By:	Date:	Scale:	Sheet Size:
EC	AL	DOB	JULY 2024	1:500	A0

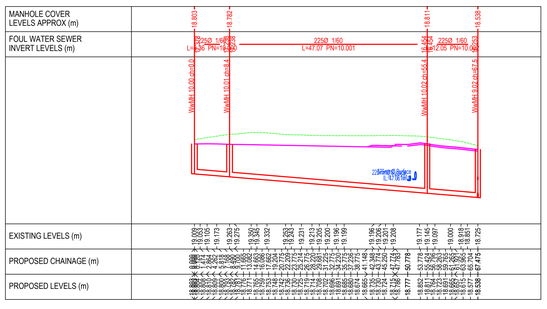
Project Number:	Drawing Number:	Status Code:	Rev Number:
DOBA2411	2411-DOB-XX-SI-DR-C-1450	S2	P01



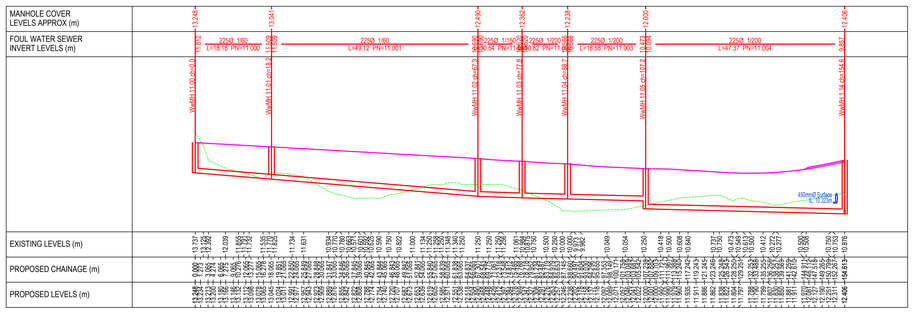
PROPOSED LONGITUDINAL SECTION WwMH 8.00 - WwMH 4.11
SCALE H 1:500, V 1:100



PROPOSED LONGITUDINAL SECTION WwMH 9.00 - WwMH 4.13
SCALE H 1:500, V 1:100



PROPOSED LONGITUDINAL SECTION WwMH 10.00 - WwMH 9.02
SCALE H 1:500, V 1:100



PROPOSED LONGITUDINAL SECTION WwMH 11.00 - WwMH 1.14
SCALE H 1:500, V 1:100

LEGEND:

- PROPOSED SURFACE WATER
- PROPOSED FOUL WATER
- EXISTING FOUL SEWER
- PROPOSED GROUND/ ROAD LEVEL
- EXISTING GROUND PROFILE

GENERAL NOTES:

1. FOR STANDARD DOBA NOTES REFER TO DRAWING 2411-S00.1
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEER'S DRAWINGS AND SPECIFICATIONS.
3. USE FIGURED DIMENSIONS ONLY. DO NOT SCALE
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LEVELS WITH ENGINEERING DRAWINGS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES TO BE NOTIFIED TO THE ENGINEER FOR RESOLUTION.
5. CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY CONDITION SURVEY OF THE WORKS AREA, PUBLIC ROADS AND RETURN TO ORIGINAL CONDITION FOLLOWING WORKS
6. CONTRACTOR TO ALLOW FOR SCANNING AND GPR SURVEY OF THE SITE FOR ANY UNDERGROUND SERVICES PRIOR TO WORKS, REFER TO PUBLIC UTILITIES DRAWINGS FOR APPROXIMATE LOCATION OF EXISTING SERVICES

ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE

Rev.	Note	Date	Drawn	Check
S2.P02	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	29.10.2024	EC	AL
S2.P01	ISSUED FOR STATEMENT OF DESIGN ACCEPTANCE	09.10.2024	EC	AL

DONNACHADH O'BRIEN & ASSOCIATES CONSULTING ENGINEERS
UNIT 5C ELM HOUSE MILLENNIUM PARK NAAS CO. KILDARE
PHONE +353 45 904 040
INFO@DOBRIEN-ENGINEERS.IE WWW.D-OBRIEN-ENGINEERS.IE

Client:	MARSHALL YARDS DEVELOPMENT COMPANY LIMITED
Project:	LANDS AT GORTNAHOMNA, CASTLEMARTYR Co. CORK
Drawing Title:	PROPOSED WW LONGITUDINAL SECTIONS SHEET 2

Drawn By:	Checked By:	Approved By:	Date:	Scale:	Sheet Size:
EC	AL	DOB	JULY 2024	1:500	A0

Project Number:	Drawing Number:	Status Code:	Rev Number:
DOBA2411	2411-DOB-XX-SI-DR-C-1451	S2	P02

Appendix C Wastewater Network Calculations

FOUL SEWERAGE DESIGN

Design Criteria for Foul Network 1

Pipe Sizes STANDARD Manhole Sizes STANDARD

Industrial Flow (l/s/ha)	0.00	Add Flow / Climate Change (%)	0
Industrial Peak Flow Factor	0.00	Minimum Backdrop Height (m)	0.200
Flow Per Person (l/per/day)	150.00	Maximum Backdrop Height (m)	1.500
Persons per House	3.00	Min Design Depth for Optimisation (m)	1.200
Domestic (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	0.75
Domestic Peak Flow Factor	6.00	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for Foul Network 1

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	17.786	0.508	35.0	0.000	3	0.0	1.500	o	150	Pipe/Conduit	
1.001	6.683	0.191	35.0	0.000	1	0.0	1.500	o	150	Pipe/Conduit	
1.002	60.241	1.721	35.0	0.000	8	0.0	1.500	o	150	Pipe/Conduit	
2.000	9.182	0.306	30.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
1.003	34.298	0.980	35.0	0.000	4	0.0	1.500	o	225	Pipe/Conduit	
1.004	30.654	0.307	100.0	0.000	6	0.0	1.500	o	225	Pipe/Conduit	
1.005	35.257	0.176	200.0	0.000	4	0.0	1.500	o	225	Pipe/Conduit	
1.006	35.257	0.176	200.0	0.000	6	0.0	1.500	o	225	Pipe/Conduit	
1.007	8.296	0.041	200.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	15.613	0.000	0.0	3	0.0	1.48	26.2	0.1
1.001	15.105	0.000	0.0	4	0.0	1.48	26.2	0.1
1.002	14.914	0.000	0.0	12	0.0	1.48	26.2	0.4
2.000	13.811	0.000	0.0	1	0.0	2.10	83.5	0.0
1.003	12.818	0.000	0.0	17	0.0	1.94	77.3	0.5
1.004	11.146	0.000	0.0	23	0.0	1.15	45.6	0.7
1.005	10.840	0.000	0.0	27	0.0	0.81	32.2	0.8
1.006	10.663	0.000	0.0	33	0.0	0.81	32.2	1.0
1.007	10.487	0.000	0.0	34	0.0	0.81	32.2	1.1

Network Design Table for Foul Network 1

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.008	26.828	0.134	200.0	0.000	3	0.0	1.500	o	225	Pipe/Conduit	
3.000	13.494	0.450	30.0	0.000	3	0.0	1.500	o	150	Pipe/Conduit	
3.001	4.755	0.159	30.0	0.000	11	0.0	1.500	o	150	Pipe/Conduit	
3.002	61.467	2.594	23.7	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
1.009	13.945	0.070	200.0	0.000	2	0.0	1.500	o	225	Pipe/Conduit	
1.010	3.661	0.018	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.011	18.568	0.093	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.012	21.485	0.107	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
4.000	11.133	0.445	25.0	0.000	2	0.0	1.500	o	150	Pipe/Conduit	
4.001	56.149	0.702	80.0	0.000	10	0.0	1.500	o	225	Pipe/Conduit	
5.000	34.650	1.507	23.0	0.000	3	0.0	1.500	o	225	Pipe/Conduit	
4.002	54.767	1.565	35.0	0.000	10	0.0	1.500	o	225	Pipe/Conduit	
4.003	8.868	0.044	200.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
6.000	14.419	0.240	60.0	0.000	5	0.0	1.500	o	225	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.008	10.374	0.000	0.0	37	0.0	0.81	32.2	1.2
3.000	15.566	0.000	0.0	3	0.0	1.60	28.3	0.1
3.001	15.116	0.000	0.0	14	0.0	1.60	28.3	0.4
3.002	14.958	0.000	0.0	14	0.0	1.80	31.9	0.4
1.009	10.240	0.000	0.0	53	0.0	0.81	32.2	1.7
1.010	10.170	0.000	0.0	53	0.0	0.81	32.2	1.7
1.011	10.152	0.000	0.0	53	0.0	0.81	32.2	1.7
1.012	10.059	0.000	0.0	53	0.0	0.81	32.2	1.7
4.000	18.308	0.000	0.0	2	0.0	1.76	31.0	0.1
4.001	17.788	0.000	0.0	12	0.0	1.28	51.1	0.4
5.000	19.402	0.000	0.0	3	0.0	2.40	95.4	0.1
4.002	17.086	0.000	0.0	25	0.0	1.94	77.3	0.8
4.003	15.521	0.000	0.0	26	0.0	0.81	32.2	0.8
6.000	14.988	0.000	0.0	5	0.0	1.48	59.0	0.2

Network Design Table for Foul Network 1

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
6.001	10.265	0.171	60.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
4.004	34.826	0.174	200.0	0.000	7	0.0	1.500	o	225	Pipe/Conduit	
4.005	5.284	0.026	200.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
4.006	4.144	0.021	200.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
7.000	18.326	0.305	60.0	0.000	4	0.0	1.500	o	150	Pipe/Conduit	
4.007	4.281	0.021	200.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
4.008	4.378	0.022	200.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
4.009	59.228	0.296	200.0	0.000	9	0.0	1.500	o	225	Pipe/Conduit	
4.010	9.752	0.049	200.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
8.000	52.731	2.109	25.0	0.000	11	0.0	1.500	o	150	Pipe/Conduit	
8.001	22.225	0.370	60.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
4.011	5.745	0.029	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
4.012	7.664	0.038	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
9.000	59.298	1.088	54.5	0.000	10	0.0	1.500	o	150	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
6.001	14.748	0.000	0.0	6	0.0	1.48	59.0	0.2
4.004	14.576	0.000	0.0	39	0.0	0.81	32.2	1.2
4.005	14.402	0.000	0.0	40	0.0	0.81	32.2	1.3
4.006	14.376	0.000	0.0	41	0.0	0.81	32.2	1.3
7.000	15.350	0.000	0.0	4	0.0	1.13	20.0	0.1
4.007	14.355	0.000	0.0	46	0.0	0.81	32.2	1.4
4.008	14.334	0.000	0.0	47	0.0	0.81	32.2	1.5
4.009	14.312	0.000	0.0	56	0.0	0.81	32.2	1.8
4.010	14.016	0.000	0.0	57	0.0	0.81	32.2	1.8
8.000	16.782	0.000	0.0	11	0.0	1.76	31.0	0.3
8.001	14.672	0.000	0.0	11	0.0	1.13	20.0	0.3
4.011	13.567	0.000	0.0	68	0.0	0.81	32.2	2.1
4.012	13.538	0.000	0.0	68	0.0	0.81	32.2	2.1
9.000	18.350	0.000	0.0	10	0.0	1.19	21.0	0.3

Network Design Table for Foul Network 1

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
9.001	10.415	0.174	60.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
10.000	8.358	0.139	60.0	0.000	1	0.0	1.500	o	225	Pipe/Conduit	
10.001	47.065	0.784	60.0	0.000	6	0.0	1.500	o	225	Pipe/Conduit	
10.002	12.051	0.201	60.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
9.002	7.076	0.118	60.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
9.003	32.071	1.069	30.0	0.000	3	0.0	1.500	o	225	Pipe/Conduit	
9.004	38.595	0.643	60.0	0.000	6	0.0	1.500	o	225	Pipe/Conduit	
4.013	10.807	0.180	60.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
4.014	5.068	0.203	25.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
4.015	26.941	0.539	50.0	0.000	3	0.0	1.500	o	225	Pipe/Conduit	
1.013	18.966	0.095	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
11.000	18.181	0.303	60.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
11.001	49.120	0.819	60.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
11.002	10.538	0.070	150.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
11.003	10.821	0.054	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.001	17.261	0.000	0.0	10	0.0	1.13	20.0	0.3
10.000	17.378	0.000	0.0	1	0.0	1.48	59.0	0.0
10.001	17.238	0.000	0.0	7	0.0	1.48	59.0	0.2
10.002	16.454	0.000	0.0	7	0.0	1.48	59.0	0.2
9.002	16.253	0.000	0.0	17	0.0	1.48	59.0	0.5
9.003	16.135	0.000	0.0	20	0.0	2.10	83.5	0.6
9.004	13.823	0.000	0.0	26	0.0	1.48	59.0	0.8
4.013	13.180	0.000	0.0	94	0.0	1.48	59.0	2.9
4.014	13.000	0.000	0.0	94	0.0	2.30	91.5	2.9
4.015	12.297	0.000	0.0	97	0.0	1.63	64.6	3.0
1.013	9.952	0.000	0.0	150	0.0	0.81	32.2	4.7
11.000	11.812	0.000	0.0	0	0.0	1.48	59.0	0.0
11.001	11.509	0.000	0.0	0	0.0	1.48	59.0	0.0
11.002	10.690	0.000	0.0	0	0.0	0.94	37.2	0.0
11.003	10.620	0.000	0.0	0	0.0	0.81	32.2	0.0

Network Design Table for Foul Network 1

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
11.004	18.579	0.093	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
11.005	47.375	0.237	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.014	31.308	0.157	199.4	0.000	0	0.2	1.500	o	225	Pipe/Conduit	
1.015	8.031	0.040	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.016	49.390	0.247	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.017	6.802	0.034	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.018	32.945	0.165	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.019	11.001	0.055	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.020	13.601	0.068	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.021	8.772	0.044	200.0	0.000	0	0.0	1.500	o	225	Pipe/Conduit	
1.022	82.520	0.358	230.8	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.023	38.773	0.180	215.4	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.024	56.972	0.220	259.0	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.025	56.184	0.140	401.3	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.026	2.633	0.070	37.6	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.027	38.557	0.160	241.0	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.028	29.452	0.110	267.7	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.029	76.866	0.260	295.6	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.030	19.327	0.120	161.1	0.000	0	0.0	1.500	o	300	Pipe/Conduit	

Existing 300mm Dia Wastewater Network

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
11.004	10.566	0.000	0.0	0	0.0	0.81	32.2	0.0
11.005	10.094	0.000	0.0	0	0.0	0.81	32.2	0.0
1.014	9.857	0.000	0.2	150	0.0	0.81	32.3	4.9
1.015	9.700	0.000	0.2	150	0.0	0.81	32.2	4.9
1.016	9.660	0.000	0.2	150	0.0	0.81	32.2	4.9
1.017	9.413	0.000	0.2	150	0.0	0.81	32.2	4.9
1.018	9.379	0.000	0.2	150	0.0	0.81	32.2	4.9
1.019	9.214	0.000	0.2	150	0.0	0.81	32.2	4.9
1.020	9.159	0.000	0.2	150	0.0	0.81	32.2	4.9
1.021	9.091	0.000	0.2	150	0.0	0.81	32.2	4.9
1.022	9.048	0.000	0.2	150	0.0	0.91	64.4	4.9
1.023	8.690	0.000	0.2	150	0.0	0.94	66.7	4.9
1.024	8.510	0.000	0.2	150	0.0	0.86	60.8	4.9
1.025	8.290	0.000	0.2	150	0.0	0.69	48.8	4.9
1.026	8.150	0.000	0.2	150	0.0	2.26	160.1	4.9
1.027	8.080	0.000	0.2	150	0.0	0.89	63.0	4.9
1.028	7.920	0.000	0.2	150	0.0	0.85	59.8	4.9
1.029	7.810	0.000	0.2	150	0.0	0.80	56.9	4.9
1.030	7.550	0.000	0.2	150	0.0	1.09	77.2	4.9

Existing 300mm Dia Wastewater Network

Network Design Table for Foul Network 1

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.031	37.060	0.100	370.6	0.000	0	0.0	1.500	o	300	Pipe/Conduit	
1.032	15.434	0.080	192.9	0.000	0	0.0	1.500	o	300	Pipe/Conduit	

Existing 300mm Dia Wastewater Network

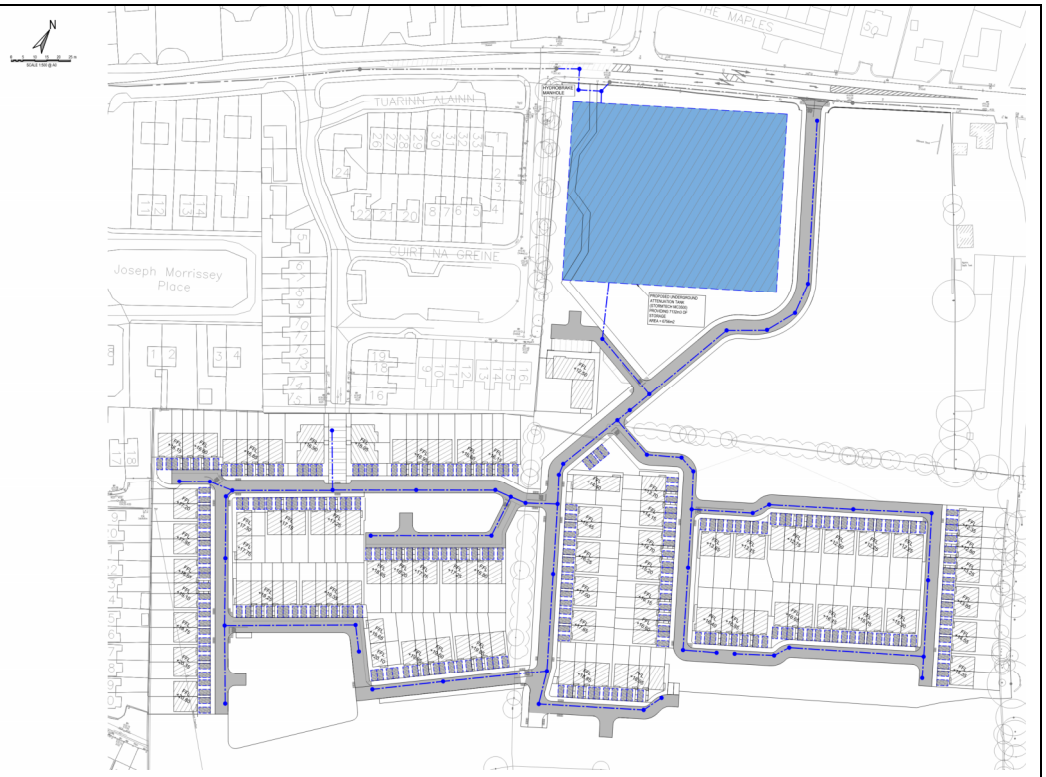
Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.031	7.430	0.000	0.2	150	0.0	0.72	50.7	4.9
1.032	7.330	0.000	0.2	150	0.0	1.00	70.5	4.9

Existing 300mm Dia Wastewater Network

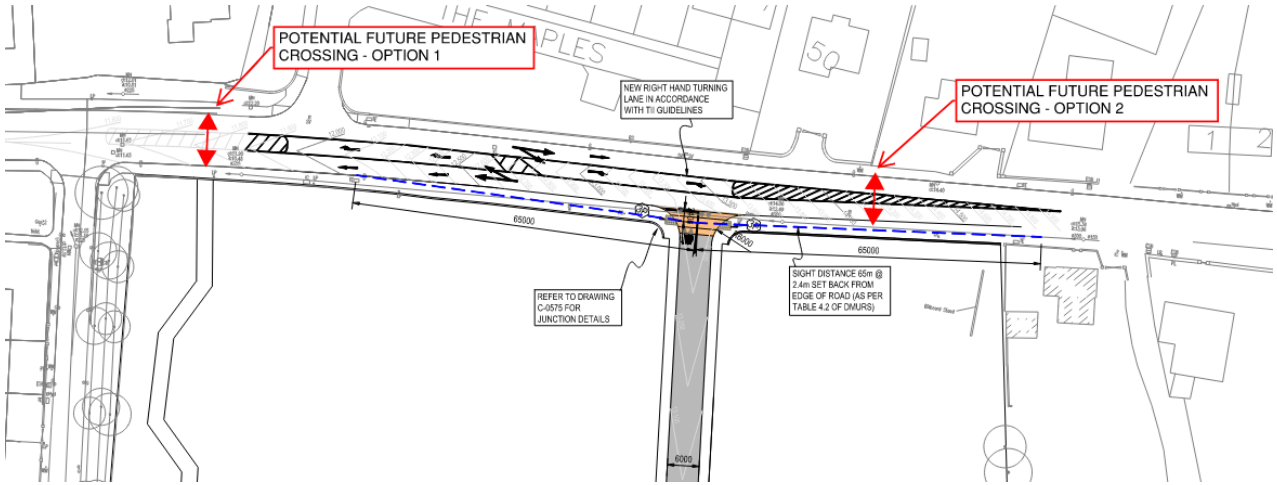
Appendix D Applicant's Response to the CCC Water Services Department s247 Meeting Comments

Cork County Council Water Services Department Section s247 Meeting Comments	Applicant's Response
Why is the attenuation not all provided in one area adjacent to the SW outfall?	A SuDS treatment train has been provided in accordance with GDSDS as illustrated on drawing C-0200. This approach addresses both runoff quantity and quality and allows for smaller pipe sizes to be designed through the site by utilising sub-catchments with associated SuDS features and attenuation. The proposed surface water network and attenuation design has been designed to facilitate the application development site and also future development to the north and south of the application site. Providing only a single attenuation system at the outfall would result in an extremely large attenuation tank (ca. 7,000 m3) and would restrict the available lands for development in the northern portion of the site – see below an image of the attenuation tank required. The volume of attenuation required for a single attenuation tank is significantly greater than the overall attenuation volume for the treatment train approach (2,223 m3).

	 **Figure 5** Extents of attenuation at outfall for a single tank
An assessment of the existing surface water network along the N25 is required to confirm available capacity to receive flows from the proposed development, including CCTV survey to confirm condition of the network,	Refer to the Drainage Impact Assessment prepared by DOBA and submitted with the planning application. In summary, the proposed flows entering the existing surface water network along the N25 are to be restricted to less than the existing flows entering the network. As such, additional capacity is being created in the downstream network due to the proposed SW design.
Rainfall on the site discharges to ground at present.	As noted in Section 4.4 of the IDR, soakaways in accordance with the BRE Digest 365 have

	been carried out across the site. The results indicate moderate to poor infiltration on the site which is not suitable for a full infiltration SuDS design. As such, a restricted discharge from the site to the existing surface water network is proposed.
Demonstrate that there is no increase to flood risk downstream of the site,	Refer to the Drainage Impact Assessment prepared by DOBA and submitted with the planning application. In summary, the proposed flows entering the existing surface water network along the N25 are to be restricted to less than the existing flows. As such, the downstream flood risk is to be reduced.
Karst region potentially	Groundwater monitoring has been included in the scope of the geotechnical investigations on the site. No water strikes were noted during the borehole investigations. The proposed attenuation systems will be lined if they are located within 1m of groundwater (if encountered on site)

Appendix E Applicant's Response to the CCC Transportation Services Department s247 Meeting Comments

Cork County Council Transportation Services Department Section s247 Meeting Comments	Applicant's Response
Priority Controlled Junction is the correct approach.	Noted.
Future retrofitting of potential future controlled pedestrian crossing to be considered in design.	Potential locations for a future pedestrian crossing have been illustrated in **Figure 6** below:  **Figure 6** Suggested potential pedestrian crossing locations
Operating speed is above 50 kph – look to visually narrow the road along this section	The visibility splays at the proposed entrance have been designed for a 60kph speed limit in accordance with Table 4.2 of DMURS. The future development on the northern lands will look to provide an active street frontage with units facing directly onto the N25 to visually narrow the road and reduce speeds.

Appendix F Applicant's Response to the CCC Pre-planning LRD Opinion under S.32D of the Planning & Development Act. Meeting Comments

Cork County Council Pre-planning LRD Opinion under S.32D of the Planning & Development Act. Meeting Comments	Applicant's Response
Attenuation tanks should be constructed in reinforced concrete, with provision for access for internal inspection and repair (having regard to the Karst geology of the area).	Noted. SW Design and Drawings, C-0200 have been updated to include reinforced concrete attenuation tanks having regard to the potential karst geology.
Installing a watermain on the N25 to serve the site is highly undesirable and a road opening license may not be granted for this proposal (having regard to the volume of traffic on this section of the N25 and the fact that the road was totally reconstructed recently). Note that CCC installed a 150mm watermain as part of the major roadworks project which should be adequate to serve the proposed development. If this is not adequate, then alternative routes would need to be considered that would minimise the impact to the N25. This aspect of proposal needs to be reviewed and verified and the overall level of development needs clarity around infrastructure; and as such this infrastructural detail does not constitute a reasonable basis on which to make an application.	A revised Confirmation of feasibility (COF) has been issued and a Statement of design acceptance (SoDA) has also been issued for a connection to the 150mm watermain constructed as part of the major roadworks project along the N25. The COF and SoDA have been appended to this submission as **Appendix A** and **Appendix B** respectively.
Please ensure a Feasibility of Connection (FoC) agreement with Irish Water is included with any application consenting to the accommodation of the treated hydraulic load to the public system.	A confirmation of feasibility has been attached in **Appendix A** of this report which confirms that upgrade works are underway to increase the capacity of the Castlemartyr Wastewater Treatment Plant and is scheduled to be completed in 2026 (may be subject to change).
Site specific Construction, Environmental and Waste Management Plan; and Operational Waste Management Plan to align with inter alia ecological, landscape, archaeological and surface water/ flood issues.	DOBA have prepared a site specific preliminary Construction and Environmental Waste Management Plan, **2411-DOB-XX-SI-RP-C-0003**, and a site specific Operational Waste Management Plan, **2411-DOB-XX-SI-RP-C-0004**, which are submitted as part of the planning documents.
Details of Surface Water Management and a Drainage Impact Assessment (Surface Water. The design and management of surface water for the proposed development will comply with the requirements of the Greater Dublin Strategic Drainage Study (GDSDS) and the Cork County Development Plan 2022 – 2028. The design of the surface water network and SuDS measures within the application site shall include a 20% climate change factor in accordance and the Cork Co. Co. Water Services requirements. The proposed SuDS measures will incorporate Nature Based SuDS, filtration systems, detention system SuDS and proprietary treatment systems such	DOBA have prepared a Drainage Impact Assessment, **2411-DOB-XX-SI-RP-C-0005**, in accordance with the requirements of GDSDS, the Cork County Development Plan 2022 – 2028. The DIA confirms that the design of the surface water network includes a 20% climate change factor and the proposed SuDS measures include Nature Based SuDS filtration systems including tree pits, dry swales, permeable paving and also proprietary treatment systems such as petrol interceptor and rainwater harvesting for the creche.

as petrol/oil separators and rainwater harvesting to the creche)	
DMURS Statement of Compliance	DOBA have prepared a DMURS statement of compliance / consistency in Section 7.4 of the IDR
Design Rationale and necessary Road Safety Assessment/ Audit of proposed junction at site entrance with N25.	DOBA and Transport Insights have designed a priority junction at the site entrance with the N25 which is in compliance with the TII design standards. Traffico have prepared a Stage 1 Road Safety Audit for the proposed development and the recommendations from the auditor have been adopted in the planning drawings.

Appendix G Stage 1 RSA Feedback Form

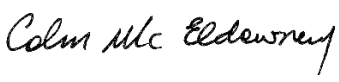
Road Safety Audit Feedback Form

Scheme: Residential Development at Gortnahomna, Castlemartyr

Audit Stage: Stage 1 Road Safety Audit | **Audit Date:** 22nd August 2024

Problem Reference (Section 2)	Designer Response Section			Audit Team Response Section
	Problem Accepted (yes / no)	Recommended Measure Accepted (yes / no)	Alternative Measures or Comments	Alternative Measures Accepted (yes / no)
2.1	Yes	Yes	A gradient of 1:75 has been applied to the entrance. The existing site levels will be raised to facilitate this.	Comment noted & accepted.
2.2	Yes	Yes	Larger corner radii have been applied to the horizontal deflections and junction	Comment noted & accepted.
2.3	Yes	Yes	A change in surface material and a pedestrian refuge is proposed. Additional slow zone signs have been added to the home zone entrances.	Comment noted & accepted.

**The Designer should complete the Designer Response Section above, then fill out the designer details below and return the completed form to the Road Safety Audit Team for consideration and signing.*

Designer's Name:	Alan Lambe	Designer's Signature:		Date:	18.10.2024
Audit Team's Name:	Martin Deegan	Audit Team's Signature:		Date:	18th Oct. 2024
Employer's Name:	Colm McEldowney	Employer's Signature:		Date:	18.10.2024