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Fingal County Council
Baldoyle Community Centre

Engineering Report for Planning

BCC-ROD-00-XX-RP-C-0001-EngRpt P04

ROD
ROUGHAN & O'DONOVAN

Fingal County Council
Baldoyle Community Centre

Engineering Report for Planning

1. INTRODUCTION

This report has been prepared as part of a planning package submitted on behalf of Fingal County Council regarding the proposed development of a new Community Centre at Baldoyle Racecourse Park, Fingal. This report sets out the Engineering basis for the planning stage design of the scheme in terms of surface drainage, foul drainage, and water supply. This report should be read in conjunction with the following drawings and documents:

- BCC-ROD-00-XX-DR-C-0001 Existing Site Layout
- BCC-ROD-00-XX-DR-C-0005 Proposed Site Layout
- BCC-ROD-00-XX-DR-C-0030 Existing Drainage Layout
- BCC-ROD-00-XX-DR-C-0031 Proposed Drainage Layout
- BCC-ROD-00-XX-DR-C-0040 Existing Watermain Layout
- BCC-ROD-00-XX-DR-C-0041 Proposed Watermain Layout

2. PROPOSED DEVELOPMENT

The proposed development includes the delivery of a new community centre including sports hall, studies, changing rooms and toilet facilities. The development includes the reconstruction of existing parking located to the north of the site, landscaping of the surrounding area within the development site and associated utilities & drainage work.

3. SITE INFORMATION

3.1 Site Location

The site is located off Red Arches Road adjacent to Baldoyle Racecourse Park, Baldoyle, Fingal. The site is bound by the park on three sides, to the south, east and west and Red Arches Road to the north. Access to the Coast Road is gained approximately 400m to the east, and high-density residential developments less than 100m to the west. Refer to Figure 3.1 below for the proposed site location.

Figure 3.1: Site Location

Refer to Appendix A for Existing Site Layout.

3.2 Site Topography

The site is generally flat, with a slight slope from northeast to southwest. The levels across the site range from 4.18MOD at the entrance, to 4.72MOD in the east and 4.24MOD in the south-west. An existing disused building is present to the west of the site, which is accessed via an elevated pedestrian ramp which is currently fenced off. Existing carparking is present to the northwest of the site which is to remain. The existing parking in the centre of the site will be removed to facilitate the building construction.

Refer to Appendix C for Topographical & Utility Survey.

4. WATER SUPPLY

4.1 Existing Water Supply

The existing building is connected to the existing watermain network via a connection from the north to the north elevation of the building. There is a second connection located to the north-east of the building to a hydrant located on the raised footway. Both connections exit the site to the north across Red Arches Road to the existing public watermain located in the footway/cycleway. The size of the watermain is to be confirmed, as this information was not presented as part of the utility survey.

Refer to Appendix B for Drainage and Watermain Records.

Refer to Appendix C for Topographical & Utility Survey.

Refer to Drawings BCC-ROD-00-XX-DR-C-0040 & 0041 for the Existing & Proposed Watermain Layout.

4.2 Proposed Water Supply

The existing connection is to be utilised as part of the works. A pre-connection enquiry has been submitted to Irish Water who have confirmed that the proposed connection is feasible. A Connection Application will be submitted to Irish Water post planning. The building will be connected via a new meter box to Irish Water details, the position of which will be confirmed during the connection application.

The peak daily demand has been calculated as 0.29l/sec.

All watermains have been designed in accordance with Irish Water's '*Code of Practice for Water Infrastructure'* (Document No. IW-CDS-5020-03) and will be constructed in accordance with same and Irish Water '*Water Infrastructure Standard Details'* (Document No. IW-CDS-5020-01).

Refer to Appendix D for Irish Water Confirmation of Feasibility.

Refer to Drawings BCC-ROD-00-XX-DR-C-0041 for the proposed watermain layout.

5. FOUL DRAINAGE

It is proposed to reconfigure and extend the existing separate foul drainage system within the site boundary and to use an existing outfall to discharge from the site.

5.1 Existing Foul Drainage

The site and the existing building are served by an existing 100mm diameter foul drain which outfalls to the west of the site to a larger 225mm diameter foul sewer network.

Refer to Appendix B for Drainage and Watermain Records.

Refer to Drawings BCC-ROD-00-XX-DR-C-0030 for the existing drainage layout.

5.2 Proposed Foul Drainage

The existing 100mm diameter foul drain and outfall will be used to serve the new development. There will be some modifications to the drainage lines within the site boundary to cater for the new pop-up locations.

The wastewater network has been designed in accordance with Irish Water's '*Code of Practice for Wastewater Infrastructure'* (Document No. IW-CDS-5030-03) and will be constructed in accordance with same and Irish Water '*Water Infrastructure Standard Details'* (Document No. IW-CDS-5030-01).

Refer to Drawings BCC-ROD-00-XX-DR-C-0031 for the proposed drainage layout.

6. SURFACE WATER DRAINAGE

It is proposed to provide a new separate surface system to serve the development. This section outlines the existing surface water drainage services surrounding the site and gives our proposals for the surface water drainage requirements as part of the development.

6.1 Existing Surface Water Drainage

There is an existing surface water drainage network located within the site which includes a series of gullies and manholes. This outfalls from the site access to a main surface water sewer located at Red Arches Road. The manhole that the existing network discharges to is identified as manhole S53 on FCC´s ´Taking-In-Charge´ drawing that is included in the appendices. Adjacent to this, there is another manhole on a separate line, S56, which is also in the charge of FCC. Both lines, that are in the charge of FCC, subsequently flow to the north. No attenuation was recorded on site from the utility survey. An existing petrol interceptor is located adjacent the existing carpark before the outfall to the main sewer.

Refer to Appendix B for Drainage and Watermain Records.
Refer to Appendix I for Fingal County Council´s Taking-In-Charge drawings.

Refer to Drawing BCC-ROD-00-XX-DR-C-0030 for existing drainage layout.

6.2 Proposed Surface Water Drainage

It is proposed to construct a new surface water drainage system for the building and carpark, however, this system will utilise the existing connection to the manhole at Red Arches Road which is in the charge of FCC.

The site will be attenuated for the 1-in-100 year + 20% climate change event. It has been calculated that 62.49m^3 of combined on site storage will allow the site to achieve a greenfield discharge rate of 2 L/s without experiencing any flooding on site within the 1 in 100 year + 20% climate change. This is being incorporated through a mixture of underground storage in the form of pipework and permeable paving or grasscrete, above ground attenuation in the form of grassed rain gardens.

The use of soakaways has been confirmed as unfeasible following a ground investigation, for the purpose of these calculations no permeability of the soil has been used to determine the maximum attenuation required. A breakdown of the SUDS features is illustrated below in Table 6.2.

SUDS Storage Features		m^3 Storage
Permeable carpark	Area 1	5.01 m^3
	Area 2	4.98 m^3
Above ground attenuation	Area 1	25.5 m^3
	Area 2	9.3 m^3
	Area 3	17.7 m^3
	Total	62.49 m^3

Table 6.2: SUDS Storage Features

The stormwater system is designed for 50mm/hr rainfall intensity as per Greater Dublin Strategic Drainage Study (GDSDS). They were designed for a minimum self-cleansing velocity of 0.7m/s in accordance with BS EN 16933-2:2017 and the Greater Dublin Strategic Drainage Strategy. However, following consultation with Fingal

County Council Drainage department, an allowance for climate change of 20% was included rather than the 10% allowance called up in the GDSDS.

Refer to Appendix G for Surface Water Calculations.

Refer to Drawings BCC-ROD-00-XX-DR-C-0031 for proposed drainage layout.

6.2.1 SUDS Approach

This should be read in conjunction with the following:

(i) BCC-ROD-00-XX-DR-C-0031

The proposed SuDS features will include a combination of Source Control, Site Control and Regional Control measures as part of a Management Train whereby the surface water is managed locally in small sub-catchment rather than being conveyed to and managed in large systems further down the catchment.

Where possible the potential for surface water infiltration to the subsoil should always be utilised to help reduce the impact on the existing surface water drainage network downstream. However, a detailed ground investigation has not yet been carried out on the site. This proposed investigation will include for infiltration tests and should the ground prove suitable, this will also be incorporated into the system at detailed design stage.

It is proposed to provide the following SuDS measures:

1) Permeable Paving
2) Rain Garden with stone base below
3) Surface water pipes
4) Green roof
5) Petrol interceptor

Attenuation

Attenuation will be provided beneath three number rain gardens/soakaways located to the west, south and east of the proposed building. These grassed areas will act as attenuation for the site, allowing surface water to accumulate to a maximum high water level during a 1 in 100 year + 20% storm event. The rain water will continue to the discharge manhole to the north of the site, where the flow will be restricted to a green field run off rate of 2 L/s.

While it is acknowledged that Fingal County Council discourage the use of underground attenuation on sites, it is noted that the site in this case is extremely tight and that it is simply not possible to meet the storage requirements using other methods alone.

Grasscrete Paving

It is proposed that grasscrete paving will be used below the car parking area. Design of which will be subject to further design at detailed design stage. The paving will act as temporary storage for rainwater from the parking and roads to the north of the site. Grasscrete paving will also act to reduce the discharge of oil spillages from the site, as the primary area where vehicle movements are experienced are to be drained via permeable paving. A petrol interceptor is being provided as an additional means of reducing the discharge of oils and spillages from the site.

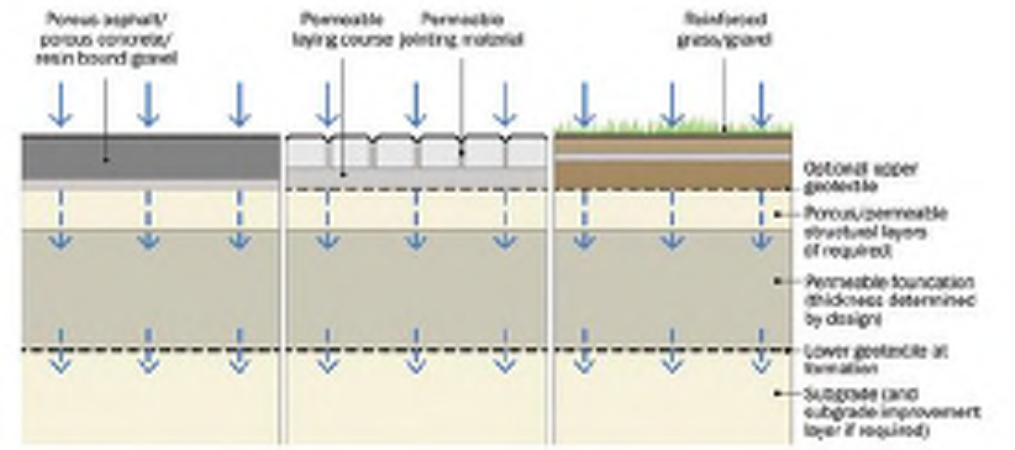

Figure 6.2 'SUDs Manual Figure 20.14 Pervious Pavement System Type A- Total Infiltration'

Green Roof

It is intended for a portion of the community centre to feature a green roof. This will assist in reducing the run off rate from the roof and to act as treatment for the storm water. The green roof design will be subject to further design at detailed design stage. The roof will not act as storage for water on the roof but an allowance for impermeability has been taken as per the calculations.

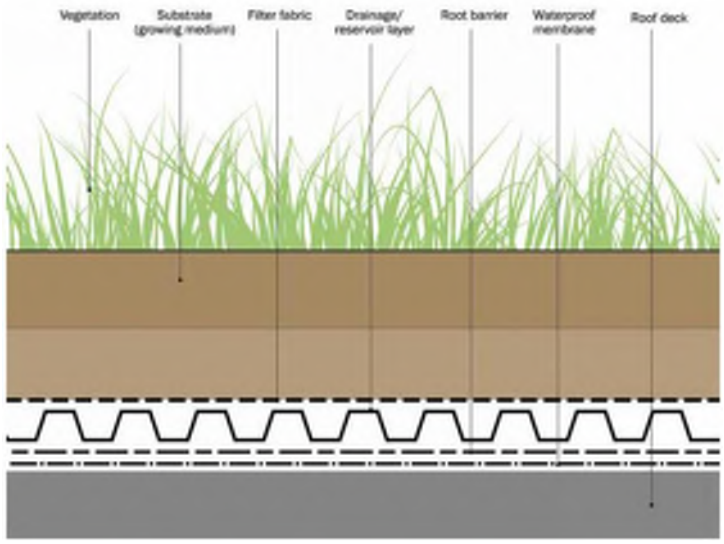

Figure 6.4 'SUDs Manual Figure 12.1 Section through a typical green roof'

Impermeability Factors

The impermeability factors of 0.6 for streets and footways, 0.6 for green roof and 0.1 for grassed areas are chosen in line with Table 26.14 'Impermeability and pollution indices for different land use types' of the SUDs Manual. This table has been reproduced below.

ANNEX 5

TABLE 26.14 Impermeability and pollution indices for different land use types[1]

Land use surface type (LUST)	Impermeability (IMP_{RF})	Total suspended soluds pollution index (PI_{TSS})	Organic pollution index (PI_{Org})	Hydrocarbon pollution index (PI_{PAH})	Metals pollution index (PI_{HM})
Roofs					
• industrial/commercial	1.0	0.3	0.3–0.4	0.2	0.4–0.8
• residential	0.9	0.4–0.5	0.6–0.7	0.1	0.2–0.5
Highways					
• motorways	0.8–0.9	0.9	0.7	0.9	0.8
• major arterial highways	0.7–0.8	0.8	0.7	0.8	0.8
• urban distributor roads	0.6–0.7	0.7–0.8	0.5	0.8	0.7
• residential streets	0.4–0.6	0.4	0.6	0.6	0.6
• pavements	0.5–0.6	0.4	0.6	0.3	0.3
Car parks/hardstanding					
• industrial/commercial	0.6–0.8	0.6–0.7	0.6–0.7	0.7	0.4–0.5
• driveways (residential)	0.5	0.5	0.6	0.4	0.3
Open areas					
• gardens (all types)	0.1	0.3	0.2–0.3	0	0.01
• parks/golf courses	0.2	0.2–0.3	0.2	0	0.02
• grassed areas (including verges, all types)	0.1	0.2–0.3	0.2–0.3	0.05	0.05

Note

1 Pollution index values are based on reported land use type EMC distributions and impact potential thresholds from House *et al* (1993), Luker and Montague (1994), Butler and Clark (1995), D'Arcy *et al* (2000), Mitchell (2005) and Moy *et al* (2003).

Figure 6.5 'SUDs Manual Table 26.14 Impermeability and pollution indices for different land use type'

7. FLOOD RISK ASSESSMENT

A flood risk assessment was carried out as part of the preliminary design of the project, this included a review of the following flood risks present for the site;

- Tidal; flooding from high sea levels
- Fluvial; flooding from water courses
- Pluvial; flooding from rain & surface water
- Development surcharges; flooding from existing surface water sewers

The low risk level associated with these items is detailed in the sections below.

Furthermore, the flood maps produced by McCloy Consulting as part of the *Stage 3 Material Alterations to the Draft Fingal County Development Plan 2023-2029* indicate that the site is within Flood Zone C (low risk >0.1% AEP) for the current and mid-range scenarios.

Refer to Appendix H for OPW and McCloy Consulting flood risk mapping.
Refer to Appendix I for Fingal County Council´s Taking-In-Charge drawings.
Refer to Drawings BCC-ROD-00-XX-DR-C-0031 for proposed drainage layout

7.1 Tidal

The site is located approximately 450m from the Irish Sea/Dublin Bay. The road level remains at approx. 5m MOD until the Coast Road, after which the verge slopes down to sea level.

The Dublin Coastal Protection Project indicated a 2002 high tide event where the water level reached 2.95 MOD. The proposed finished floor level of the community centre is at 4.8m, 1.85m above this high-water level, therefore tidal flooding risk is considered to be low.

7.2 Fluvial

The site is located approximately 150m from a historic ditch which acts as a land runoff for the Mayne River which flows into Dublin Bay. The OPW fluvial flood extent map MAY/HPW/EXT/CURS/003 illustrates the closest reference point of 1Maa675 which extracts the following information.

Node Label	Water Level mOD 10% AEP	Water Level mOD 1% AEP	Water Level mOD 0.1% AEP
1Maa675	2.50	2.85	3.46

Table 7.2; Fluvial Map Node information

As the proposed finished floor level is at 4.8m, the highest water level anticipated from fluvial flooding is 1.34m below the proposed finished floor level, therefore fluvial flood risk is considered low.

7.3 Pluvial

Previous flood events were analysed as part of the preliminary flood risk review. Two events were noted which were closest in proximity from the proposed site, located approximately 380-500m south. These events occurred in 2011 & 2002, with both events being noted as a result of excessive rainfall and the existing surface water systems being unable to accommodate the heavy rainfall. These events were not considered a risk to the proposed development due to the distance from each, and the proposed overground attenuation on the site which will act as storage for such heavy rainfall events.

7.4 Development Surcharges

The surrounding area was analysed in terms of development and existing surface water infrastructure surrounding the site.

There is existing FCC surface water drainage infrastructure in Red Arches Road with the closest manholes to the site being S53 & S56 indicated on FCC´s TIC drawings. The OPW Flood Event Maps do not indicate any issues with this infrastructure. We met with FCC Drainage personnel on site on the 20th January 2022 who were not aware of any surcharge issues.

Baldoyle Racecourse park is adjacent the development site. Runoff from the park is not considered to be a risk as along the eastern perimeter of the site, the levels reduce to form a ditch and tree line between the site and the park. To the south and west of the site, the ground slopes away from the site. This combined with the proposed finished floor level of the building means that there is a low risk of flooding from surface water flows from the surrounding areas.

7.5 Surface Water Connection

The existing connection to the public surface water sewer is to be maintained. An underground CCTV survey is planned to be carried out at detailed design stage to ensure the existing connection is of a good state and the connection is to the existing manhole which discharges to the north. Following a site meeting with FCC Drainage personnel on the 20th January 2022, it was identified that maintaining the existing connection to the manhole in Red Arches Road (S53 on FCC´s TIC drawings) was the most appropriate approach. The outfall from the proposed site will be reduced

considerably from the existing as the proposals include restricting the discharge from the site to 2 l/s and incorporating overground attenuation within the site.

7.6 Flood Risk Conclusion

Following the above analysis it is considered that the proposed development is not subject to an adverse risk of flooding based on the historic desktop survey carried out.

For fluvial and coastal flooding, the Flood Maps indicate that the site is within Flood Zone C (low risk >0.1% AEP).

For development surcharges, a detailed surface water analysis has been carried out for the proposed development which shows that the site is anticipated to experience no flooding in a 1 in 100 year plus 20% climate change storm event. In any case, should an extreme storm event occur, the overground attenuation areas will overflow, and surface water is directed away from the building to ensure the building does not experience flooding from surface water sources.

8. BUILDING

8.1 Structure

A superstructure scheme has been identified which is likely to be the most cost-effective solution to accommodate the requirements of the curved roof profile with minimal structural depth, spanning over the large open sports hall.

The main steel structural frame will consist of a portal frame structure formed by columns and skewed rafters. Skewed rafters with varying alignment of the vertical member axis and with stepped heights have been adopted to facilitate the required roof curvature perpendicular to the span.

The span of the frames is approximately 18.0m (matching the width of the sports hall) and in the orthogonal direction, a bay spacing of 4.8m has been adopted.

8.2 Rafters & Columns

Rafters and columns with a 533x210x122 UB section size are envisaged. The rafter to column connection will be a moment connection providing lateral stability in this direction. The columns will be bolted to the RC roof slab of the surrounding low-rise areas, giving a column height of approximately 4m above this level.

The rafters will be tied-in the perpendicular direction by steel beams (139 CHS).

Trimmers for roof lights will consist of 203 UC 46 sections.

The frame will be provided with roof and longitudinal bracing which will provide the building's lateral stability in the orthogonal direction to the portal moment frames.

All the steel grades for the portal frame members will be grade class S355 and the required execution class will be Execution Class 3.

8.3 Surrounding Walls

The low-rise areas surrounding the sports hall will typically be formed using 215mm blockwork walls with an RC roof slab. Where a sloped roof is required to these areas (either end of sports hall) it is envisaged that a steelwork frame formed by 203 UC 46 sections will bolted to the RC roof slab at 4m c/c.

8.4 Substructure

The ground investigation works undertaken to date indicate the presence of Made Ground to depths of approximately 4m overlying a thin layer of soft organic silts / sands or gravels which extend to depths of between 4m and 4.80m. These strata are underlain by a very stiff to hard black gravelly clay and the boreholes all extended to the target depth of 10m in this very stiff Dublin Black Boulder Clay.

Foundations will have to be transferred to the black gravelly clays, probably by short driven piles, with pile depths of circa 8m envisaged. The adoption of precast driven piles should also limit the amount of arisings to be disposed of.

An alternative approach adopting deep trench fill below strip footings and pad foundations is also possible. However, the presence of made ground could result in significant costs in relation to the disposal of excavated soil from the site.

9. SUMMARY

- The proposed development will have separate foul and surface water drainage system to serve the site.

- Surface water will be attenuated on site for the 1-in-100 year event including an allowance of +20% for climate change, and will discharge through a series of green roofs, an attenuation tank, permeable paving and an oversized pipe. The surface water system has been modelled in accordance with the Greater Dublin Area Strategic Drainage Study, with self-cleansing and discharge capacity is achieved based.

- A portion of the building will incorporate a green roof as a form of water treatment and to help slow the rate of surface water discharge from the site.

- Water will be supplied for this development via an existing connection located to the north of the site. The watermain has been designed fully in accordance with the Irish Water Code of Practice.

- The existing surface water outfall to FCC´s infrastructure in Red Arches Road will be maintained.

- The existing foul drainage outfall to the west of the site will be maintained. New drainage elements within the site will be designed fully in accordance with the Irish Water Code of Practice.

- Flooding from external and or internal sources is not considered likely due to analysis of flood records for the area. Flood maps indicate that the site is within Flood Zone C (low risk >0.1% AEP).

APPENDIX A
EXISTING SITE LAYOUT

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS, SPECIFICATIONS AND DESIGNER'S RISK ASSESSMENTS.
2. ALL LEVELS ARE IN METRES TO ORDNANCE DATUM, MALIN HEAD.
3. THE TOPOGRAPHICAL INFORMATION IS REPLICATED FROM INFORMATION RECEIVED FROM OTHERS AND IS ISSUED AS BACKGROUND INFORMATION ONLY.

LEGEND:

- EXISTING BUILDING
- OUTLINE OF PROPOSED BUILDING
- SITE BOUNDARY

No.	Revision	Date	By	Chk'd	App'd
P02	ISSUE FOR INFORMATION	17.04.23	GH	SK	KOR
P01	ISSUE FOR INFORMATION	11.11.22	RE	SK	KOR

Project Stage

FOR PLANNING APPROVAL

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Client: FINGAL COUNTY COUNCIL

Project Title: BALDOYLE COMMUNITY CENTRE

Drawing Title: EXISTNG SITE LAYOUT

Drawing Number	Rev.
BCC-ROD-00-XX-DR-C-0001	P02

Scale:	Date:	Job No:	Status Code:
1:250 @A1	NOV 22	21.115.101	S2 - FOR INFORMATION

Drawn:	Checked:	Approved:
RE	SK	KOR

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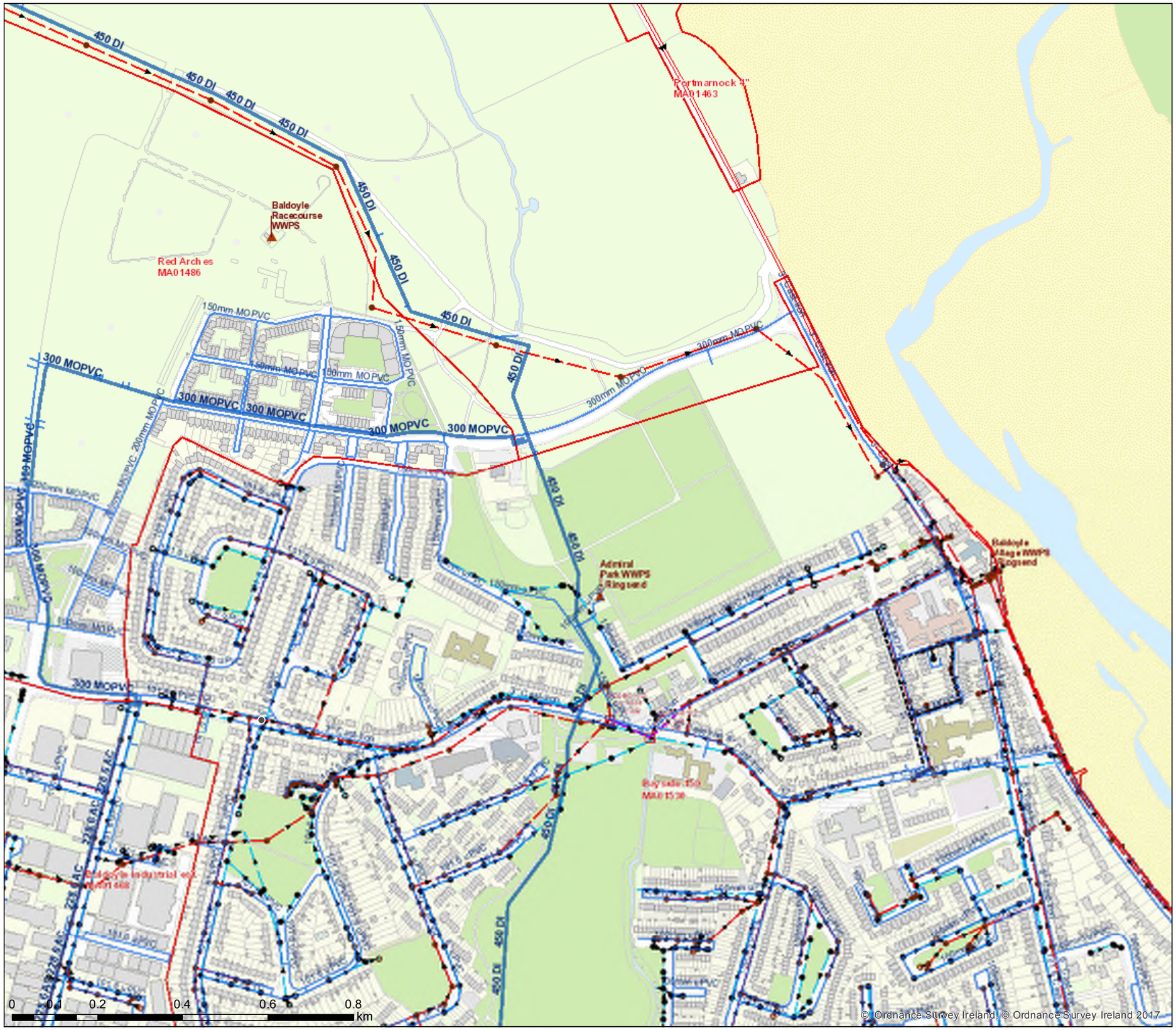
APPENDIX B
DRAINAGE AND WATERMAIN RECORDS

SR272-2021 Baldoyle



UISCE ÉIREANN : IRISH WATER

Print Date: 17/04/2021

Printed by:Irish Water

Water Distribution Network
- Water Treatment Plant
- Water Pump Station
- Storage Cell/Tower
- Dosing Point
- Meter Station
- Abstraction Point
- Telemetry Kiosk

Reservoir
- Potable
- Raw Water

Water Distribution Mains
- Irish Water
- Private

Trunk Water Mains
- Irish Water
- Private

Water Lateral Lines
- Irish Water
- Non IW
- Water Casings
- Water Abandoned Lines
- Boundary Meter
- Bulk/Check Meter
- Group Scheme
- Source Meter
- Waste Meter
- Unknown Meter ; Other Meter
- Non-Return
- PRV
- PSV
- Sluice Line Valve Open/Closed
- Butterfly Line Valve Open/Closed
- Sluice Boundary Valve Open/Closed
- Butterfly Boundary Valve Open/Closed
- Scour Valves
- Single Air Control Valve
- Double Air Control Valve
- Water Stop Valves
- Water Service Connections
- Water Distribution Chambers
- Water Network Junctions
- Pressure Monitoring Point
- Fire Hydrant
- Fire Hydrant/Washout

Water Fittings
- Cap
- Reducer
- Tap
- Other Fittings

Sewer Foul Combined Network
- Waste Water Treatment Plant
- Waste Water Pump station

Sewer Mains Irish Water
- Gravity - Combined
- Gravity - Foul
- Gravity - Unknown
- Pumping - Combined
- Pumping - Foul
- Pumping - Unknown
- Syphon - Combined
- Syphon - Foul
- Overflow

Sewer Mains Private
- Gravity - Combined
- Gravity - Foul
- Gravity - Unknown
- Pumping - Combined
- Pumping - Foul
- Pumping - Unknown
- Syphon - Combined
- Syphon - Foul
- Overflow
- Sewer Lateral Lines
- Sewer Casings

Sewer Manholes
- Standard
- Backdrop
- Cascade
- Catchpit
- Bifurcation
- Hatchbox
- Lamphole
- Hydrobrake
- Other; Unknown

Discharge Type
- Outfall
- Overflow
- Soakaway
- Standard Outlet
- Other; Unknown

Cleanout Type
- Rodding Eye
- Flushing Structure
- Other; Unknown

Sewer Inlets
- Catchpit
- Gully
- Standard
- Other; Unknown

Sewer Fittings
- Vent/Col
- Other; Unknown

Storm Water Network

Surface Water Mains
- Surface Gravity Mains
- Surface Gravity Mains Private
- Surface Water Pressurised Mains
- Surface Water Pressurised Mains Private

Inlet Type
- Gully
- Standard
- Other; Unknown

Storm Manholes
- Standard
- Backdrop
- Cascade
- Catchpit
- Bifurcation
- Hatchbox
- Lamphole
- Hydrobrake
- Other; Unknown
- Storm Culverts
- Storm Clean Outs
- Stormwater Chambers

Discharge Type
- Outfall
- Overflow
- Soakaway
- Other; Unknown

Gas Networks Ireland
- Transmission High Pressure Gasline
- Distribution Medium Pressure Gasline
- Distribution Low Pressure Gasline

ESB Networks

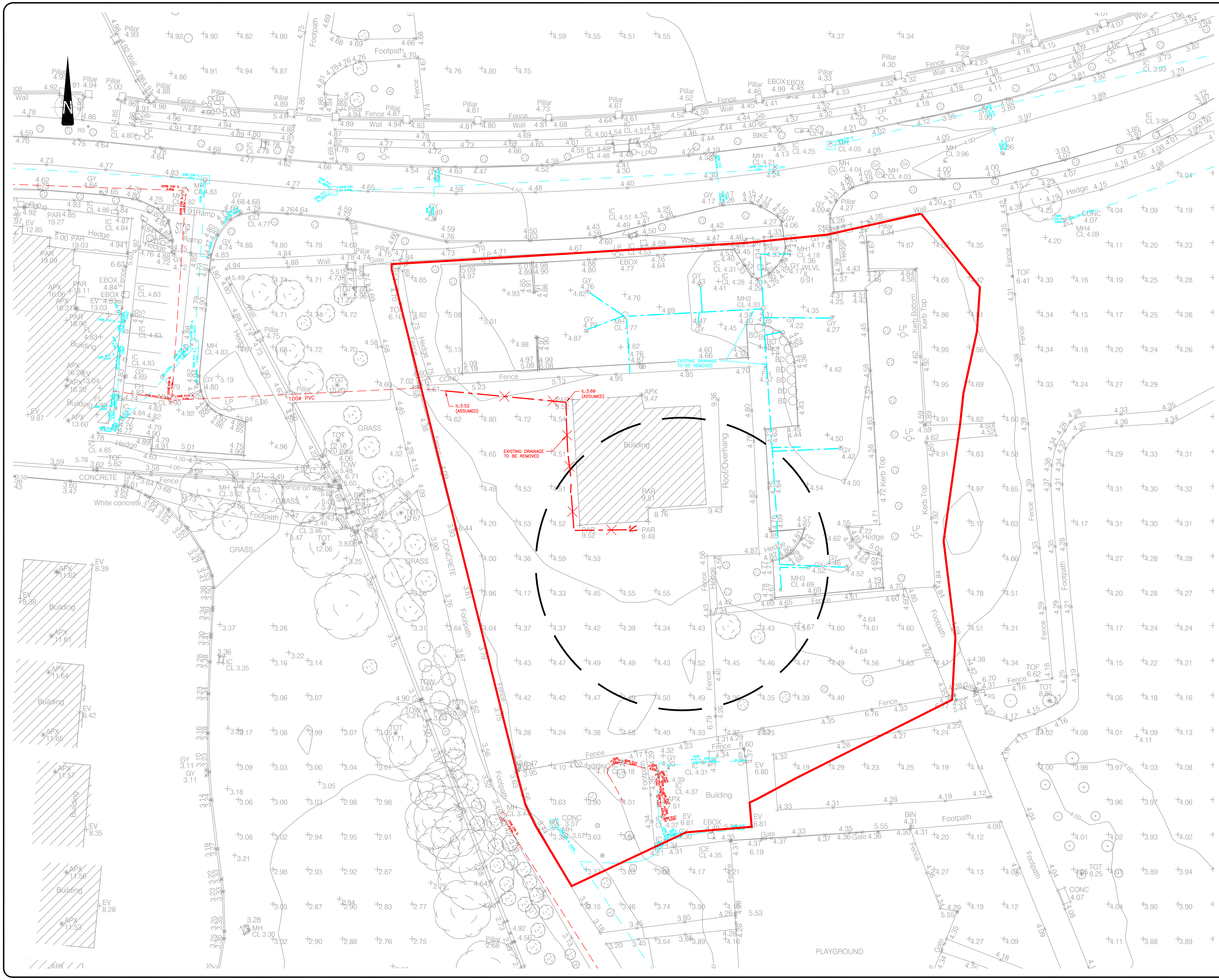
ESB HV Lines
- HV Underground
- HV Overhead
- HV Abandoned

ESB MVLV Lines
- MV Overhead Three Phase
- MV Overhead Single Phase
- LV Overhead Three Phase
- LV Overhead Single Phase
- MVLV Underground
- Abandoned

Non Service Categories
- Proposed
- Under Construction
- Out of Service
- Decommissioned

Water Non Service Assets
- Water Point Feature
- Water Pipe
- Water Structure

Waste Non Service Assets
- Waste Point Feature
- Sewer
- Waste Structure



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LEGEND:

- SITE BOUNDARY
- EXISTING BUILDING
- OUTLINE OF PROPOSED BUILDING
- EXISTING SURFACE WATER SEWER/DRAIN
- EXISTING FOUL WATER SEWER/DRAIN
- EXISTING COMBINED SEWER/DRAIN
- EXISTING SURFACE WATER SEWER/DRAIN WITH MANHOLE TO BE REMOVED
- EXISTING FOUL WATER SEWER/DRAIN WITH MANHOLE TO BE REMOVED

No.	Revision	Date	By	Chk'd	App'd
P03	ISSUE FOR INFORMATION	17.04.23	GH	SK	KOR
P02	ISSUE FOR INFORMATION	05.01.23	LW	SK	KOR
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Client: FINGAL COUNTY COUNCIL

Project Title: BALDOYLE COMMUNITY CENTRE

Drawing Title: EXISTNG DRAINAGE LAYOUT

Drawing Number: BCC-ROD-00-XX-DR-C-0030 Rev: P03

Scale: 1:250 @A1 | Date: NOV' 22 | Job No: 21.115.101 | Status Code: S2 - SUITABLE FOR INFORMATION

Drawn: RE | Checked: SK | Approved: KOR

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS, SPECIFICATIONS AND DESIGNER'S RISK ASSESSMENTS.
2. ALL LEVELS ARE IN METRES TO ORDNANCE DATUM, MALIN HEAD.
3. THE TOPOGRAPHICAL INFORMATION IS REPLICATED FROM INFORMATION RECEIVED FROM OTHERS AND IS ISSUED AS BACKGROUND INFORMATION ONLY.

LEGEND:

- EXISTING BUILDING
- OUTLINE OF PROPOSED BUILDING
- EXISTING WATERMAIN
- EXISTING HYDRANT
- SITE BOUNDARY

No.	Revision	Date	By	Chk'd	App'd
P02	ISSUE FOR INFORMATION	17.04.23	GH	SK	KOR
P01	ISSUE FOR INFORMATION	11.11.22	RE	SK	KOR

Project Stage

FOR PLANNING APPROVAL

ROD ROUGHAN & O'DONOVAN

Offices:
Dublin - Sandyford & Santry
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Client: FINGAL COUNTY COUNCIL

Project Title: BALDOYLE COMMUNITY CENTRE

Drawing Title: EXISTNG WATERMAIN LAYOUT

Drawing Number	Rev.
BCC-ROD-00-XX-DR-C-0040	P02

Scale:	Date:	Job No:	Status Code
1:250 @A1	NOV 22	21.115.101	S2 - FOR INFORMATION

Drawn:	Checked:	Approved:
RE	SK	KOR

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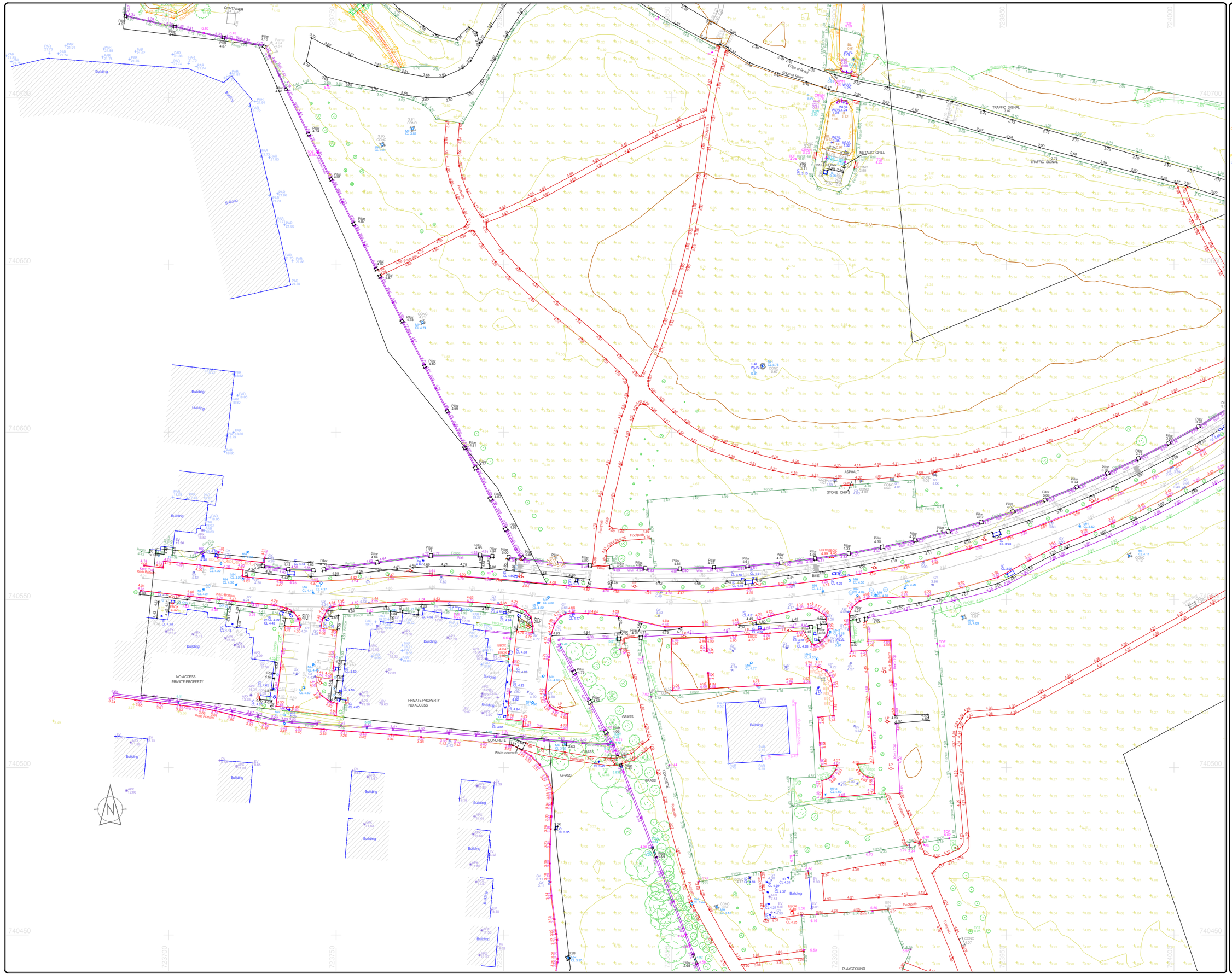
J:\2021\21115\01\21115101-00_WIP\BIM MODELS\01 CAD\01 DWG\02 STG 2 - Part 8 Planning\BCC-ROD-00-XX-DR-C-0040.dwg, 17/04/2023 11:52:25, Bluebeam PDF.pc3

APPENDIX C
TOPOGRAPHICAL & UTILITY SURVEY



LEGEND

Street furniture & Services

- Over Head Wires (LUAS) - Pylon ESB
- Flowerbed
- Pipe
- Lift
- Barrier
- Pump
- Trial Pit
- Bus/Tram Shelter
- Postbox
- Valve - General
- Water Valve
- Gas Valve
- Sluice Valve
- Air Valve
- Stop Cock
- C P Post
- Marker Post
- Traffic light
- Parking Meter
- Plane Aerial Mark
- Smart Card Validator
- Unknown Valve
- Road Sign
- Bus Stop
- Bollard
- Beacon
- Coalhole Cover
- Bore Hole
- Electricity Pole
- Telegraph pole
- OCS Pole
- CCTV Camera Pole
- Lamp Post
- Foul Manholes
- Surface Water MH
- Manholes
- Air Conditioning Vents
- Services Inspection Cover
- Traffic Inspection Cover
- Cable TV Inspection Cover
- ESAT Inspection Cover
- NTL Inspection Cover
- Eircom Inspection Cover
- Rodding Eye
- Phone Box
- Bench Seat
- Kiosk
- Gully
- Waste Bin
- Hydrant
- Fire Hydrant
- ESB Box
- ESB Inspection Cover
- Traffic Control Box
- LUAS Technical Cubicle
- Ticket Vending Machine
- Water Meter Cover
- Telecom Inspection Cover
- Monument / Toilets
- Tank Storage
- Basement: MH, Cover & Pipe
- Disbled Aerial Mark
- Stay for pole
- Pipe Protection
- Washout

Natural Features

- Surface Change
- Land Drain
- Bottom of Slope
- Top of Slope
- Ditch
- Water Edge / Lake / Pond
- Hedge / Trees Drip Line / Vegetation
- Tree Coniferous
- Tree Deciduous
- Water Level
- Crown Level
- Invert level
- Bed Level
- Spotheight
- Top of Tree

Golf

- Fair Way
- Green
- Tee Box

Other

- Survey Station
- Photo point

Built Features

Roads & Road Markings

- Building
- Edge of Road
- Kerb Bottom
- Kerb Top
- Bridge Abutment
- Bridge Deck
- Bridge Parapet
- Building Façade
- Footpath / Platform Train & Tram
- Damp Proof Course / Verge
- Bridge Pier / Wall & Gate Pillar / LUAS Trackbed
- Cycleway / Private Landing Area
- Fence
- Gate
- Road Centreline
- Top of Wall
- Hoarding
- Property Line
- Road Scar
- Top of Fence
- Floor Level
- Apex Height
- Eaves Height
- Parapet Height
- Soffit Elevation
- Step Level
- Concrete Pad
- Track
- Wall / Retaining Wall
- Railway / Tram Rail / Grating / Ramp
- Building Canopy / Roof / Overhang

Murphy Surveys Ltd. Disclaimer

The user or recipient of this survey data understands and acknowledges this data may be inaccurate or contain errors or omissions and the user or recipient assumes full responsibility for any risks or damages resulting from, arising from, or in connection with any use of or reliance upon data displayed herein. Although significant care has been exercised to produce surveys that satisfy survey accuracy standards, these surveys are only as accurate as the source data from which they were compiled. Although all reasonable steps have been taken to locate all features visible at the time of the survey, there is no guarantee that all will be shown on the drawing, as some above ground features may have obstructed the survey. Wherever possible, areas unable to be surveyed will be labelled as "UTS".

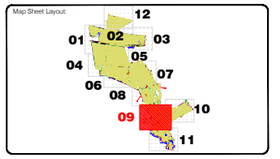
The Company shall not be liable for any inaccuracy of the data provided beyond the specified scale or accuracy, or for any matters resulting from their use for purposes other than that stated in the Contract. No liability shall attach to the Surveyor in respect of any consequential loss or damages suffered by the Client.

The Client must promptly notify the Company of any errors in mapping of which it becomes aware. If misleading, inaccurate or otherwise inappropriate information is brought to the Company's attention or the Company itself identifies any such imprecision or error in a survey, it shall use its reasonable endeavours to fix or remove it and if necessary in certain instances, the Company being on notice of any such misleading, inaccurate or otherwise inappropriate information, it will re-conduct the survey and reproduce the data to within the specified scale or accuracy.

North

Site Location

Map Sheet Layout:



Surveyed by :	BD, PF, MN	Date:	March 2019
Drawn by :	CN	Date:	25.03.2019
Checked by :	PK	Date:	26.03.2019

Datum : Malin Head
Grid System: Irish National Grid ☐ ITM16 ☑

Revisions

No.	Date	Description
01	26.03.2019	First Drawing

murphy SURVEYS
GLOBAL CONSULTING SURVEYORS

Topographic surveys, Measured Building Surveys, Setting-Out, As-Built Surveys, Hydrographic Surveys, Legal Mapping, Pipeline Surveys, Services Location, Ground Penetrating Radar, Laser Scanning, Rectified Photography

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Email: info@murphysurveys.ie

Client :	Fingal County Council
Project :	Topographical Survey Racecourse Park
Date : 26.03.2019	**Scale :** 1:500@A1
Description :	Topographical Survey
Drawing Number :	MSL29776_T_ITM_Rev0_09

ABBREVIATIONS

AR	ASSUMED ROUTE
AV	AIR VALVE
BB	BELISHA BEACON
BD	BACKDROP
Bdl	BED LEVEL
BH	BOREHOLE
BHch	BASEMENT HATCH COVER
Bin	LITTER / GRIT SALT BIN
BL	BASEMENT LIGHT
Bol	BOLLARD
BP	BOUNDARY POST
BS	BUS STOP
BTIC	BRITISH TELECOM CHAMBER
CatL	CATENARY LEVEL
CATV	CABLE TV COVER
CB	CONTROL BOX
CBlt	CONVEYOR BELT
CC	COAL CHUTE
CGrd	CATTLE GRID
ChL	CHANNEL LEVEL
Chy	CHIMNEY
CI	CAST IRON
CL	COVER LEVEL
CO	CONCRETE
CP	CABLE PIT
CpL	COPING LEVEL
Cpsn	CAPSTAN
Cpst	CAMERA POST
CrL	CROWN LEVEL
CulP	CULVERT PIPE
CWM	CABLE WINDING MACHINERY
DP	DEPTH
DIA	DIAMETER
DS	DIRECTION SIGN
EIC	ELECTRIC INSPECTION COVER
EoC	EDGE OF CANOPY
EOR	END OF RECORDS
EOT	END OF TRACE
EP	ELECTRICITY POLE
ER	EARTH ROD
EShw	EMERGENCY SHOWER
ESP	ELECTRICITY SUPPLY POINT
Esw	ELECTRICAL SWITCH
FB	FOOTBRIDGE
FH	FIRE HYDRANT
FL	FLOOR LEVEL
FS	FLAG STAFF/ POLE
GY	GULLY
G=	GIRTH
GIP	GAS INLET PIPE
GP	GUIDE POST
GPR	TRACED BY G.P.R.
Grl	GRILLE
GV	GAS VALVE
Hgt	HEIGHT
Hrl	HANDRAIL
HV	HIGH VOLTAGE
IC	INSPECTION CHAMBER
IL	INVERT LEVEL
IP	INLET PIPE
JN	JUNCTION
KO	KERB OUTLET
Lby	LIFEBOUY
Lck	LOCK GATE
Lrd	LADDER
LH	LAMP HOLE
LP	LAMP POST
LV	LOW VOLTAGE
MgP	MOORING POST
mH	METERS HIGH
Mhcy	MACHINERY
MH	MANHOLE
MKr	MARKER POST
MKrE	MARKER POST (ELECTRIC)
MKrG	MARKER POST (GAS)
MKrR	MARKER POST (RAILWAY)
MKrT	MARKER POST (TELECOM)
MKrW	MARKER POST (WATER)
MP	MILE POST
MS	MILE STONE
NL	NOT LOCATED
NP	NAME PLATE
OSA	OUTSIDE SURVEY AREA
OSBM	O.S BENCH MARK
OGP	OVERGROUND PIPE
OHCu	O/H CABLE (UNIDENTIFIED)
OHE	OVERHEAD CABLE (ELECTRIC)
OHG	OVERHEAD GANTRY
OHP	OVERHEAD PIPE
OHT	OVERHEAD CABLE (TELECOM)
OP	OUTLET PIPE
P	POST
Pb	PARK BENCH
PB	POST BOX
PCsg	PEDESTRIAN CROSSING
PE	POLYETHYLENE
PF	PITCH FIBER
PI	PILE
Pir	MOVEMENT DETECTOR
Pmd	PLANT MOTOR DRIVE
PP	PETROL / DIESEL PUMP
PR	PIPE RISER
Psk	PENSTOCK
PV	PUMPPIPE (VERTICAL)
PVC	POLYVINYL CHLORIDE
Pyl	PYLON
Pz	PIEZOMETER
RE	RODDING EYE
RG	RAIN GAUGE
RMP	RESERVOIR MONITORING PNT
RP	REFLECTOR POST
RS	ROAD SIGN
RSP	RAILWAY SIGNAL POST
RWP	RAIN WATER PIPE
S	SPREAD
SA	SURVEY ABANDONED
SB	SIGN BOARD
Shtr	SHELTER (BUS / TRAM)
SI	SPUN IRON
SL	SOFFIT LEVEL
SltL	SILT LEVEL (TOP)
SMP	SETTLEMENT MONITORING PNT
SiL	SIGNAL LOST
SP	SIGN POST
SPil	SHEET PILING
Spr	SPRING
SPt	SAMPLING POINT
ST	STOP TAP
Sti	STILE
Stl	STRUCTURE TOP LEVEL
Stp	STUMP (TREE)
StP	STAND PIPE
StPO	STAY POST
StW	STAY WIRE
SV	STOP VALVE
SVP	SOIL VENT PIPE
TBM	TEMPORARY BENCH MARK
TCB	TELEPHONE CALL BOX
TEL	TELECOM CHAMBER COVER
TFR	TAKEN FROM RECORDS
Thl	THRESHOLD LEVEL
TL	TRAFFIC LIGHT
TP	TELEGRAPH POLE
Tpt	TRIAL PIT
Tr	TROUGH
UTF	UNABLE TO FIND
UTGA	UNABLE TO GAIN ACCESS
UTL	UNABLE TO LIFT
UTR	UNABLE TO ROD
UTS	UNABLE TO SURVEY
UTT	UNABLE TO TRACE
VC	VITREOUS CLAY
VP	VENT PIPE
VR	VAPOUR RECOVERY
VS	VENTILATION SHAFT
VW	VALVE / SLUICE WHEEL
WB	WEIGHBRIDGE
WL	WATER LEVEL
WM	WATER METER
WO	WASH OUT VALVE
Wr	WEIR
WrL	WEIR LEVEL
WrP	WEIR PLATE (TOP)
WWP	WASTE WATER PIPE

PAS128 SURVEY METHODOLOGY KEY

THIS SURVEY HAS BEEN CARRIED OUT IN ACCORDANCE WITH THE PAS128 SPECIFICATION FOR UNDERGROUND UTILITY DETECTION, VERIFICATION & LOCATION. THE SPECIFICATION ALLOWS FOR A RANGE OF TECHNIQUES AND METHODS OF VARYING INTENSITY TO BE DEPLOYED. THE COLOUR CODED SCHEME INDICATES WHERE DIFFERENT SURVEY METHODOLOGIES HAVE BEEN USED ON SITE, AND THE LIST BELOW IDENTIFIES EQUIPMENT USED TO OBTAIN THE SURVEY RESULTS.
NB: PLEASE SEE ACCOMPANYING REPORT FOR FULL DETAILS.

ELECTROMAGNETIC DETECTION	GROUND PENETRATING RADAR	TOTAL STATION	GPS/GNSS
Vivax vLoc 3	IDS Opera Duo		Trimble R8s

- M4P - EML SEARCH TRANSECT AT 2m INTERVALS - TRACED AT 0.5m INTERVALS. GPR SURVEY GRID AT 0.5m INTERVALS OR HIGH DENSITY ARRAY. POST PROCESSING OF GPR DATA.
- M3P - EML SEARCH TRANSECT AT 2m INTERVALS - TRACED AT 1m INTERVALS. GPR SURVEY GRID AT 1m INTERVALS OR HIGH DENSITY ARRAY. POST PROCESSING OF GPR DATA.
- M2P - EML SEARCH TRANSECT AT 5m INTERVALS - TRACED AT 2m INTERVALS. GPR SURVEY GRID AT 2m INTERVALS OR HIGH DENSITY ARRAY. POST PROCESSING OF GPR DATA.
- M1P - EML SEARCH TRANSECT AT 10m INTERVALS - TRACED AT 5m INTERVALS. GPR SURVEY AS APPROPRIATE. POST PROCESSING OF GPR DATA.
- M4 - EML SEARCH TRANSECT AT 2m INTERVALS - TRACED AT 0.5m INTERVALS. GPR SURVEY GRID AT 0.5m INTERVALS. GPR MARK-UP ON SITE
- M3 - EML SEARCH TRANSECT AT 2m INTERVALS - TRACED AT 1m INTERVALS. GPR SURVEY GRID AT 1m INTERVALS. GPR MARK-UP ON SITE.
- M2 - EML SEARCH TRANSECT AT 5m INTERVALS - TRACED AT 2m INTERVALS. GPR SURVEY GRID AT 2m INTERVALS. GPR MARK-UP ON SITE.
- M1 - EML SEARCH TRANSECT AT 10m INTERVALS - TRACED AT 5m INTERVALS. GPR SURVEY AS APPROPRIATE. GPR MARK-UP ON SITE

Rev	Date	Drawn	Description	Chkd	Appd
01	30/11/21	C.D.	SURVEY COMPLETED	K.S.	J.M.

PCA Ltd
Hillcrest House,
Hillcrest Road,
Sandyford, Dublin

01-2136300

Client
ROUGHAN & O'DONOVAN

Title
Baldoyle Community Centre
Utilities Survey
Sheet 1/3

Surveyor	A. Jiminez	A.J.	Eng check		
Drawn	C. Daus	C.J.	Coordination		
Dwg check	K. Sheehan	K.S.	Approved	Mark Mc	

Scale at A0: 1:200@A0
Status: Complete
Rev: 01
Drawing Number: 211109MM

APPENDIX D
IRISH WATER CONNECTION OF FEASIBILITY

Kieran O'Riordan

Arena House,
Arena Road, Sandyford
Dublin 18
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 April 2022

Re: CDS22002354 pre-connection enquiry - Subject to contract | Contract denied

Connection for Business Connection of 1 unit(s) at Baldoyle Racecourse Park, Red Arches Road, Fingal

Dear Sir/Madam,

Irish Water has reviewed your pre-connection enquiry in relation to a Water & Wastewater connection at Baldoyle Racecourse Park, Red Arches Road, Fingal (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** **THIS IS NOT A CONNECTION OFFER. YOU MUST APPLY FOR A CONNECTION(S) TO THE IRISH WATER NETWORK(S) IF YOU WISH TO PROCEED.**
Water Connection	Feasible without infrastructure upgrade by Irish Water
Wastewater Connection	Feasible without infrastructure upgrade by Irish Water
SITE SPECIFIC COMMENTS	
Water Connection	
Wastewater Connection	Separate storm and foul water connection services have to be provided for the Development. The surface and storm water from the site must be discharged only into an existing storm water network that does not discharge to an IW combined/foul sewer. The connection arrangement should be agreed with the Local Authority Drainage Division. The customer is responsible for obtaining all necessary consents/permissions required to facilitate any connection works to private infrastructure. The status and capacity of the infrastructure should be verified, prior to any physical connection works.

	The proposed development appears to connect to the Irish Water Network via private land/s. Please be advised that at connection application stage, you have to provide evidence of consent of the Third Party Landowner/s for the connection works to be carried out through these lands.

The design and construction of the Water & Wastewater pipes and related infrastructure to be installed in this development shall comply with the Irish Water Connections and Developer Services Standard Details and Codes of Practice that are available on the Irish Water website. Irish Water reserves the right to supplement these requirements with Codes of Practice and these will be issued with the connection agreement.

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

Reproduced from the Ordnance Survey of Ireland by Permission of the Government. License No. 3-3-34

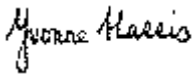
Whilst every care has been taken in its compilation Irish Water gives this information as to the position of its underground network as a general guide only on the strict understanding that it is based on the best available information provided by each Local Authority in Ireland to Irish Water. Irish 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 Kevin McManmon from the design team at kmcmanmon@water.ie For further information, visit **www.water.ie/connections.**

Yours sincerely,



Yvonne Harris

Head of Customer Operations

APPENDIX E
PROPOSED DRAINAGE LAYOUT

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS, SPECIFICATIONS AND DESIGNER'S RISK ASSESSMENTS.
2. ALL LEVELS ARE IN METRES TO ORDNANCE DATUM, MALIN HEAD.
3. THE TOPOGRAPHICAL INFORMATION IS REPLICATED FROM INFORMATION RECEIVED FROM OTHERS AND IS ISSUED AS BACKGROUND INFORMATION ONLY.

LEGEND:

- SITE BOUNDARY
- EXISTING BUILDING
- PROPOSED BUILDING
- LANDSCAPE (REFER TO ARCHITECT'S DRAWINGS FOR DETAILS)
- PROPOSED ROAD
- PROPOSED PAVEMENT
- PERMEABLE PAVING
- EXISTING SURFACE WATER SEWER
- EXISTING FOUL WATER SEWER
- PROPOSED SURFACE WATER SEWER/DRAIN WITH MANHOLE
- PROPOSED FOUL WATER SEWER/DRAIN WITH MANHOLE
- PROPOSED FOUL WATER SEWER/DRAIN WITH AJ
- PROPOSED SURFACE WATER SEWER/DRAIN WITH AJ
- PROPOSED FILTER DRAIN
- PROPOSED GULLY
- F.F.L: XX.XX — PROPOSED FINISH FLOOR LEVEL

No.	Revision	Date	By	Chk'd	App'd
P04	ISSUE FOR INFORMATION	17.04.23	GH	SK	KOR
P03	ISSUE FOR INFORMATION	05.01.23	LW	SK	KOR
P02	ISSUE FOR INFORMATION	14.12.22	LW	SK	KOR
P01	ISSUE FOR INFORMATION	11.11.22	RE	SK	KOR

Project Stage: **FOR PLANNING APPROVAL**

ROD ROUGHAN & O'DONOVAN

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Leeds - Otley
Ireland t +353 (0) 1 294 0800
UK t +44 (0) 113 360 1720

Client: FINGAL COUNTY COUNCIL

Project Title: BALDOYLE COMMUNITY CENTRE

Drawing Title: PROPOSED DRAINAGE LAYOUT

Drawing Number: BCC-ROD-00-XX-DR-C-0031 — Rev: P04

Scale:	Date:	Job No:	Status Code
1:250 @A1	NOV' 22	21.115.101	S2 - SUITABLE FOR INFORMATION

Drawn: RE | Checked: SK | Approved: KOR

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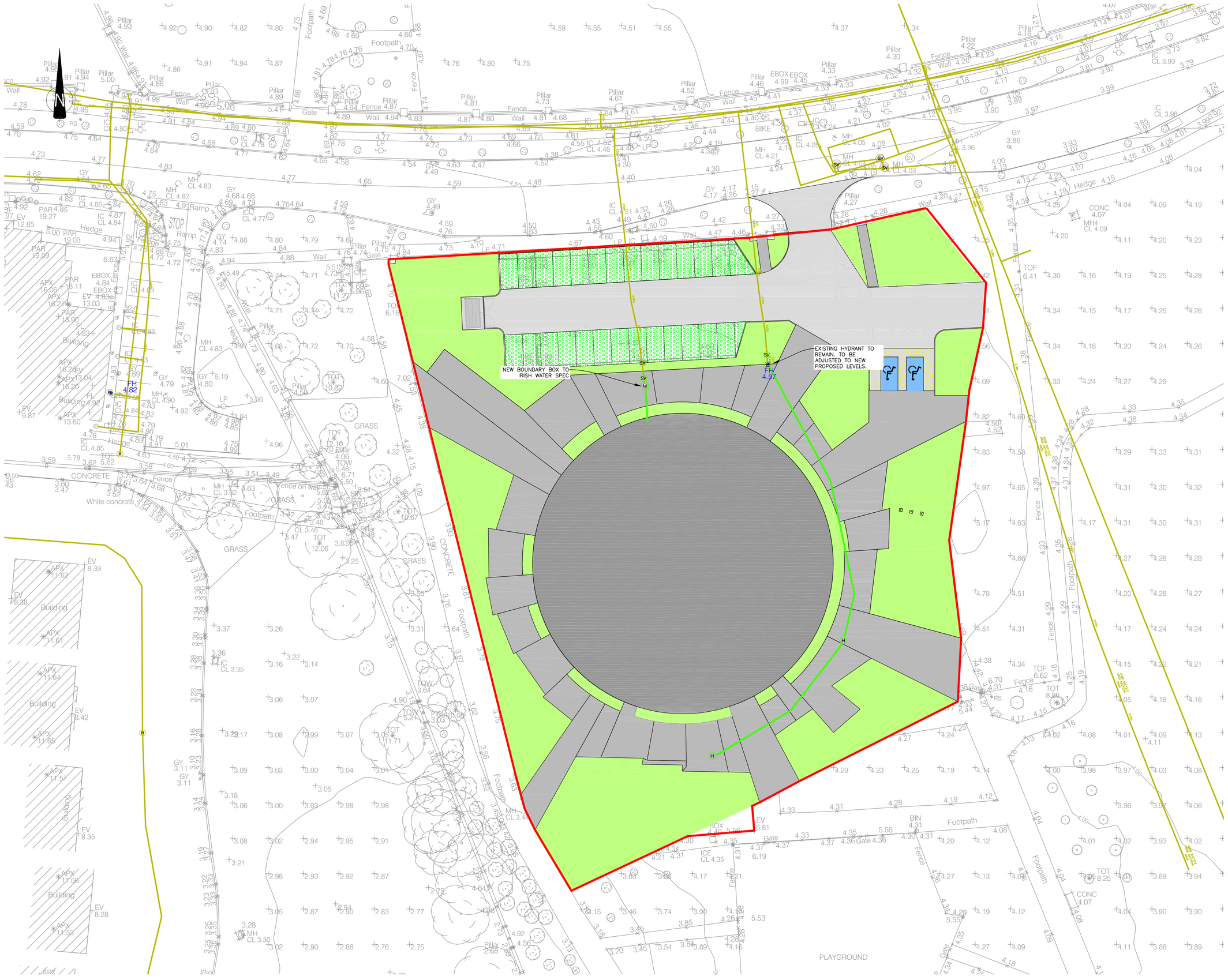
APPENDIX F
PROPOSED WATERMAIN LAYOUT



NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS AND SPECIFICATIONS
2. ALL LEVELS ARE IN METRES TO ORDNANCE DATUM, MALIN HEAD.
3. POSITION OF EXISTING WATERMAIN TO BE CONFIRMED PRIOR TO LAYING OF NEW WATERMAIN.
4. ALL SERVICE PIPES TO M&E SPEC AND DETAIL CONNECTED TO WATERMAIN IN ACCORDANCE WITH IRISH WATER REQUIREMENTS.
5. ALL WATERMAINS AND ASSOCIATED FITTINGS TO BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATER PUBLICATION "WATER INFRASTRUCTURE STANDARD DETAILS, DOCUMENT NUMBER: IW-CDS-5020-01 AND "CODE OF PRACTICE FOR WATER INFRASTRUCTURE" DOCUMENT NUMBER IW-CDS-5020-03
6. NEW WATERMAINS ARE TO BE INSTALLED WITH A MINMUM COVER OF 900mm IN ACCORDANCE WITH THE IRISH WATER DETAIL STD-W-013 (SEE NOTE 5.)
7. ALL SLUICE VALVE AND HYDRANT CHAMBERS ARE TO BE CONSTRUCTED FROM BLOCKWORK
8. ALL MARKER POST AND PLATES ARE TO BE IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-27 (SEE NOTE 5.)
9. ALL THRUST BLOCKS ARE TO BE IN ACCORDANCE WITH IRISH WATER DETAIL STD-W-28 (SEE NOTE 5.)
10. ALL SLUICE VALES TO BE IN ACCORDANCE WITH THE REQUIREMENTS CALLED UP ON IRISH WATER DETAIL STD-W-15 (SEE NOTE 5.)
11. ALL HYDRANT TO BE IN ACCORDANCE WITH THE REQUIREMENTS CALLED UP ON IRISH WATER DETAIL STD-W-18 (SEE NOTE 5.)
12. All WATER METER ACCESS POINTS REQUIRE MARKER POST & PLATES TO STD-W-27-REV2 TYPICAL.

LEGEND:

- EXISTING BUILDING
- PROPOSED BUILDING
- LANDSCAPE (REFER TO ARCHITECT'S DRAWINGS FOR DETAILS)
- PROPOSED ROAD
- PROPOSED PAVEMENT
- GRASSCRETE PAVING
- EXISTING WATERMAIN
- EXISTING HYDRANT (H)
- EXISTING SLUICE VALVE (SV)
- EXISTING AIR VALVE (AV)
- PROPOSED WATERMAIN
- PROPOSED HYDRANT (H)
- PROPOSED SLUICE VALVE (SV)
- SITE BOUNDARY
- PROPOSED FINISH FLOOR LEVEL (F.F.L: XX.XX)

No.	Revision	Date	By	Chk'd	App'd
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P03	ISSUE FOR INFORMATION	05.01.23	LW	SK	KOR
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Project Stage

FOR PLANNING APPROVAL

ROD ROUGHAN & O'DONOVAN

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UK t +44 (0) 113 360 1720

Client: FINGAL COUNTY COUNCIL

Project Title: BALDOYLE COMMUNITY CENTRE

Drawing Title: PROPOSED WATERMAIN LAYOUT

Drawing Number	Rev.
BCC-ROD-00-XX-DR-C-0041	P04

Scale:	Date:	Job No:	Status Code
1:250 @A1	NOV' 22	21.115.101	S2 - SUITABLE FOR INFORMATION

Drawn:	Checked:	Approved:
RE	SK	KOR

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

J:\2021\21115\01\21115101-00_WIP\BIM MODELS\01 CAD\01 DWG\02 STG 2 - Part 8 Planning\BCC-ROD-00-XX-DR-C-0041.dwg, 17/04/2023 11:04:35, Bluebeam PDF.pc3

APPENDIX G
SURFACE WATER CALCULATIONS

Arena House
Arena Road
Sandyford Dublin 18

Date 31/01/2022 12:49
File 21.115.101 Baldoyle MD_SK 22.01.26.MDX

Designed by Sean.Kennedy
Checked by

Micro Drainage | Network 2019.1

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
IC01	4.375	0.725	Open Manhole	1200	1.000	3.650	100				
01	4.300	0.700	Open Manhole	1200	1.001	3.600	150	1.000	3.600	100	
02	4.300	0.890	Open Manhole	1200	1.002	3.410	150	1.001	3.410	150	
4	4.300	1.018	Open Manhole	1200	2.000	3.282	150				
09	4.500	1.244	Open Manhole	1200	2.001	3.600	100	2.000	3.256	150	
03	4.300	1.018	Open Manhole	1200	1.003	3.282	100	1.002	3.282	150	
								2.001	3.282	100	
IC02	4.375	0.725	Open Manhole	1200	3.000	3.650	100				
08	4.300	0.700	Open Manhole	1200	3.001	3.600	100	3.000	3.600	100	
04	4.400	1.144	Open Manhole	1200	1.004	3.256	150	1.003	3.256	100	
								3.001	3.256	100	
07	4.300	0.800	Open Manhole	1200	4.000	3.500	150				
05	4.300	1.200	Open Manhole	1200	1.005	3.100	150	1.004	3.100	150	
								4.000	3.100	150	
06	4.400	1.350	Open Manhole	1200	1.006	3.050	100	1.005	3.050	150	
	4.300	1.531	Open Manhole	0		OUTFALL		1.006	2.769	100	

Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
IC01	723878.401	740476.785	723878.401	740476.785	Required	
01	723884.772	740471.556	723884.772	740471.556	Required	
02	723905.148	740491.511	723905.148	740491.511	Required	
4	723910.172	740504.791	723910.172	740504.791	Required	
09	723910.056	740508.727	723910.056	740508.727	Required	
03	723902.083	740510.445	723902.083	740510.445	Required	
IC02	723861.391	740507.860	723861.391	740507.860	Required	
08	723861.150	740516.275	723861.150	740516.275	Required	

Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
04	723899.739	740524.510	723899.739	740524.510	Required	
07	723892.131	740534.386	723892.131	740534.386	Required	
05	723897.455	740534.427	723897.455	740534.427	Required	
06	723897.575	740538.575	723897.575	740538.575	Required	
	723895.291	740552.459			No Entry	

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	o	100	IC01	4.375	3.650	0.625	Open Manhole	1200
1.001	o	150	01	4.300	3.600	0.550	Open Manhole	1200
1.002	o	150	02	4.300	3.410	0.740	Open Manhole	1200
2.000	o	150	4	4.300	3.282	0.868	Open Manhole	1200
2.001	o	100	09	4.500	3.600	0.800	Open Manhole	1200
1.003	o	100	03	4.300	3.282	0.918	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	8.242	164.8	01	4.300	3.600	0.600	Open Manhole	1200
1.001	28.520	150.1	02	4.300	3.410	0.740	Open Manhole	1200
1.002	19.180	149.8	03	4.300	3.282	0.868	Open Manhole	1200
2.000	3.938	150.0	09	4.500	3.256	1.094	Open Manhole	1200
2.001	8.156	25.6	03	4.300	3.282	0.918	Open Manhole	1200
1.003	14.259	548.4	04	4.400	3.256	1.044	Open Manhole	1200

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
3.000	o	100	IC02	4.375	3.650	0.625	Open Manhole	1200
3.001	o	100	08	4.300	3.600	0.600	Open Manhole	1200
1.004	o	150	04	4.400	3.256	0.994	Open Manhole	1200
4.000	o	150	07	4.300	3.500	0.650	Open Manhole	1200
1.005	o	150	05	4.300	3.100	1.050	Open Manhole	1200
1.006	o	100	06	4.400	3.050	1.250	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
3.000	8.418	168.4	08	4.300	3.600	0.600	Open Manhole	1200
3.001	39.457	114.7	04	4.400	3.256	1.044	Open Manhole	1200
1.004	10.177	65.2	05	4.300	3.100	1.050	Open Manhole	1200
4.000	5.323	13.3	05	4.300	3.100	1.050	Open Manhole	1200
1.005	4.149	83.0	06	4.400	3.050	1.200	Open Manhole	1200
1.006	14.071	50.0		4.300	2.769	1.431	Open Manhole	0

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.006		4.300	2.769	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Manhole Headloss Coeff (Global)	0.500	Inlet Coeffiecient	0.800
Areal Reduction Factor	1.000	Foul Sewage per hectare (l/s)	0.000	Flow per Person per Day (l/per/day)	0.000
Hot Start (mins)	0	Additional Flow - % of Total Flow	0.000	Run Time (mins)	60
Hot Start Level (mm)	0	MADD Factor * 10m³/ha Storage	2.000	Output Interval (mins)	1

Number of Input Hydrographs 0	Number of Offline Controls 0	Number of Time/Area Diagrams 0
Number of Online Controls 1	Number of Storage Structures 4	Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	M5-60 (mm)	16.200	Cv (Summer)	0.750
Return Period (years)	100	Ratio R	0.300	Cv (Winter)	0.840
Region	Scotland and Ireland	Profile Type	Summer	Storm Duration (mins)	30

Online Controls for Storm

Hydro-Brake® Optimum Manhole: 06, DS/PN: 1.006, Volume (m³): 1.6

Unit Reference	MD-SHE-0069-2000-0900-2000	Sump Available	Yes
Design Head (m)	0.900	Diameter (mm)	69
Design Flow (l/s)	2.0	Invert Level (m)	3.050
Flush-Flo™	Calculated	Minimum Outlet Pipe Diameter (mm)	100
Objective	Minimise upstream storage	Suggested Manhole Diameter (mm)	1200
Application	Surface		

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	0.900	2.0	Kick-Flo®	0.568	1.6
Flush-Flo™	0.278	2.0	Mean Flow over Head Range	-	1.8

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.7	0.600	1.7	1.600	2.6	2.600	3.2	5.000	4.4	7.500	5.3
0.200	2.0	0.800	1.9	1.800	2.7	3.000	3.5	5.500	4.6	8.000	5.5
0.300	2.0	1.000	2.1	2.000	2.9	3.500	3.7	6.000	4.8	8.500	5.7
0.400	1.9	1.200	2.3	2.200	3.0	4.000	4.0	6.500	5.0	9.000	5.8
0.500	1.8	1.400	2.4	2.400	3.1	4.500	4.2	7.000	5.2	9.500	6.0

Storage Structures for Storm

Tank or Pond Manhole: IC01, DS/PN: 1.000

Invert Level (m) 3.650

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	35.0	0.300	35.0

Tank or Pond Manhole: 4, DS/PN: 2.000

Invert Level (m) 3.282

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	234.0	0.250	234.0

Tank or Pond Manhole: IC02, DS/PN: 3.000

Invert Level (m) 3.650

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	45.0	0.300	45.0

Porous Car Park Manhole: 07, DS/PN: 4.000

Infiltration Coefficient Base (m/hr)	0.00000	Porosity	0.30	Slope (1:X)	0.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	3.500	Depression Storage (mm)	5
Max Percolation (l/s)	111.1	Width (m)	10.0	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	40.0	Membrane Depth (mm)	0

Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 2.000
Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coeffiecient 0.800
Hot Start Level (mm) 0 Additional Flow - % of Total Flow 0.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 1 Number of Storage Structures 4 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 16.200 Cv (Summer) 0.750
Region Scotland and Ireland Ratio R 0.300 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DVD Status ON
Analysis Timestep 2.5 Second Increment (Extended) Inertia Status ON
DTS Status ON

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years) 1, 30, 100
Climate Change (%) 0, 20, 20

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
1.000	IC01	60 Winter	100	+20%					3.746	-0.004	0.000	0.59		2.5	OK

Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Level Exceeded
1.000	IC01	

Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)
1.001	01	60 Winter	100	+20%					3.728	-0.022	0.000	0.20		2.7
1.002	02	60 Winter	100	+20%	30/15 Summer				3.712	0.152	0.000	0.20		2.7
2.000	4	10080 Winter	100	+20%	30/2880 Winter				3.484	0.052	0.000	0.05		0.6
2.001	09	10080 Winter	100	+20%					3.501	-0.199	0.000	0.00		0.0
1.003	03	60 Winter	100	+20%	1/120 Winter				3.699	0.317	0.000	0.91		2.2
3.000	IC02	60 Winter	100	+20%	100/60 Winter				3.753	0.003	0.000	0.54		2.3
3.001	08	60 Winter	100	+20%	30/30 Winter				3.736	0.036	0.000	0.41		2.3
1.004	04	180 Winter	100	+20%	30/15 Summer				3.690	0.284	0.000	0.22		4.3
4.000	07	180 Winter	100	+20%	100/120 Summer				3.682	0.032	0.000	0.05		2.0
1.005	05	180 Winter	100	+20%	1/60 Winter				3.686	0.436	0.000	0.17		2.4
1.006	06	360 Winter	100	+20%	1/15 Summer				3.700	0.550	0.000	0.24		1.9

PN	US/MH Name	Status	Level Exceeded
1.001	01	OK	
1.002	02	SURCHARGED	
2.000	4	SURCHARGED	
2.001	09	OK	
1.003	03	SURCHARGED	
3.000	IC02	SURCHARGED	
3.001	08	SURCHARGED	
1.004	04	SURCHARGED	

Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Status	Level Exceeded
4.000	07	SURCHARGED	
1.005	05	SURCHARGED	
1.006	06	SURCHARGED	

APPENDIX H
OPW & MCCLOY CONSULTING FLOOD RISK MAPPING

Tidal flooding may also occur within area shown on this map.
Please refer to the tidal flood extent map. Figure No. MAY/HPW/EXT/CURS/T/003

1Mab2028

1Mac743D

1Ma2273

1Maa675

SAINTDOOLAGHS
Clochar Dúiligh

DRUMNIGH
Droimnigh
Droimnigh

SNUGBOROUGH
Snugborough

MAYNETOWN
An Mhaighean

BALGRIFFIN PARK
Páirc Bhaile Ghrifín

GRANGE
An Ghráinseach

STAPOLIN
Steach Poilín

STAPOLIN
Steach Poilín

Node Label	Water Level (mOD) 10% AEP	Flow (m3/s) 10% AEP	Water Level (mOD) 1% AEP	Flow (m3/s) 1% AEP	Water Level (mOD) 0.1% AEP	Flow (m3/s) 0.1% AEP
1Ma2273	11.79	8.56	11.97	13.89	12.17	21.34
1Maa675	2.50	0.43	2.85	0.68	3.46	1.05
1Mab2028	12.62	0.47	12.82	0.87	13.10	1.55
1Mac743D	16.80	5.02	17.13	9.87	17.35	18.35

321500 322000 322500 323000 323500 324000 324500

242500 242000 241500 241000 240500

250 0 250 500 750 1000 Meters

Location Plan:

LEGEND

- AFA Boundary
- Defended Area
- Modelled River Centreline
- Node Point
- 10% AEP Fluvial Extent (High Risk)
- 1% AEP Fluvial Extent (Medium Risk)
- 0.1% AEP Fluvial Extent (Low Risk)
- Flood Defence - Embankment
- Flood Defence - Wall
- Gate
- NODE123 — Node Label
- x.x% AEP — Standard of Protection of Flood Defence

IMPORTANT USER NOTE:
THE VIEWER OF THIS MAP SHOULD REFER TO THE DISCLAIMER, GUIDANCE NOTES AND CONDITIONS OF USE THAT ACCOMPANY THIS MAP.

The Office of Public Works
Jonathan Swift Street
Trim
Co. Meath

Project:
FINGAL EAST MEATH FRAM STUDY

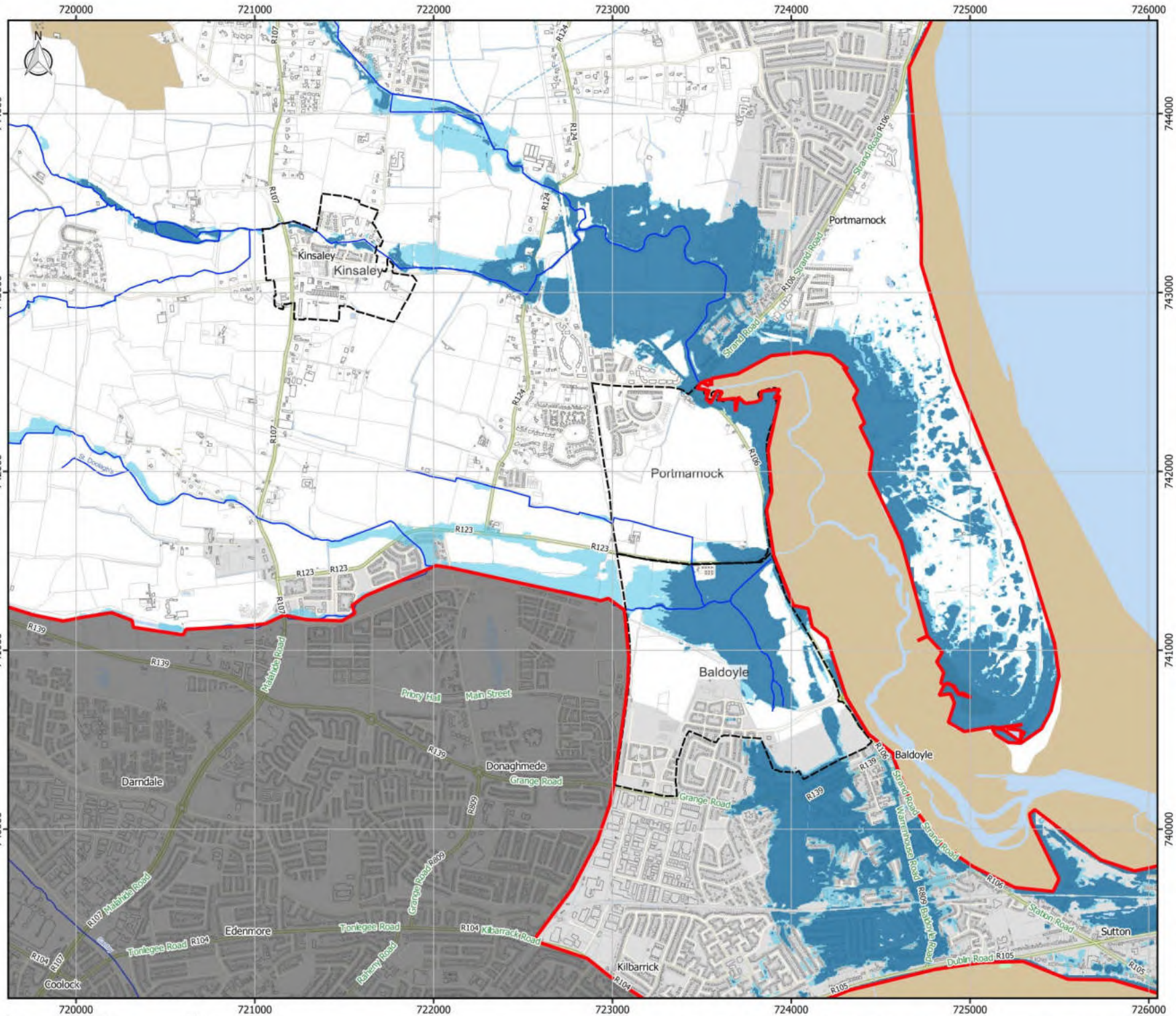
Map: **Mayne Model**
FLUVIAL FLOOD EXTENT MAP

Map Type:	EXTENT		
Source:	FLUVIAL		
Map Area:	HPW		
Scenario:	CURRENT		
Drawn by:	IH	Date:	Nov - 2017
Checked by:	JM	Date:	Nov - 2017
Approved by:	JM	Date:	Nov - 2017

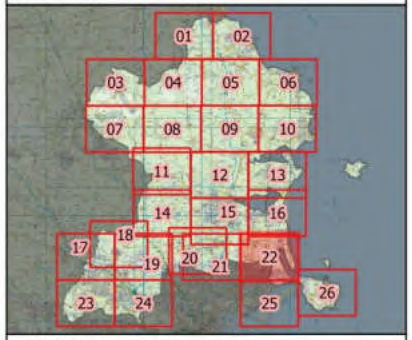
Map No.:
MAY/HPW/EXT/CURS/003

Revision: F1

Map Scale: 1:10,000 Plot Scale: 1:1 @ A3



KEY PLAN



LEGEND

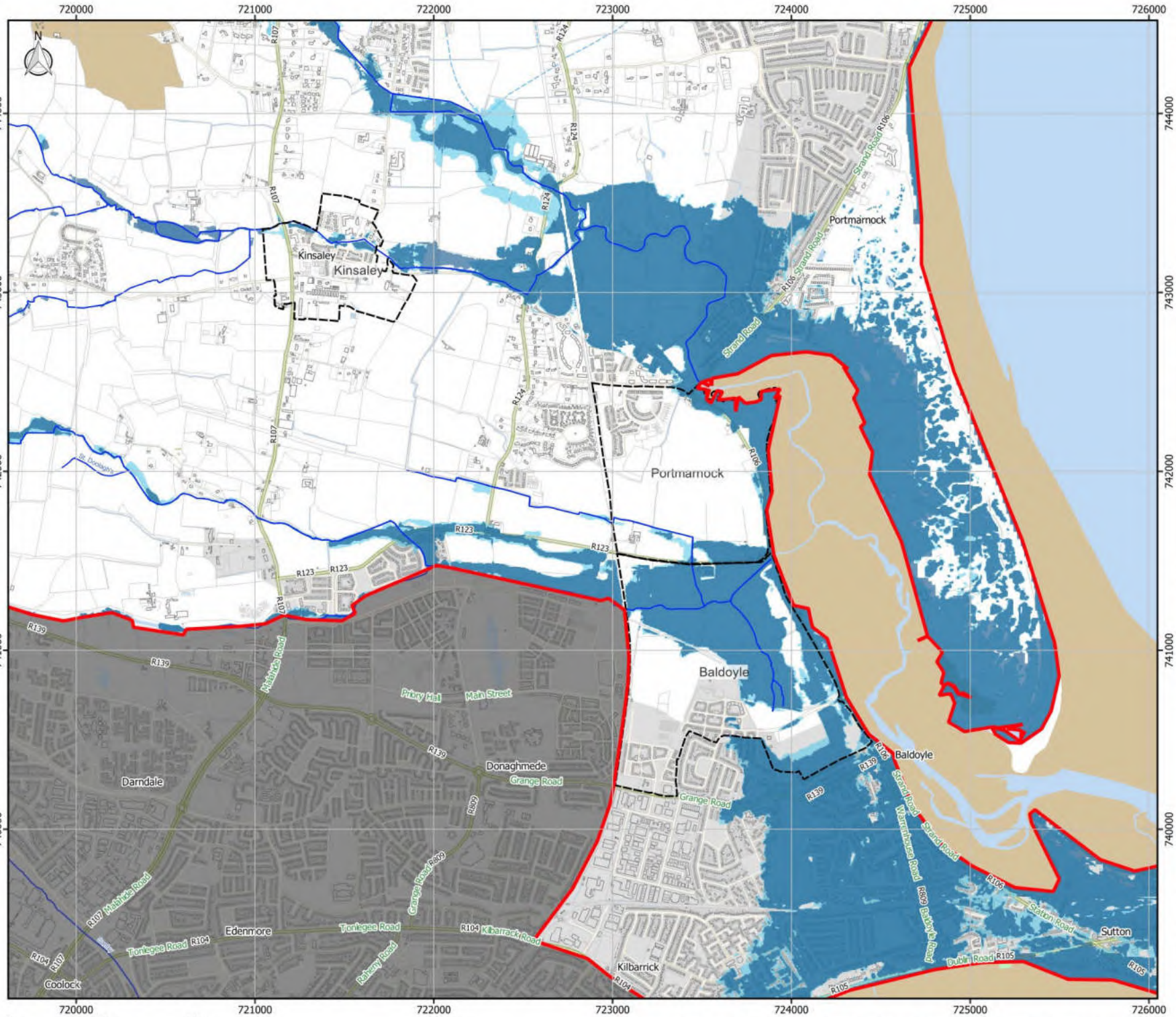
- Fingal County Administrative Boundary
- Watercourses
- LAP & Masterplan Boundaries
- Flood Zone A
- Flood Zone B
- Defended Areas

REV:	NOTE:	DATE:
04	FOR INFORMATION	10/11/2022

Comhairle Contae Fhine Gall
Fingal County Council

McCloy Consulting
Unit 12, The Beat Centre, Stephenstown Industrial Estate, Balbriggan, Co. Dublin
T: +353 (0)1 5138963
E: info@mccloyconsulting.ie
W: www.mccloyconsulting.ie

MAP:	FLOOD ZONE MAP	
FLOOD PROBABILITY:	FLUVIAL: 1% / 0.1%	COASTAL: 0.5% / 0.1%
SOURCE CRS:		ITM EPSG:2157
DRAWN BY:	DL	DATE: 10/11/2022
CHECKED BY:	PS	DATE: 10/11/2022
APPROVED BY:	DKS	DATE: 10/11/2022
DRAWING NUMBER:	M02127-06_FIG_FL122	
MAP SERIES:		PAGE 22 OF 26
DRAWING SCALE:		1:20000 @ A3



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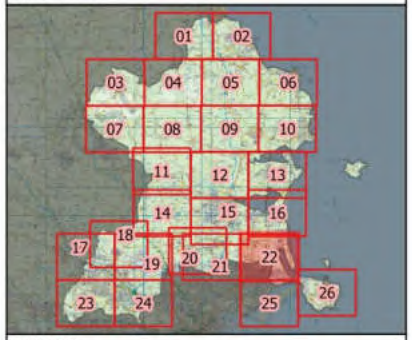


LEGEND

- Fingal County Administrative Boundary
- Watercourses
- LAP & Masterplan Boundaries
- 1% / 0.5% AEP MRFS Flood Extent
- 0.1% AEP MRFS Flood Extent
- No Climate Change Data Available; Present Day Flood Data Only.CC Flood Risk Subject to Site Specific Assessment

REV:	NOTE:	DATE:
04	FOR INFORMATION	10/11/2022

Comhairle Contae Fhine Gall
Fingal County Council

McCloy Consulting
Unit 12, The Beat Centre, Stephenstown Industrial Estate, Balbriggan, Co. Dublin
T: +353 (0)1 5138963
E: info@mccloyconsulting.ie
W: www.mccloyconsulting.ie

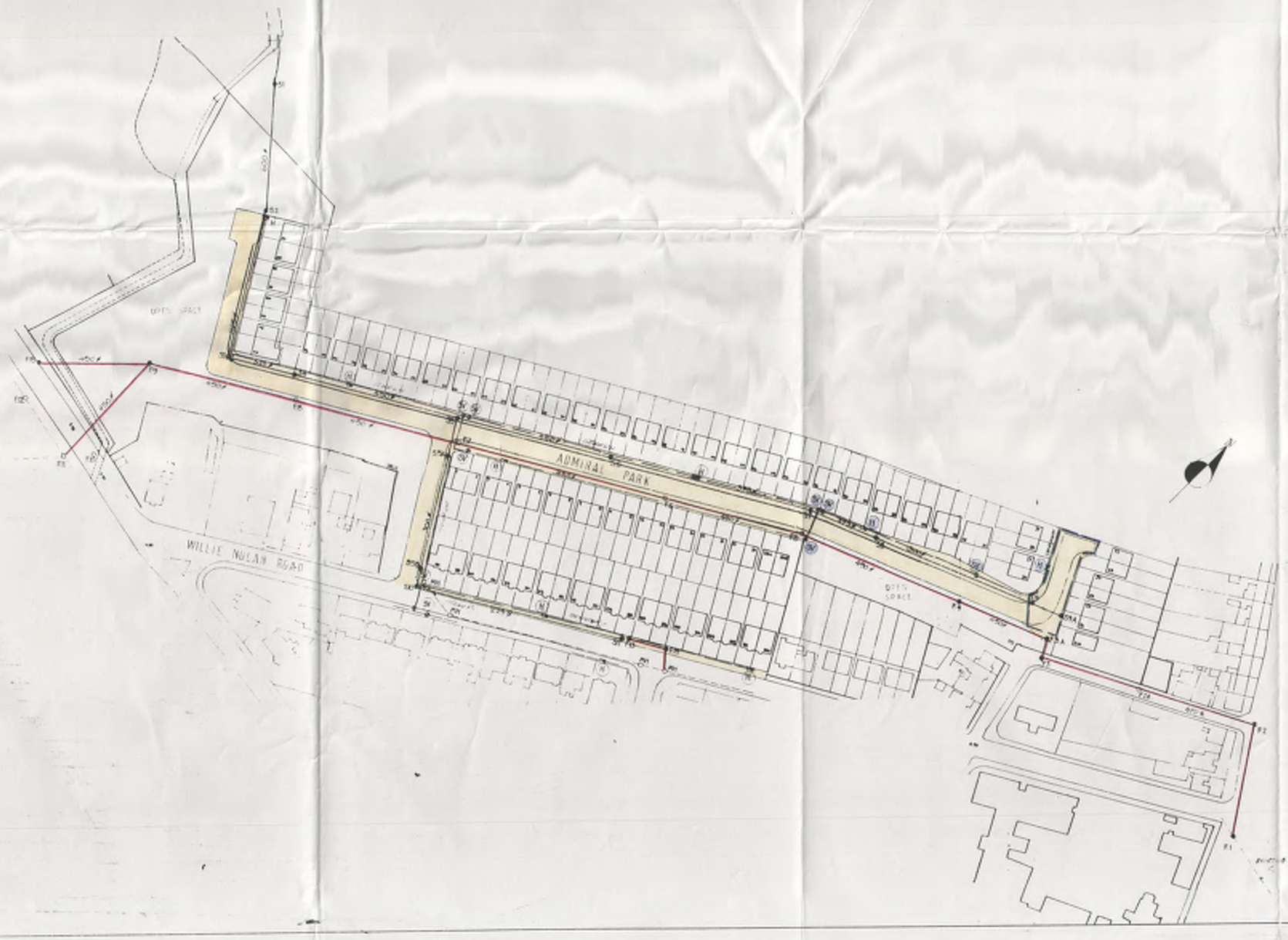
MAP: MID RANGE FUTURE SCENARIO FLOOD EXTENT

FLOOD PROBABILITY:
FLUVIAL: 1% / 0.1% COASTAL: 0.5% / 0.1%

SOURCE CRS:		ITM EPSG:2157
DRAWN BY:	DL	DATE: 10/11/2022
CHECKED BY:	PS	DATE: 10/11/2022
APPROVED BY:	DKS	DATE: 10/11/2022
DRAWING NUMBER:	M02127-06_FIG_FL222	
MAP SERIES:		PAGE 22 OF 26
DRAWING SCALE:		1:20000 @ A3

APPENDIX I
FINGAL COUNTY COUNCIL TAKING-IN-CHARGE DRAWINGS

SITE LOCATION MAP SCALE 1 20000



MANHOLE No.	COVER LEVEL	INVERT LEVEL	MANHOLE No.	COVER LEVEL	INVERT LEVEL
F1	8.19	[illegible]	S1	5.00	[illegible]
F2	6.20	0.80	S2	5.12	3.23
F2A	5.93	0.58	S3	5.20	3.78
F3	6.20	1.00	S4	5.25	3.84
F3A	6.27	1.13	S5	5.18	4.02
F4	6.59	1.29	S5A	5.21	4.22
F5	5.70	1.47	S5B	5.12	4.64
F6	5.32	1.63	S6	5.25	4.27
F7	5.21	1.83	S7	5.23	4.56
F8	5.18	1.99	S8	6.00	4.78
F9	4.85	2.16	S9	6.24	4.96
F10	4.99		S9A	6.69	4.89
F11			S10	5.35	4.52
F12			S11	5.63	4.90
F13	5.30	4.28			
F14	5.78	4.78			
F15	6.28	2.24			

REVISIONS

THIS DRAWING DOES NOT CONSTITUTE A RECOMMENDATION TO HAVE THE ESTATE TAKEN IN CHARGE / INTO MAINTENANCE

FOR INFORMATION ON SAME SEE LETTER DATED: _____

THIS MAP REFERS TO THE TAKING INTO MAINTENANCE ONLY OF THOSE ROADS & SERVICES AS INDICATED IN COLOUR.

County Engineer.
D. G. O'CONNOR, B.A., B.A.I., C.Eng., F.I.E.I.

Date 24/27/4/96	Surveyed By	NOTE ALL FOUL AND SURFACE WATER SEWERS ARE 225mm dia. UNLESS OTHERWISE STATED.
Checked By	Drawn By	
Date 28 APR 1996	B.C.No. 1052.	SCALE DIMENSIONS NOT TO BE USED. LENGTH OF ROADS ARE AS ON THE ATTACHED ROAD SCHEDULE
	Scale 1:1000.	
	O.S. Ref No. 3134-6.	

Comhairle Chontae Fhine Gall

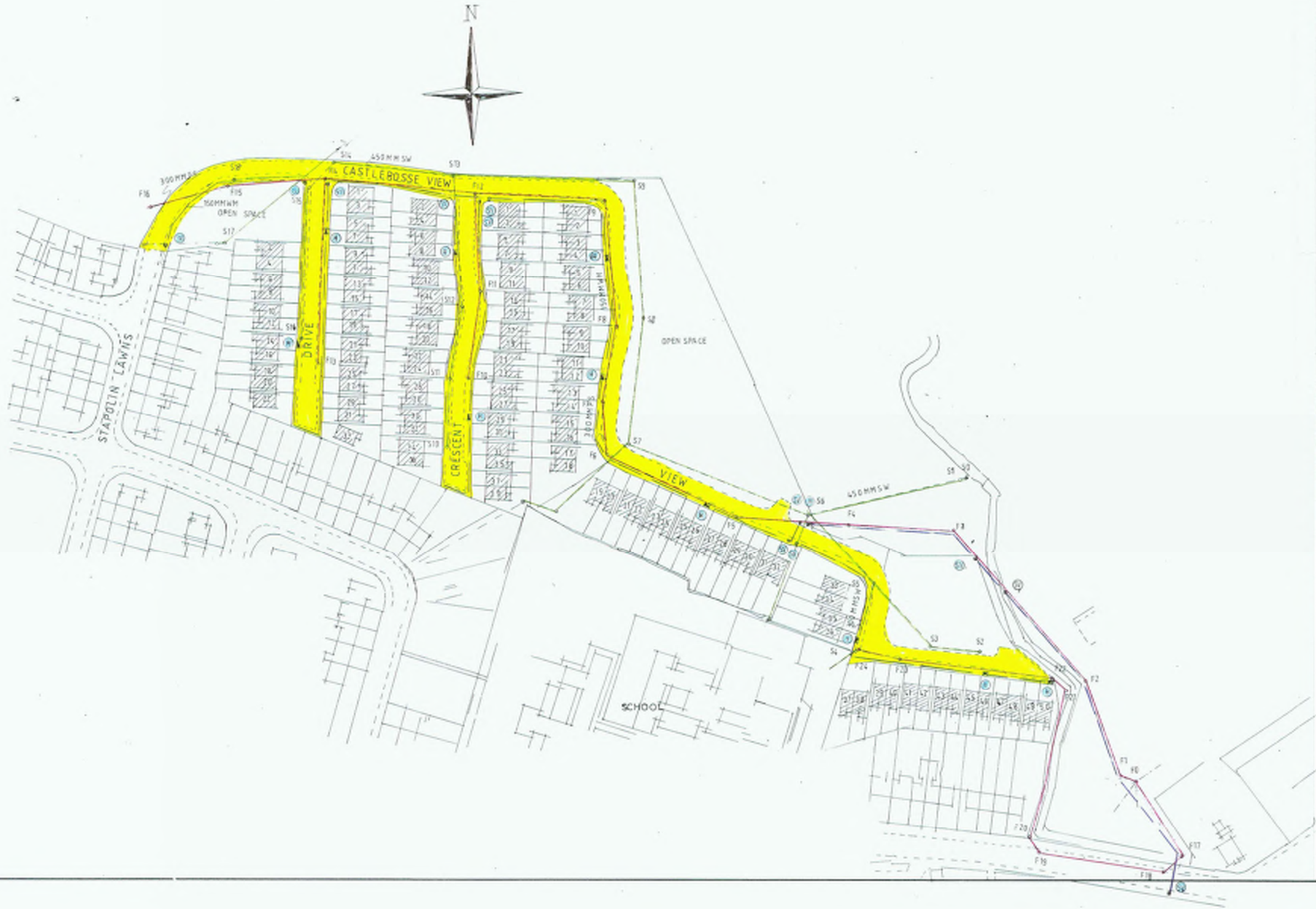
Fingal County Council

BUILDING AND DEVELOPMENT CONTROL

ADMIRAL PARK

BALDOYLE

Foul sewer — Red
Surface water — Green
Watermain — Blue
Hydrants — (H)
Sluice valves — (SV)



FOUL SEWER

MANHOLE No.	COVER LEVEL	INVERT LEVEL	PIPE DIAMETER
F0	2.17	-0.33	
F1	2.31	-0.26	
F2	2.20		
F3	2.27	0.15	
F4	2.67	0.28	
F5	2.94	0.61	
F6	3.18	0.57	
F7	3.25	0.65	
F8	3.40	0.77	
F9	3.17	1.04	
F10	3.50	2.02	
F11	3.17	1.76	
F12	3.14	1.31	
F13	4.22	2.82	
F14	3.56	1.53	
F15	4.03	1.74	
F16	4.76	1.95	

SURFACE WATER

MANHOLE No.	COVER LEVEL	INVERT LEVEL	PIPE DIAMETER
S0	2.80	0.70	
S1	2.68	0.91	
S2	2.76	1.81	
S3	2.81	1.65	
S4	3.01	1.59	
S5	2.47	1.29	
S6	2.82	0.99	
S7	3.15	1.30	
S8	3.31	1.50	
S9	3.64	1.83	
S10			
S11	3.51	2.31	
S12	3.33	2.21	
S13	3.56	2.08	
S14	3.55	2.13	
S15	3.68	2.38	
S16	4.10	2.75	

FCC-TD-TP-TIC 433
BC NO. 1256
ESTATE: Castlerosse Baldoyle (Phase 1+2)

REVISIONS

THIS DRAWING DOES NOT CONSTITUTE A RECOMMENDATION TO HAVE THE ESTATE TAKEN IN CHARGE/INTO MAINTENANCE

FOR INFORMATION ON SAME SEE LETTER DATED _____

THIS MAP REFERS TO THE TAKING INTO MAINTENANCE ONLY OF THOSE ROADS & SERVICES AS INDICATED IN COLOUR.

Date	Surveyed By A FLYNN	NOTE ALL FOUL AND SURFACE WATER SEWERS ARE 225mm DIA. UNLESS OTHERWISE STATED.
Checked By	Drawn By A FLYNN	
Date	B C No. 1256	SCALE DIMENSIONS NOT TO BE USED.
	Scale 1:1000	LENGTH OF ROADS ARE AS ON THE ATTACHED ROAD SCHEDULE.
	O.S. Ref. No. 3133 B	WATER MAIN 100mm UNLESS OTHERWISE STATED.

Comhairle Chontae Fhine Gall

Fingal County Council

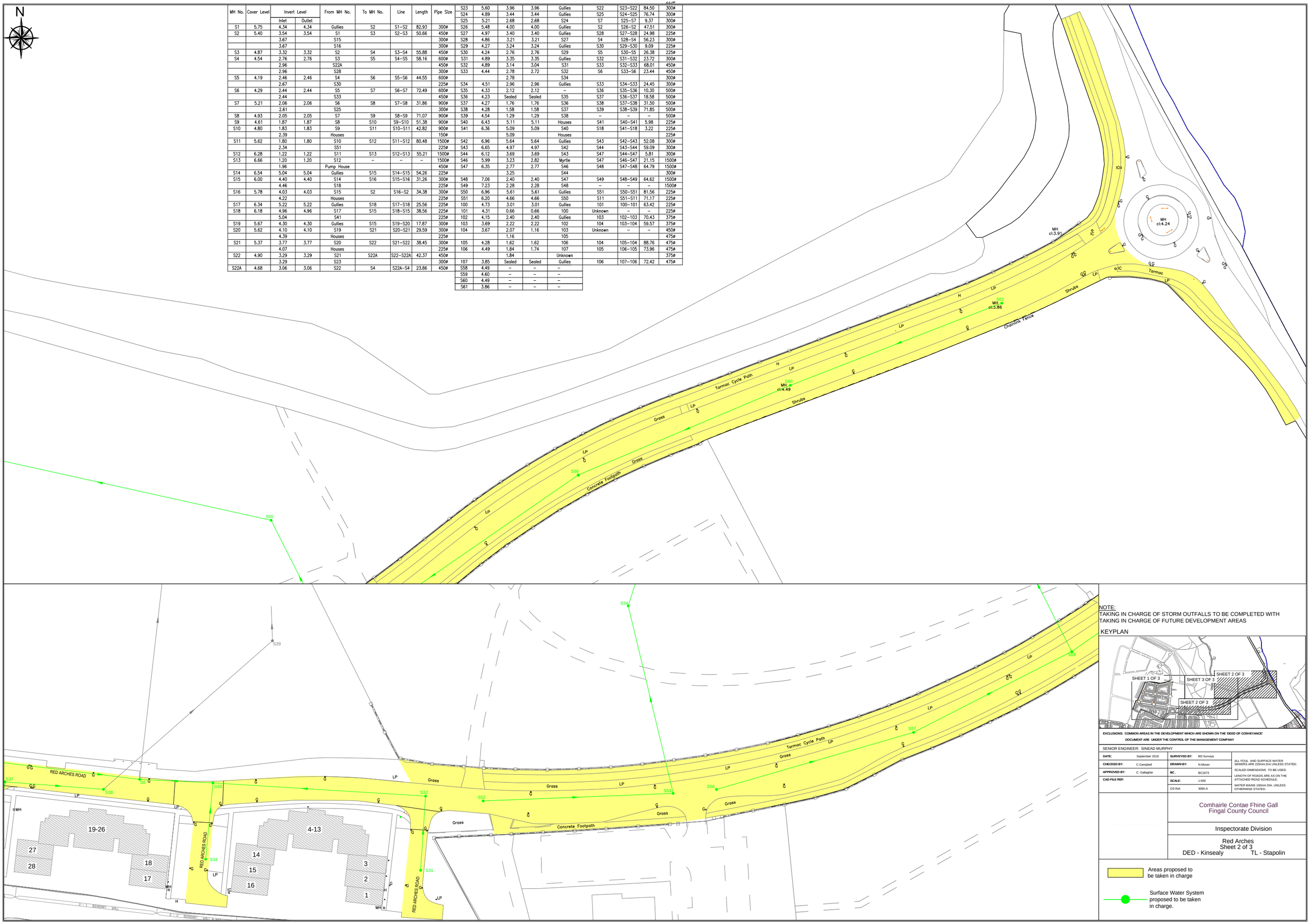
BUILDING AND DEVELOPMENT CONTROL

TAKING IN CHARGE
CASTLEROSSE PHASE ONE
CASTLEROSSE PHASE TWO

Foul sewer — Red
Surface water — Green
Water main — Blue
Hydrants (H) Sluice valves (SV)

MH No.	Cover Level	Invert Level		From MH No.	To MH No.	Line	Length	Pipe Size
		Inlet	Outlet					
S1	5.75	4.34	4.34	Gullies	S2	S1–S2	82.93	300ø
S2	5.40	3.54	3.54	S1	S3	S2–S3	50.66	450ø
		3.67		S15				300ø
		3.67		S16				300ø
S3	4.87	3.32	3.32	S2	S4	S3–S4	55.88	450ø
S4	4.54	2.76	2.76	S3	S5	S4–S5	58.16	600ø
		2.96		S22A				450ø
		2.96		S28				300ø
S5	4.19	2.46	2.46	S4	S6	S5–S6	44.55	600ø
		2.67		S30				225ø
S6	4.29	2.44	2.44	S5	S7	S6–S7	72.49	600ø
		2.44		S33				450ø
S7	5.21	2.06	2.06	S6	S8	S7–S8	31.86	900ø
		2.61		S25				300ø
S8	4.93	2.05	2.05	S7	S9	S8–S9	71.07	900ø
S9	4.61	1.87	1.87	S8	S10	S9–S10	51.38	900ø
S10	4.80	1.83	1.83	S9	S11	S10–S11	42.82	900ø
		2.39		Houses				150ø
S11	5.62	1.80	1.80	S10	S12	S11–S12	80.48	1500ø
		2.34		S51				225ø
S12	6.28	1.22	1.22	S11	S13	S12–S13	55.21	1500ø
S13	6.66	1.20	1.20	S12	–	–	–	1500ø
		1.96		Pump House				450ø
S14	6.54	5.04	5.04	Gullies	S15	S14–S15	54.26	225ø
S15	6.00	4.40	4.40	S14	S16	S15–S16	31.26	300ø
		4.46		S18				225ø
S16	5.78	4.03	4.03	S15	S2	S16–S2	34.38	300ø
		4.22		Houses				225ø
S17	6.34	5.22	5.22	Gullies	S18	S17–S18	25.56	225ø
S18	6.18	4.96	4.96	S17	S15	S18–S15	38.56	225ø
		5.04		S41				225ø
S19	5.67	4.30	4.30	Gullies	S15	S19–S20	17.87	300ø
S20	5.62	4.10	4.10	S19	S21	S20–S21	29.59	300ø
		4.39		Houses				225ø
S21	5.37	3.77	3.77	S20	S22	S21–S22	38.45	300ø
		4.07		Houses				225ø
S22	4.90	3.29	3.29	S21	S22A	S22–S22A	42.37	450ø
		3.29		S23				300ø
S22A	4.68	3.06	3.06	S22	S4	S22A–S4	23.86	450ø

S23	5.60	3.96	3.96	Gullies	S22	S23–S22	84.50	300ø
S24	4.89	3.44	3.44	Gullies	S25	S24–S25	76.74	300ø
S25	5.21	2.68	2.68	S24	S7	S25–S7	9.37	300ø
S26	5.48	4.00	4.00	Gullies	S2	S26–S2	47.51	300ø
S27	4.97	3.40	3.40	Gullies	S28	S27–S28	24.98	225ø
S28	4.86	3.21	3.21	S27	S4	S28–S4	56.23	300ø
S29	4.27	3.24	3.24	Gullies	S30	S29–S30	9.09	225ø
S30	4.24	2.76	2.76	S29	S5	S30–S5	26.38	225ø
S31	4.89	3.35	3.35	Gullies	S32	S31–S32	23.72	300ø
S32	4.89	3.14	3.04	S31	S33	S32–S33	68.01	450ø
S33	4.44	2.78	2.72	S32	S6	S33–S6	23.44	450ø
		2.78		S34				300ø
S34	4.51	2.96	2.96	Gullies	S33	S34–S33	24.45	300ø
S35	4.33	2.12	2.12	–	S36	S35–S36	10.30	500ø
S36	4.23	Sealed	Sealed	S35	S37	S36–S37	18.58	500ø
S37	4.27	1.76	1.76	S36	S38	S37–S38	31.50	500ø
S38	4.28	1.58	1.58	S37	S39	S38–S39	71.85	500ø
S39	4.54	1.29	1.29	S38	–	–	–	500ø
S40	6.43	5.11	5.11	Houses	S41	S40–S41	5.98	225ø
S41	6.36	5.09	5.09	S40	S18	S41–S18	3.22	225ø
		5.09		Houses				225ø
S42	6.96	5.64	5.64	Gullies	S43	S42–S43	52.08	300ø
S43	6.65	4.97	4.97	S42	S44	S43–S44	59.09	300ø
S44	6.12	3.69	3.69	S43	S47	S44–S47	5.81	300ø
S46	5.99	3.23	2.82	Myrtle	S47	S46–S47	21.15	1500ø
S47	6.35	2.77	2.77	S46	S48	S47–S48	64.79	1500ø
		3.25		S44				300ø
S48	7.06	2.40	2.40	S47	S49	S48–S49	64.62	1500ø
S49	7.23	2.28	2.28	S48	–	–	–	1500ø
S50	6.96	5.61	5.61	Gullies	S51	S50–S51	81.56	225ø
S51	6.20	4.66	4.66	S50	S11	S51–S11	71.17	225ø
100	4.73	3.01	3.01	Gullies	101	100–101	63.42	225ø
101	4.31	0.66	0.66	100	Unknown	–	–	225ø
102	4.15	2.40	2.40	Gullies	103	102–103	70.43	375ø
103	3.69	2.22	2.22	102	104	103–104	59.57	375ø
104	3.67	2.07	1.16	103	Unknown	–	–	450ø
		1.16		105				475ø
105	4.28	1.62	1.62	106	104	105–104	88.76	475ø
106	4.49	1.84	1.74	107	105	106–105	73.96	475ø
		1.84		Unknown				375ø
107	3.85	Sealed	Sealed	Gullies	106	107–106	72.42	475ø
S58	4.49	–	–	–				
S59	4.60	–	–	–				
S60	4.49	–	–	–				
S61	3.86	–	–	–				



NOTE:
TAKING IN CHARGE OF STORM OUTFALLS TO BE COMPLETED WITH TAKING IN CHARGE OF FUTURE DEVELOPMENT AREAS

KEYPLAN

EXCLUSIONS: COMMON AREAS IN THE DEVELOPMENT WHICH ARE SHOWN ON THE 'DEED OF CONVEYANCE' DOCUMENT ARE UNDER THE CONTROL OF THE MANAGEMENT COMPANY

SENIOR ENGINEER: SINEAD MURPHY

DATE:	September 2018	SURVEYED BY:	BD Surveys
CHECKED BY:	C.Campbell	DRAWN BY:	N.Moran
APPROVED BY:	C. Gallagher	BC .	BC1673
CAD FILE REF:		SCALE:	1:500
		OS Ref.	3065-A

ALL FOUL AND SURFACE WATER SEWERS ARE 225mm DIA UNLESS STATED.

SCALED DIMENSIONS TO BE USED.

LENGTH OF ROADS ARE AS ON THE ATTACHED ROAD SCHEDULE.

WATER MAINS 100mm DIA. UNLESS OTHERWISE STATED.

Comhairle Contae Fhine Gall
Fingal County Council

Inspectorate Division

Red Arches
Sheet 2 of 3
DED - Kinseally TL - Stapolin

Areas proposed to be taken in charge

Surface Water System proposed to be taken in charge.