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CONSULTING
ENGINEERS

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Planning Department,
South Dublin City Council,
County Hall,
Tallaght,
Dublin 24

29th April 2022

SDCC Ref: SD21B/0529

Our Ref:22005_Let_SDCC_220429

RE: 60, BALLYROAN ROAD, TEMPLEOGUE, DUBLIN 16, D16V1Y6

To whom it may Concern,

POGA Consulting Engineers were engaged to provide Engineering services at the above dwelling. On behalf of our client, we enclose our response to planning condition 2 issued as part of the final grant on 07/12/2021.

Planning condition 2 (A)states:

> (A) A report showing site specific soil percolation test results and design calculations for the proposed soakaway, which shall be in accordance with BRE Digest 365 - Soakaway Design.

Our response is:

> Trinity Green Environmental Consultants completed a site-specific Soil Infiltration Test for the purpose of designing a Soakaway, as part of this planning application. Please refer to Appendix A for the full Soil Infiltration Test Report.The soakaway tests were completed in accordance with BRE Digest 365, and the report concluded that the "soakage is slow and the watertable is high". Therefore, the soil was deemed unsuitable for infiltration and the alternative SuDS strategy of a Rainwater Garden was pursued.
>
> The planter is designed to store the run off from 95% of the roof area for a 10 year storm event with a 2 hour duration - please refer to Appendix B for rainfall details and design of planter.

Planning condition 2(B) states:

> (B) A revised drawing showing plan and cross-sectional views, dimensions, and location of proposed soakaway. Any proposed soakaway shall be located fully within the curtilage of the property and shall be:
> (i) At least 5m from any building, public sewer, road boundary or structure.
> (ii) Generally, not within 3m of the boundary of the adjoining property.
> (iii) Not in such a position that the ground below foundations is likely to be adversely affected.
> (iv) A minimum of 10m from any sewage treatment percolation area and from any watercourse/floodplain.
> (v) Soakaways shall include an overflow connection to the existing surface water drainage network.

Our response is:

The proposed Rainwater Garden planter is located to the rear of the dwelling. Please refer to Appendix C containing drawings 22005-100 and 22005-101, respectively, for the full surface water drainage layout and for a section through the proposed Rainwater Garden planter.

Planning condition 2(C) states:

> (C) Water Butts shall be included as part of additional Sustainable Drainage Systems (SuDS) features.

Our response is:

The roof runoff will be directed to the Rainwater Garden planter through surface water pipes. On opposite sides of the roof, rain water butts will gather some of the roof rainwater and thus help to collect the runoff. Please refer to Appendix C containing drawings 22005-100 and 22005-101, respectively, for proposed rainwater butt locations and for typical rainwater butt connection to the dwelling's drainage network.

Planning condition 2(D) states:

> (D) All works shall comply with the Building Regulations -Technical guidance document- Part H Drainage and Wastewater disposal.

Our response is:

All surface water drainage is designed in accordance with the Department of Environment Recommendation for Site Development Works, Building Regulations Part H (Drainage and Wastewater Disposal) and Irish Water Standards.

Planning condition 2(E) states:

> (E) There shall be complete separation of the foul and surface water drainage for the proposed development.
> REASON: In the interests of public health, the proper planning and sustainable development of the area and in order to ensure adequate surface water drainage provision.

Our response is:

Appendix D contains the Irish Water Utilities mapping for the drainage within the area. The mapping shows complete separation of existing foul and surface water networks in the region where the subject site is located. Furthermore, the foul and surface water connections from the existing network to the dwelling are also separate.

If you have any queries in relation to the above do not hesitate to contact me.

Yours sincerely

_____

Eamonn Mahon *BEng(hons), MSc, CEng, MIEI, MIStructE*- Associate
On behalf of POGA Consulting Engineers

APPENDIX A

SOIL INFILTRATION TEST

Trinity Green
Environmental Consultants

Clonfert
Maynooth
Co. Kildare
t: 01-6290616
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Vat No. 3251411B

Soil Infiltration Test for Design of Soakaway

At

60 Ballyroan Road

Prepared by

Dr. Eugene Bolton
Senior Consultant
Trinity Green

Report on Soil Infiltration Test

Introduction

To manage the surface water from the development it is proposed to construct Soakaways in accordance with BRE Digest365 As part of this, the infiltration capacity of the soil was assessed. Dr. Eugene Bolton of Trinity Green Environmental Consultants was commissioned to carry out soil Infiltration Tests in accordance with BRE Digest365 to establish the suitability of the site for disposal of water.

1.0 Visual assessment of Site

The site is located in an Urban setting where the sites are mature so there is no vetetation to indicate likely soakage properties of the soil. The landscape is relatively flat and on the day of the tests there was no surface water present.

Sub-soil profile

A test pit was excavated to 0.95m bgl. There is a layer of black clayey topsoil to 300mm bgl. The subsoil to 800mm is a light brown CLAY lightly compacted. below this it a gravely SILT/CLAY but with low gravel content. Water was present at 850mm bgl

4.0 Infiltration Tests

The Infiltration rate, generally expressed as metres per second, is the volume of water that enters the soil over a unit area and unit time. In order to obtain this measurement a pit is excavated and filled with water. The fall in the level of the water is recorded over time.
a new test pit was opened that had dimensions

Length 1.2m
Width 0.3m
Depth 0.75m

.
The base of the pit was filled with water to a depth of 500mm and the drop in the water level was followed over time

5.0 Results

The time required for the level to fall from 75% full to 25% full (ie 50% drop) – from a water depth of 0.375m to a water depth of 0.125m is estimated to be 987min.

Table 1 – Time taken for water level to fall

Elapsed Time (Mins)	Depth of Water (mm)
0	500
13	490
34	480
183	430
275	400
403	360
619	300
1219	150
1342	125

Infiltration rate (f) = Volume of water used/unit exposed area /unit time

Volume = pit length (m) x Width (m) x Drop in water level (m)
= 1.2 x 0.3 x 0.25
= 0.09m3

Exposed area = (Length x Half the effective height x 2) + (Width x Half the effective height x 2) + Base area
= (1.2 x 0.25 x 2) + (0.3 x 0.25 x 2) + (1.2 x 0.3)
= 1.11m2

Time = 987min

Infiltration rate (f) = 0.09/1.11/987

= 8.2E-05 m/min

f = 1.3E-06 m/sec

6.0 *Conclusions*

From the above observation it is concluded that the soakage is slow and watertable is high

Signed .....
Dr. Eugene Bolton
Senior Consultant
Trinity Green

15/03/2022

Photo

Trial Pit – Depth 0.95 – water encountered at 0.85mm bgl

Test Pit before water added – Depth 0.75m

Pit during test

APPENDIX B

RAINFALL DATA & RAINGARDEN PLANTER DESIGN

Met Eireann
Return Period Rainfall Depths for sliding Durations
Irish Grid: Easting: 312920, Northing: 227997,

	Interval		Years											
DURATION	6months,	1year,	2,	3,	4,	5,	10,	20,	30,	50,	75,	100,	150,	200,	250,	500,
5 mins	2.6,	3.9,	4.6,	5.6,	6.4,	6.9,	8.9,	11.1,	12.6,	14.8,	16.7,	18.2,	20.6,	22.5,	24.1,	N/A ,
10 mins	3.7,	5.4,	6.4,	7.8,	8.9,	9.7,	12.3,	15.5,	17.6,	20.6,	23.3,	25.4,	28.8,	31.4,	33.6,	N/A ,
15 mins	4.3,	6.3,	7.5,	9.2,	10.4,	11.4,	14.5,	18.2,	20.7,	24.2,	27.4,	29.9,	33.8,	36.9,	39.5,	N/A ,
30 mins	5.7,	8.3,	9.7,	11.9,	13.4,	14.6,	18.5,	23.0,	26.0,	30.4,	34.2,	37.3,	42.0,	45.7,	48.8,	N/A ,
1 hours	7.5,	10.9,	12.7,	15.4,	17.3,	18.7,	23.6,	29.1,	32.8,	38.1,	42.8,	46.5,	52.2,	56.7,	60.4,	N/A ,
2 hours	10.0,	14.2,	16.5,	19.9,	22.3,	24.1,	30.1,	36.9,	41.4,	47.8,	53.5,	58.0,	64.8,	70.2,	74.6,	N/A ,
3 hours	11.7,	16.6,	19.2,	23.1,	25.8,	27.9,	34.6,	42.3,	47.4,	54.6,	61.0,	66.0,	73.6,	79.6,	84.5,	N/A ,
4 hours	13.2,	18.6,	21.4,	25.7,	28.7,	30.9,	38.3,	46.7,	52.2,	60.0,	66.9,	72.3,	80.5,	87.0,	92.3,	N/A ,
6 hours	15.5,	21.7,	25.0,	29.9,	33.2,	35.8,	44.2,	53.6,	59.8,	68.5,	76.3,	82.2,	91.4,	98.6,	104.5,	N/A ,
9 hours	18.3,	25.4,	29.2,	34.8,	38.5,	41.5,	50.9,	61.6,	68.5,	78.3,	86.9,	93.6,	103.8,	111.7,	118.3,	N/A ,
12 hours	20.6,	28.4,	32.5,	38.7,	42.8,	46.0,	56.3,	67.9,	75.5,	86.0,	95.4,	102.6,	113.6,	122.1,	129.2,	N/A ,
18 hours	24.2,	33.2,	37.9,	45.0,	49.6,	53.3,	64.9,	78.0,	86.5,	98.3,	108.7,	116.7,	129.0,	138.5,	146.3,	N/A ,
24 hours	27.2,	37.1,	42.3,	50.0,	55.1,	59.1,	71.8,	86.0,	95.2,	108.0,	119.3,	128.0,	141.2,	151.4,	159.8,	188.9,
2 days	34.1,	45.4,	51.3,	59.9,	65.5,	69.9,	83.7,	98.8,	108.6,	122.1,	133.8,	142.8,	156.4,	166.8,	175.4,	204.8,
3 days	39.6,	52.1,	58.5,	67.8,	73.9,	78.5,	93.3,	109.3,	119.6,	133.7,	145.9,	155.2,	169.3,	180.1,	188.8,	218.9,
4 days	44.5,	57.9,	64.8,	74.7,	81.2,	86.1,	101.6,	118.5,	129.2,	143.9,	156.5,	166.2,	180.7,	191.7,	200.7,	231.5,
6 days	53.0,	68.1,	75.7,	86.7,	93.8,	99.2,	116.1,	134.3,	145.8,	161.5,	174.9,	185.1,	200.5,	212.1,	221.5,	253.6,
8 days	60.6,	77.1,	85.3,	97.2,	104.8,	110.6,	128.7,	148.1,	160.2,	176.8,	190.9,	201.6,	217.7,	229.8,	239.6,	272.9,
10 days	67.5,	85.2,	94.1,	106.7,	114.8,	121.0,	140.2,	160.5,	173.3,	190.6,	205.4,	216.5,	233.2,	245.7,	255.9,	290.3,
12 days	74.0,	92.9,	102.2,	115.6,	124.1,	130.6,	150.7,	172.0,	185.3,	203.3,	218.7,	230.2,	247.4,	260.4,	270.9,	306.3,
16 days	86.0,	106.9,	117.2,	131.8,	141.2,	148.2,	170.0,	192.9,	207.2,	226.5,	242.8,	255.1,	273.4,	287.1,	298.2,	335.4,
20 days	97.1,	119.8,	131.0,	146.7,	156.8,	164.3,	187.6,	212.0,	227.1,	247.5,	264.7,	277.6,	296.8,	311.2,	322.8,	361.6,
25 days	110.1,	134.9,	147.0,	164.0,	174.8,	183.0,	207.9,	233.9,	250.0,	271.6,	289.8,	303.5,	323.7,	338.8,	351.0,	391.6,

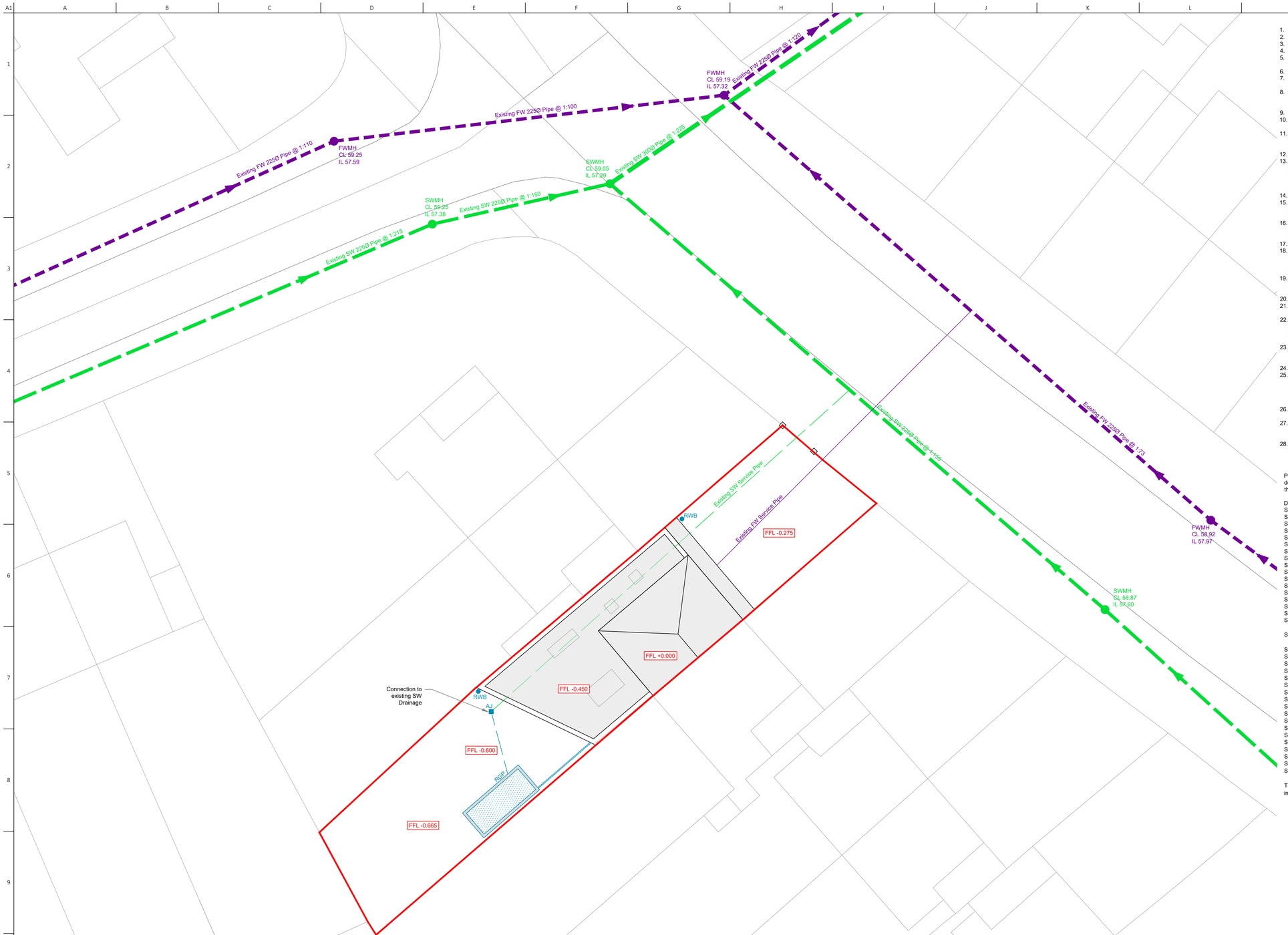
NOTES:
N/A Data not available
These values are derived from a Depth Duration Frequency (DDF) Model
For details refer to:
'Fitzgerald D. L. (2007), Estimates of Point Rainfall Frequencies, Technical Note No. 61, Met Eireann, Dublin',
Available for download at www.met.ie/climate/dataproducts/Estimation-of-Point-Rainfall-Frequencies_TN61.pdf

Rainwater Garden Planter Design

M10 | 120	=	30.1	mm				
Roof Area	=	131	m^3				
Required Volume	=	30.1	x	1.00E-03	x	131	
Required Volume	=	3.94	m^3				
Voids	=	40%					
Req. Volume Soil	=	3.94	/	0.40	=	9.86	m^3
Planter Volume	=	5	x	2	x	1	
Planter Volume	=	10	m^3				

APPENDIX C

DRAWINGS 22005-100 & 22005-101



DRAINAGE LAYOUT

Scale 1:150

GENERAL

1. Read in conjunction with all relevant Architect's and Engineer's drawings.
2. Do not set out from this drawing. Setting out to be done from Architect's drawings.
3. All houses to have individual 100mm diameter foul and surface water connections.
4. Adjust foundation depths as necessary to avoid being undermined by foul and surface water service connections.
5. Where cover to pipes is less than 1.2m in roads, refer note 2 STD-WW-07. Surround to be in accordance with standard detail STD-WW-08, depth of cover to foul sewer pipes in accordance with standard detail STD-WW-07.
6. Record drawings of the as constructed work shall be made available to POGA at the end of the project.
7. All connections to existing foul and surface water must be determined by the main contractor prior to any construction on site. All existing invert levels to be confirmed to the engineers and all discrepancies notified to POGA before any construction commences.
8. Pipe materials for the proposed gravity sewer and rising main shall be in compliance with Section 3.13 of the Wastewater Code of Practice.

SURFACE WATER

9. Surface Water manhole and road gully details to comply with Greater Dublin Regional Code of practice for Drainage Works.
10. Please ensure that the external face of proposed manhole chambers are a minimum of 0.5m from kerb line and external face of sewers are a minimum of 1m from kerb line.
11. All surface water pipes due to be taken in charge by the local authority to be S&S concrete with rubber rings. Twin-wall high density polyethylene pipes (up to 375mm dia.) may be accpatable.The contractor must confirm in writing twin-wall pipes are acceptable to the Local Authority before use.
12. Bedding and surround as per Greater Dublin Regional Code of Practice for Drainage Works
13. Manhole covers and frames shall comply with the LA standard pattern with min opening of 675mm & with closed keyways, all Manholes covers to comply with IS EN 124:1994. Group 4 (min. class D400) manholes in all trafficked areas, Minimum Group 2 (min. class B125) to be used in footways, pedestrian areas and comparable areas, Class D400 should be used in footpaths where heavy vehicles have the potential to access or mount footpaths and these covers should be free of trip hazards, removable parts and be lockable.Group 1 (min. class A15) may be used in enclosed private gardens only.
14. Manholes on house drains to be in private property. House drains shall not pass through property they do not serve.
15. Double gullies, with separate connections to main, to be provided at low points and at the ends of Cul de Sacs. Maximum run of pipe 15m.Minimum pipe diameter 150mm.Maximum gully spacing for roads up to 7m wide to be 50m UNO. All Road gullies to be closed in the direction of traffic flow.
16. All Gully tops shall comply with the LA standard. Group 3 (min. class C250) where gully are located in the kerbside channels of roads which when measured from the kerb, extend a maximum of 0.5m into the carriageway and a maximum of 0.2m into the footway, Group 4 (min Class D400) to be used elsewhere. All gully covers to comply with IS EN 124:1994.
17. No ponding is acceptable. All levels to be dished to gullies.
18. Final connections to be made by Irish Water or agents acting on their behalf. Connections are not to be made by the contractor without Irish Water written agreement in place.

FOUL

19. There are summary notes, refer to Irish Wastewater Code of Practice and Standard Details for full notes and details. Where discrepancy between these and Irish Water publication are identified, Irish Water publications take precedence. All discrepancies should be reported to POGA.
20. All foul manholes to comply with Irish Wastewater standard details.
21. Please ensure that the external face of proposed manhole chambers (not cover) are a minimum of 0.5m from kerb line and external face of sewers are a minimum of 1m from kerb line.
22. All foul pipes due to be taken in charge by the Irish Wastewater Code of Practice to be S&S concrete with rubber rings or Wavin OSMA UltraRib with a stiffness classification of SN8, 8. Pipe materials for the proposed gravity sewer and rising main shall be in compliance with Section 3.13 of the Wastewater Code of Practice. Backfill and bedding shall comply with Irish Water Standard Detail STD-WW-07. Concrete bed, Haunch and surround to wastewater pipes shall comply with standard detail STD-WW-08.
23. Where cover to pipes is less than 1.2m in roads, 0.9m in public areas where access is limited to a gross weight of 7.5 tonne vehicles, and 0.8m in grassed/landscaped areas, surround the pipe in 150mm concrete to IW detail STD-WW-08. Absolute Minimum Cover above the external crown of the pipe of 750mm.
24. All foundations to be taken below sewer depths.
25. Manhole covers and frames shall comply with the Irish Wastewater Code of Practice standard pattern with min opening of 600mm & with closed keyways. All Manholes covers to be circular and comply with IS EN 124:1994. Group 4 (min. class D400) manholes in all trafficked areas, Minimum Group 2 (min. class B125) to be used in footways, pedestrian areas and comparable areas, Class D400 should be used in footpaths where heavy vehicles have the potential to access or mount footpaths and these covers should be free of trip hazards, removable parts and be lockable.
26. From finished ground level to the first step shall be a maximum of 675mm. Stainless Steel ladder to be provide where depth of manhole exceeds 3m.
27. Manholes and inspection chambers on house drains to be in private property. Provide inspection chambers on individual service connections within 1m of the boundary. See section 3.11.13 of Wastewater Code of Practice and STD-WW-03 of Wastewater Infrastructure Standard Details.
28. Final connections to be made by the Local Authority as agents acting for Irish Water. Connections are not to be made by the contractor without the Irish Water written agreement in advance.

Please refer to the most up to date Irish Water (IW) documents, IW-CDS-5030-01 for Wastewater Infrastructure Standard Details. These details superseded all previously issued POGA wastewater details and should be used on all new and part constructed developments from the December 2017.

Drawing No.	Drawing Title	Rev
STD-WW-01	Waste water service connection responsibility	1
STD-WW-02	Typical layout for sewer within new developments	1
STD-WW-03	Drain & service connection pipework	1
STD-WW-04	Typical sewer / service pipe connection	1
STD-WW-05	Typical service layout indicating separation distances	1
STD-WW-06	Restrictions on wastewater infrastructure adjacent to trees	2
STD-WW-06A	Restrictions on trees/shrubs planting adjacent to sewers	0
STD-WW-07	Trench backfill & bedding	1
STD-WW-08	Concrete bed, haunch & surround to wastewater pipes	0
STD-WW-09	Blockwork manhole (<450mm dia.)	2
STD-WW-10	Pre-cast concrete manhole	2
STD-WW-11	In-situ concrete manhole	2
STD-WW-12	Backdrop manholes	2
STD-WW-13	Private side inspection chamber	2
STD-WW-14	Thrust blocks for rising mains	1
STD-WW-15	Scour valve chamber (foul rising main <200mm dia.)	2
STD-WW-16	Sluice valve details for rising mains ductile iron (D.I.) pipe (<200mm dia.) (sheet 1 of 2)	3
STD-WW-17	Sluice valve details for rising mains polyethylene (P.E.) pipe (<200mm dia.) (sheet 2 of 2)	2
STD-WW-18	Air valve chamber (foul rising main <200mm dia.)	2
STD-WW-19	Duct chamber	2
STD-WW-20	Emergency overflow structure	1
STD-WW-21	Typical ditch/stream crossing for gravity main (sheet 1 of 2)	1
STD-WW-22	Typical ditch/stream crossing for rising main (sheet 2 of 2)	1
STD-WW-23	Typical bridge crossing for rising main (sheet 1 of 2)	1
STD-WW-24	Typical bridge crossing for rising main (sheet 2 of 2)	1
STD-WW-25	Security gate & fencing	2
STD-WW-26	Indicative pumping station layout	0
STD-WW-27	Flow meter chamber (foul rising main <200mm dia.)	2
STD-WW-28	Indicative submersible pumping station	2
STD-WW-28A	Indicative pre-cast concrete submersible pumping station	1
STD-WW-29	Rising main discharge manhole	2
STD-WW-30	Kiosk type 1 pumping station & wet kiosk (sheet 1 of 2)	2
STD-WW-31	Kiosk type 2 + 3 pumping station & wet kiosk (sheet 2 of 2)	2
STD-WW-32	Hardstanding area pumping station (permeable & impermeable)	1
STD-WW-33	Lamp bollard & lamp standard	1
STD-WW-34	Vent stack	1

The above applied to wastewater only, refer to POGA Standard Details for Surface Water infrastructure.

DRAINAGE LEGEND

- SITE BOUNDARY
- Existing SW Sewer — EXISTING SURFACE WATER SEWER
- Existing FW Sewer — EXISTING FOUL WATER SEWER
- RWB — PROPOSED RAINWATER BUTT
- PROPOSED Ø100mm HOUSE DRAINS AT 1:80 min. GRADIENT WITH INSPECTION CHAMBERS (STD-WW-03)
- AJ — ACCESS JUNCTION
- RGP — PROPOSED RAIN GARDEN PLATER
- ROOF AREA
- FFL 63.500 — PROPOSED FINISHED FLOOR LEVEL

Rev.	Date	Description	By
P0	29/04/2022	ISSUED FOR PLANNING	AC

Project Title
EXTENSION & ALTERATIONS AT
60 BALLYROAN ROAD, CO. DUBLIN

Architect
JOE FALLON DESIGN ARCHITECTURE

Date	By	Checked	Scale @ A1
APRIL 2022	AC	EM	1:150

Drawing Title
DRAINAGE LAYOUT

Drawing Status
PLANNING

Job No.	Drawing No.	Issue
22005	100	P0

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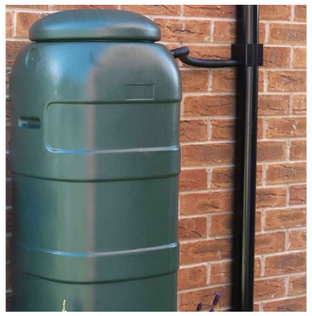

RAINWATER BUTT CONNECTION
NTS

GENERAL

1. Read in conjunction with all relevant Architect's and Engineer's drawings.
2. Do not set out from this drawing. Setting out to be done from Architect's drawings.
3. Adjust foundation depths as necessary to avoid being undermined by foul and surface water service connections.
4. Where cover to pipes is less than 1.2m in roads, refer note 2 STD-WW-07. Surround to be in accordance with standard detail STD-WW-08, depth of cover to foul sewer pipes in accordance with standard detail STD-WW-07.
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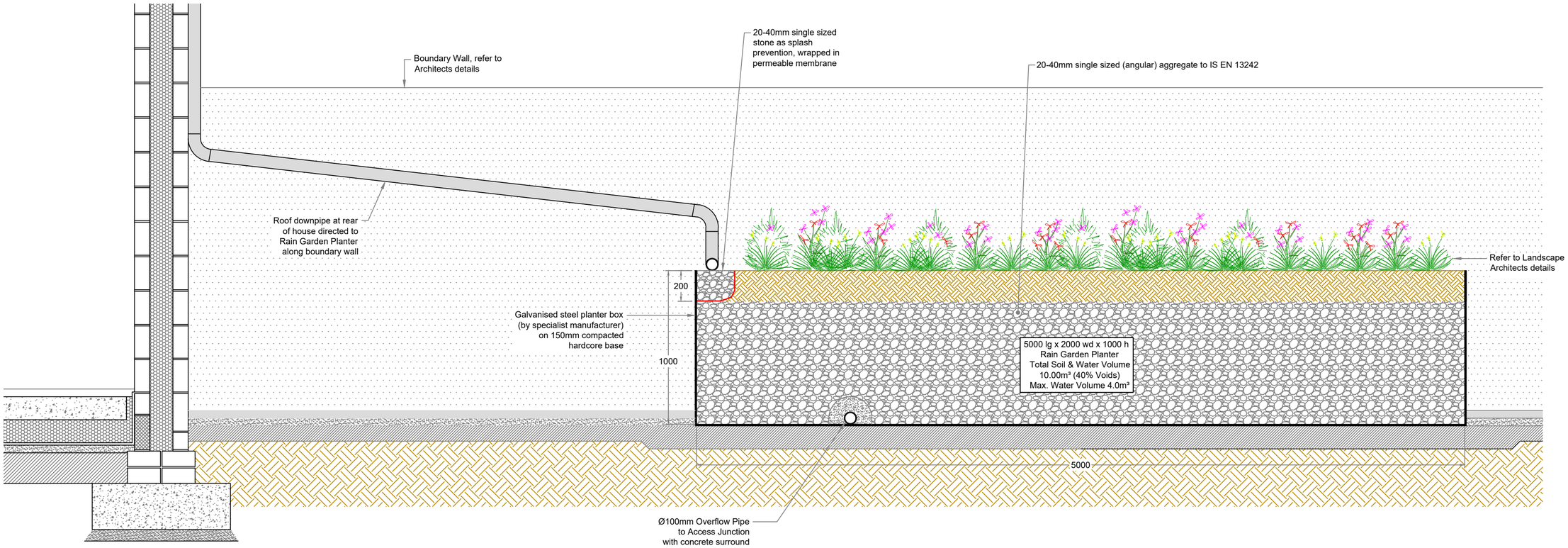
7. Pipe materials for the proposed gravity sewer and rising main shall be in compliance with Section 3.13 of the Wastewater Code of Practice.



Section - Rain Garden Planter
Scale 1:20

Rev.	Date	Description	By
P0	29/04/2022	ISSUED FOR PLANNING	AC

Project Title
EXTENSION & ALTERATIONS AT
60 BALLYROAN ROAD, CO. DUBLIN

Architect
JOE FALLON DESIGN ARCHITECTURE

Date	By	Checked	Scale @ A2
APRIL 2022	AC	EM	AS SHOWN

Drawing Title
SUDS & DRAINAGE DETAILS

Drawing Status
PLANNING

Job No.	Drawing No.	Issue
22005	101	P0

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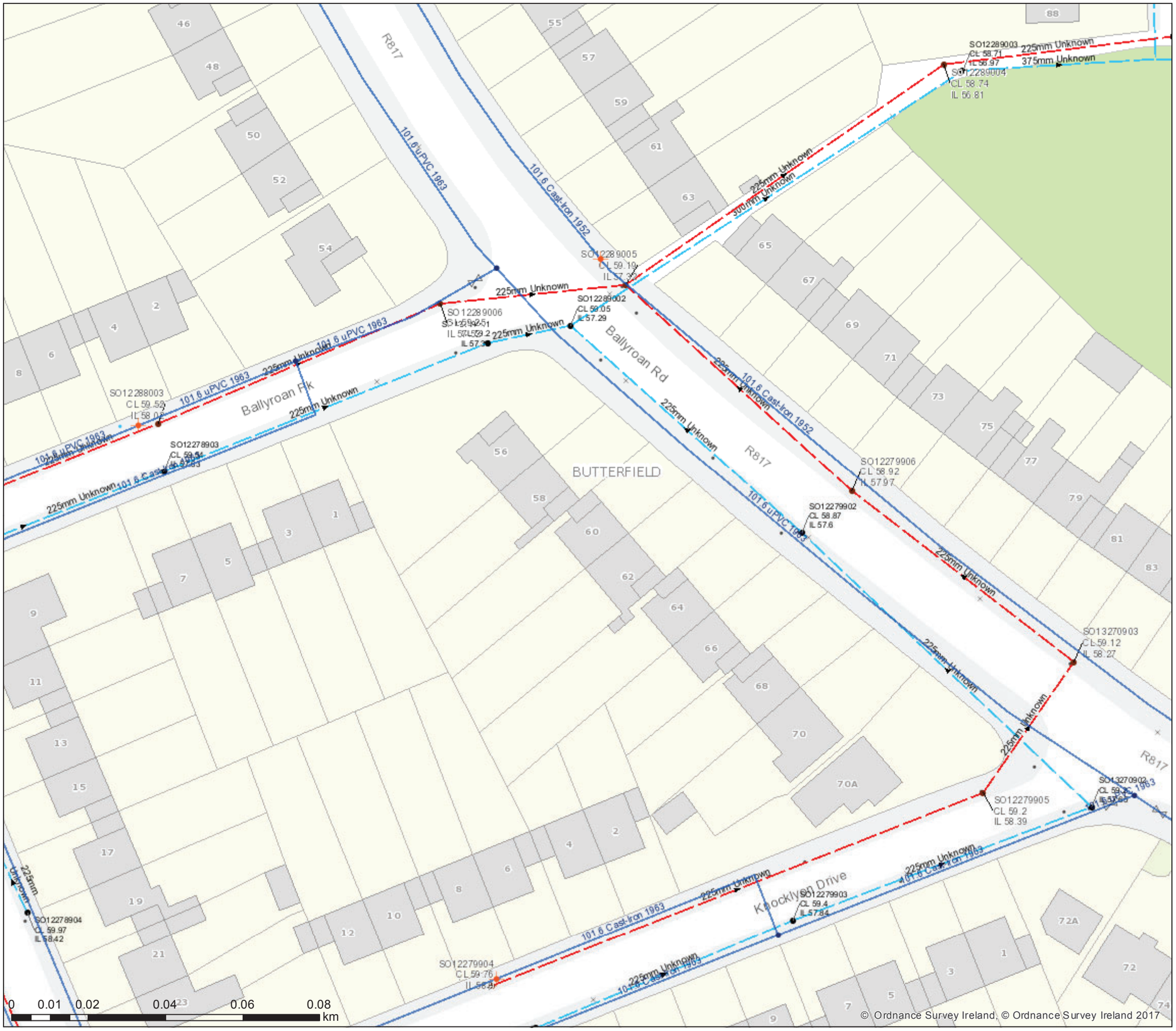
APPENDIX D

IRISH WATER EXISTING DRAINAGE MAPPING

Irish Water Web Map



UISCE ÉIREANN : IRISH WATER

Print Date: 20/04/2022

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