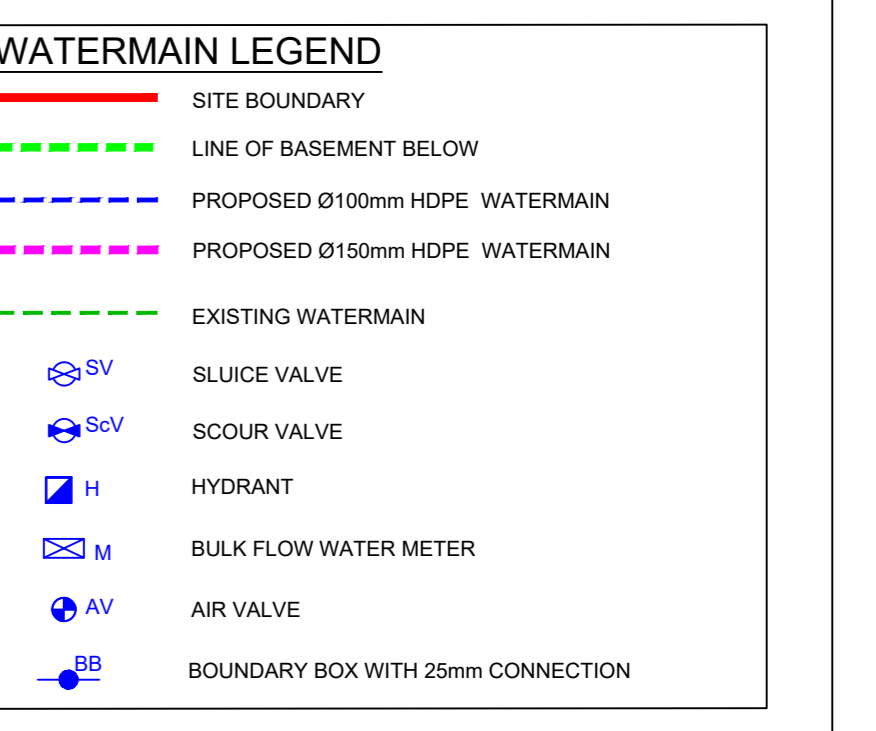




- WATERMAIN NOTES**
- These are summary notes, refer to Irish Water Code of Practice and Standard Details for full notes and details. Where discrepancy between these and Irish Water publications are identified, Irish Water publications take precedence. All discrepancies should be reported to POGA.
 - The contractor shall agree the exact make, model and closing direction of sluice valves and hydrants with the Irish Water & Water Inspector.
 - All boxes shall be as per Irish Water Code of Practice, Connection and Service Developer Services, Water Infrastructure latest standard details.
 - Watermains shall be tested in conjunction with the Irish Water, section 4.10 (Testing and Commissioning) to a minimum pressure of 10 Bars (150psi). The time taken (t) to pressure the water loop should be measured on site and the subsequent test held for a minimum duration of 22t. The water pressure should not be topped up during the test. The pressure readings should be recorded at 1 minute intervals and submitted to project engineer for evaluation prior to backfilling.
 - Anchor blocks of grade C20/25 Type F concrete shall be provided on watermains at dead ends, tees, bends of greater curvature than 11.25° and at both sides of sluice valve chambers.
 - All pipework shall be thoroughly flushed out, sterilised with chlorine and then dechlorinated and flushed out again in conjunction with Irish Water Code of Practice, section 4.10.5 and 4.13.
 - Hydrant covers shall be painted canary yellow (BS 381C) and be in paved non-vehicular areas. Hydrant neck to be placed in parking bays.
 - Where Watermains terminating in a loop, provide connection to a minimum of four properties and a hydrant. See section 3.5.14 of Irish Water Code of Practice.
 - Provide an offline hydrant downstream of the proposed bulk meter locations. See section 3.15.4 of Irish Water Code of Practice and STD-W-27 of Water Infrastructure Standard Details.
 - Distribution Watermains shall be laid in public areas and be kept a minimum distance from existing structures and trees and shrubs. Distance to be specified in Irish Water Code of Practice, Connection and Service Developer Services, Water Infrastructure standard detail, STD-W11 & STD-W-12 respectively.
 - Where water main is required to be laid in roadway, please ensure that this is located away from the kerb line, refer to 3.5.8-3.5.13 of the Irish Water Code of Practice. Watermain 150mm diameter and smaller shall be located a minimum of 3m from a structure and 1m from a boundary wall.
 - Air valves shall be provided at all summits on pipelines of 100mm(D) or greater.
 - Pipes should be jointed strictly in accordance with manufacturer's requirements.
 - All pipes blue in colour, be HDPE or MDPE for 25mm to 80mm diameters & HDPE or Ductile Iron for minimum 100mm to 300mm inside diameters, or HDPE or Ductile Iron for a minimum 350 to 600mm internal diameters. An example is, 150 internal diameter watermain pipe should be, 180mm outside diameter, SDR-17 and PE-100, this give an internal dia (from Wavinuspasure range) of 158mm. The 100mm internal diameter should be 125mm OD, SDR-17 and PE-100, this gives an internal dia of 109.5mm.
 - HDPE and HDPE pipes to be:
 - Type PE-100
 - SDR-17 rating
 - Compliance with IS EN 12201: Part 1 and Part 2 (Plastic Systems for Water Supply, Drainage and Sewerage Under Pressure - Part 1, General, and Part 2, Pipes)
 - Compliance with I.S. EN 12201-3 (Plastic Systems for Water Supply, Drainage and

- Sewerage Under Pressure - Part 3: Fittings**
- ALL PE pipes shall also conform to the following UK Water Industry Specifications:
 - 4-32-08 - Specification for the fusion joining of polyethylene pressure pipeline systems using PE80 and PE100 materials
 - 4-32-16 - Specification for Butt Fusion Joining Machines
 - 4-32-19 - Specification for polyethylene pressure pipeline systems with an aluminium barrier layer for potable water supply in contaminated land
 - IGN 4-01-03 - Pressure Testing of Pressure Pipes and Fittings for use by Public Water Supplies
 - For pipes greater than 600mm refer to Engineer for approval.
 - All Watermain pipes to have minimum 10 bar working pressure rating.
 - Cover to Watermains in roadways as per Irish Water Code of Practice latest, Connection and Service Developer Services, Water Infrastructure standard details.
 - All changes in both vertical and horizontal alignment greater than 4° to be supported by a concrete anchor block.
 - Air valve locations to be accurately set out at summit points on site.
 - All watermains to be backfilled as per per Irish Water Code of Practice latest, Connection and Service Developer Services, Water Infrastructure standard details.
 - Service pipes to be a minimum of 20mm(D) and shall not exceed 15m in length.
 - Depth of finished ground to the outlet of the Hydrant not to be greater than 350mm.
 - Boundary Box to be provided on all connection and should be located in pedestrian areas on the public side of the boundary, locations and type to be in constructed in accordance with standard detail STD-W-03.
 - All materials and details to comply with Irish Water Code of Practice latest, Connection and Service Developer Services, Water Infrastructure standard details.
- MARKERS:**
- When a suitable wall is available the sign shall be fixed to it, at a location to be agreed with the Architect.
 - Indicator posts shall be constructed with 10mm grade C30/35 concrete, reinforced with 6mm² galvanised bars.
 - Hydrant indicator plates shall be canary yellow (BS 381 C) with black lettering to BS 3251.
 - Plates shall be bolted to post/walls with non-corrosive metal bolts, which shall be compatible with the plate metal.

- Please refer to the most up to date Irish Water (IW) documents, IW-CDS-5020 for Water infrastructure standard details. These details superseded all previously issued POGA watermain details and should be used on all new and part constructed developments from the December 2017.
- | Drawing No. | Drawing Title | Rev |
|-------------|--|-----|
| STD-W-01 | Water service connection responsibility | 0 |
| STD-W-02 | Typical layout for water mains within developments | 3 |
| STD-W-03 | Customer connection & boundary box | 3 |
| STD-W-04 | General pipe connections (sheet 1 of 7) | 3 |
| STD-W-05 | General pipe connections (sheet 2 of 7) | 2 |
| STD-W-06 | General pipe connections (sheet 3 of 7) | 2 |
| STD-W-07 | General pipe connections (sheet 4 of 7) | 1 |
| STD-W-08 | General pipe connections (sheet 5 of 7) | 1 |
| STD-W-09 | General pipe connections (sheet 6 of 7) | 1 |
| STD-W-10 | General pipe connections (sheet 7 of 7) | 1 |
| STD-W-11 | Typical service layout indicating separation distances | 1 |
| STD-W-12 | Restrictions on water infrastructure works adjacent to existing trees | 2 |
| STD-W-12A | Restrictions on new trees / shrubs planting adjacent to Watermains | 0 |
| STD-W-13 | Trench backfill & bedding | 3 |
| STD-W-14 | Sluice valve for ductile iron (D.I.) pipe (<350mm dia.) (sheet 1 of 2) | 1 |
| STD-W-15 | Sluice valve for polyethylene (P.E.) pipe (<350mm dia.) (sheet 2 of 2) | 2 |
| STD-W-16 | On-line hydrant for ductile iron (D.I.) pipe (sheet 1 of 4) | 2 |
| STD-W-17 | Off-line hydrant for ductile iron (D.I.) pipe (sheet 2 of 4) | 3 |
| STD-W-18 | On-line hydrant for polyethylene (P.E.) pipe (sheet 3 of 4) | 2 |
| STD-W-19 | Off-line hydrant for polyethylene (P.E.) pipe (sheet 4 of 4) | 2 |
| STD-W-20 | On-line air valve for ductile iron (D.I.) pipe (sheet 1 of 4) | 3 |
| STD-W-21 | Off-line air valve for ductile iron (D.I.) pipe (sheet 2 of 4) | 3 |
| STD-W-22 | On-line air valve for polyethylene (P.E.) pipe (sheet 3 of 4) | 2 |
| STD-W-23 | Off-line air valve for polyethylene (P.E.) pipe (sheet 4 of 4) | 3 |
| STD-W-24 | Pressure reducing / sustaining valve (P.R.V. / P.S.V.) chamber | 1 |
| STD-W-25 | Booster pump station arrangement | 3 |
| STD-W-26 | Non Mech. Meter chamber (40-250mm Dia.) | 0 |
| STD-W-26A | Meter chamber (5300mm dia.) | 3 |
| STD-W-27 | Marker posts / plates | 2 |
| STD-W-28 | Water main thrust & support blocks | 1 |
| STD-W-29 | Duct chamber | 2 |
| STD-W-30 | Scour chamber & head wall arrangements | 3 |
| STD-W-30A | Washout hydrant | 2 |
| STD-W-31 | Typical ditch / stream crossing for water main | 1 |
| STD-W-32 | Typical bridge crossing for water main (sheet 1 of 2) | 1 |
| STD-W-33 | Typical bridge crossing for water main (sheet 2 of 2) | 1 |
| STD-W-34 | Security gate & fencing | 2 |
| STD-W-35 | Pipe repair to existing mains | 2 |
| STD-W-36 | Telemetry and wet kiosk | 2 |
| STD-W-37 | Lamp bollard & lamp standard | 1 |



Rev.	Date	Description	By
P5	14/01/20	REVISED AS PER UPDATED ARCHITECTURAL & LANDSCAPE LAYOUT	AL
P4	20/12/19	REVISED AS PER UPDATED LANDSCAPE LAYOUT	NMM
P3	06/12/19	REVISED AS PER UPDATED ARCHITECTURAL LAYOUT	TB
P2	04/11/19	AMENDED AS PER IRISH WATER COMMENTS	TB
P1	29/10/19	AMENDED AS PER IRISH WATER COMMENTS	TB

Project Title
**DOCKLANDS INNOVATIONS PARK
EAST WALL ROAD, DUBLIN 3**

Architect
MCORM

Date	By	Checked	Scale @ A1
JAN 2020	AL TB	PM	1:250

Drawing Title
WATERMAIN LAYOUT

Drawing Status
PLANNING

Job No.	Drawing No.	Issue
1731	109	P5

poga CONSULTING ENGINEERS
STRUCTURAL & CIVIL
Pat O'Gorman & Associates

Unit C2, Nutgrove Office Park
Rathfarnham
Dublin 14
D14 CR20
Tel +353 (0)1 205 1101
www.poga.ie

Ordnance Survey Ireland Licence No. EN 0005618
© Ordnance Survey Ireland / Government of Ireland
© This drawing is Copyright and must only be used for the project named