



FOR WATERMAIN DETAILS, FOUL SEWER DETAILS, AND ALL ASSOCIATED WORKS DETAILS REFER TO IRISH WATER DETAILS AND IRISH WATER CODE OF PRACTICE FOR WATER AND WASTEWATER INFRASTRUCTURE:

- IW-CDS-5020-1
- IW-CDS-5020-3
- IW-CDS-5030-1
- IW-CDS-5030-3

WATERMAIN PIPE MATERIAL TO COMPLY WITH SECTION 3.9 OF IW CODE OF PRACTICE FOR WATER INFRASTRUCTURE:

3.9 Materials Selection: Mains and Service Connections
 Water Mains suitable for Works and approved by Irish Water shall be either ductile iron (DI) or polyethylene (PE), with PE80 or PE100 rating (MDPE, HDPE or HPPPE). All plastic water pipes shall be blue in colour. U-PVC pipes shall not be used on water supply networks, unless a compelling reason is provided for its use.

By exception other materials may be considered but these will require specific Irish Water agreement and written approval. Such materials would include MoPVC and CPE/PVC alloys. The risk of contaminated ground on pipe materials should be a determining factor in the choice of the pipe material selection.

3.9.1 Ductile Iron (DI) pipes shall conform to IS EN 545 and shall have a minimum C40 pressure rating. Ductile iron fittings shall have 16 bar rating at least. All ductile iron pipework shall be coated internally with a blast furnace cement lining which complies with the requirements of BS 6920. External protection shall include an alloy of zinc and aluminium, with a minimum 15% aluminium, with or without other materials, having a mass of 400 g/m² complete with a finishing layer of blue fusion bonded epoxy in accordance with IS EN 14901.

3.9.2 MDPE and HDPE pipes shall be of a type PE-80 and have an SDR-11 or SDR-17 rating. They shall conform to 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) and IS EN 12201-3 (Plastic Systems for Water Supply, Drainage and Sewerage Under Pressure - Part 3: Fittings).

3.9.3 HPPPE pipes shall be of a type PE-100 and have an SDR-11 or SDR-17 rating. They shall conform to 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) and IS EN 12201-3 (Plastic Systems for Water Supply, Drainage and Sewerage Under Pressure - Part 3: Fittings).

Polyethylene pipes shall also conform to the following UK Water Industry Specifications (WIS):

- 3.9.4 4-32-08 - Specification for the fusion jointing of polyethylene pressure pipeline systems using PE80 and PE100 materials.
- 3.9.5 4-32-16 - Specification for Butt Fusion Joining Machines.
- 3.9.6 4-32-19 - Specification for polyethylene pressure pipeline systems with an aluminium barrier layer for potable water supply in contaminated land.
- 3.9.7 IGN 4-01-03 - Pressure Testing of Pressure Pipes and Fittings for use by Public Water Supplies

In exceptional circumstances, where specific Irish Water approval is provided to the use of **MoPVC** pipes, they shall conform to the UK Water Industry Specification No. 4-31-08 and ISO 16422, and manufacturers shall operate a quality system in compliance with BS EN ISO 9001.

In exceptional circumstances, where specific Irish Water approval is provided to the use of **CPE/PVC** alloy pressure pipes, they shall conform to BS PAS 27. All fittings shall conform to this standard also.

Service Connection pipes suitable for Works shall be of **MDPE** or **HDPE** (PE-80) material with SDR-11 or SDR-17 rating. All plastic water Service Connection pipes shall be blue in colour. **HPPPE** (PE-100) material with SDR-11 and SDR-17 rating may also be used through this pipe is less flexible. An alternative pipe material, to Irish Water's written approval, shall be provided where pressure in the Works is greater than the performance rating of these materials. The **MDPE**, **HDPE** and **HPPPE** service pipes shall comply with IS EN 12201 Part 2 (Plastic Systems for Water Supply, Drainage and Sewerage Under Pressure - Part 2, Pipes) and IS EN 12201 Part 3 (Plastic Systems for Water Supply, Drainage and Sewerage Under Pressure - Part 3: Fittings) and with UK WIS 4-32-08 (Specification for the fusion jointing of polyethylene pressure pipeline systems using PE80 and PE100 materials).

The Customer shall determine the Pressure Class of pipe that is required having regard to the pressure at the connection point and the maximum in-service operating pressure. The sizing of service connections to any premises and the approval of fittings for this purpose must be obtained in advance from Irish Water.

Joining of pipes should be carried out in accordance with the requirements of the Standards associated with the pipe material selected.

DISCHARGE FROM THE SCOUR CHAMBER TO THE PROPOSED STORM WATER MANHOLE 94 LOCATION AND DISCHARGE POINT TO BE AGREED WITH IRISH WATER AND LOCAL AUTHORITY PRIOR TO CONSTRUCTION OF THE WATER SUPPLY NETWORK.

SCOUR VALVE (OFFLINE) WITH THE APPROPRIATE SCOUR CHAMBER WITH NON RETURN VALVE TO BE PROVIDED IN THE NETWORK LOW POINT IN ACCORDANCE WITH SECTIONS 3.14 AND 3.21 OF IRISH WATER CODE OF PRACTICE FOR WATER INFRASTRUCTURE.

ALL FIRE HYDRANTS TO COMPLY WITH SECTION 3.16.5 OF THE IW CODE OF PRACTICE FOR WATER INFRASTRUCTURE.

METERS FOR APARTMENTS, WHERE REQUIRED, WILL BE INSTALLED INTERNALLY WITHIN THE PREMISES IN ACCORDANCE WITH THE BUILDING CONTROL AUTHORITY'S REQUIREMENTS AND SUBJECT TO REVIEW BY IRISH WATER.

INDIVIDUAL METERS FOR COMMERCIAL PREMISES WILL BE PROVIDED IN ACCORDANCE WITH IRISH WATER CONNECTION REQUIREMENTS. ALL COMMERCIAL METERS SHALL BE INSTALLED IN METER BOUNDARY BOXES OR METER CHAMBERS TO IRISH WATER REQUIREMENTS AND BE COMPATIBLE WITH THE AUTOMATIC METER READING (AMR) SYSTEM.

THE RESTRICTIONS ON WATER INFRASTRUCTURE WORKS ADJACENT TO EXISTING TREES WILL BE INCORPORATED INTO FUTURE LANDSCAPING ARRANGEMENT AS PER IRISH WATER STANDARD DETAIL STD-W-12A. THERE WILL BE NO PLANTING IN THE EXCLUSION ZONES.

AN ACCEPTABLE ISOLATION DEVICES (TOGETHER WITH AN ACCEPTABLE CONNECTION ARRANGEMENT) IN ACCORDANCE WITH SECTION 3.13 OF IRISH WATER CODE OF PRACTICE FOR WATER INFRASTRUCTURE WILL BE PROVIDED ON ALL SERVICE CONNECTIONS TO PREVENT BACK FLOW FROM INTERNAL WATER DISTRIBUTION SYSTEMS TO IRISH WATER'S NETWORK.

SEPARATE INTERNAL WATER DISTRIBUTION SYSTEM WITH ANCILLARY STORAGE TANKS AND PUMPING SYSTEMS TO M&E ENGINEER'S DESIGN

800mm INCOMING MAINS TO MWS BREAK TANK FOR APARTMENTS

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LEGEND:

EXISTING WATER MAIN TO BE REMOVED	(Symbol: Dashed line with 'X')
EXISTING WATER MAIN	(Symbol: Solid line)
NEW WATERMAIN WITH PROPOSED SLUICE VALVES, ISOLATION VALVES, FIRE HYDRANTS AND BOUNDARY BOXES	(Symbol: Solid line with 'M', 'S', 'H', 'B' markers)
TOPOGRAPHICAL SURVEY DATA	(Symbol: Dotted line)
DENOTES ROAD SURFACING	(Symbol: Yellow hatched area)
DENOTES FOOTPATH SURFACING	(Symbol: Grey hatched area)
DENOTES PERMEABLE FOOTPATH	(Symbol: Blue hatched area)
DENOTES PERMEABLE WALKWAY	(Symbol: Green hatched area)
DENOTES PERMEABLE PARKING SPACE	(Symbol: Red hatched area)
DENOTES BIO-RETENTION AREA - TREE PIT WITH WATERING FACILITIES BY STORM WATER RUNOFF FROM THE CARPAGESWAYS	(Symbol: Blue hatched area with tree symbols)
DENOTES GREEN ROOFS	(Symbol: Green hatched area)
DENOTES PUBLIC OPEN SPACE / LANDSCAPE	(Symbol: Light green hatched area)
DENOTES GREEN ROOFS OVER CARPARK	(Symbol: Green hatched area with grid)
DENOTES GRASSCOTE FOOTPATH	(Symbol: Green hatched area with grid)
DENOTES TYPICAL ROOF TO ARCH DESIGN	(Symbol: Brown hatched area)
DENOTES PUMPING APPLIANCE SWEEP PATH	(Symbol: Dashed line with 'P')
DENOTES OBST REFUSE VEHICLE SWEEP PATH	(Symbol: Dashed line with 'R')

PROVIDE AIR VALVE IN ACCORDANCE WITH SECTION 3.16.6. LOCATION OF AIR VALVE TO BE FINALISED THROUGH AGREEMENT WITH IRISH WATER.

A BULK METER AND ASSOCIATED TELEMETRY SYSTEM WILL BE PROVIDED TO MEASURE THE DEMAND OF THE DEVELOPMENT AS PER SECTION 2.6.5 AND 2.6.6 OF IW CODE OF PRACTICE FOR WATER INFRASTRUCTURE. THE METER AND THE TELEMETRY SYSTEM WILL BE CHOSEN AND SUPPLIED BY IRISH WATER TO ITS REQUIREMENTS BASED ON THE RANGE OF FLOW ANTICIPATED AND THE BULK METER WILL PROVIDE THE INFRASTRUCTURE TO ACCOMMODATE THE METER AND TELEMETRY FACILITIES.

BULK WATER METER TO BE IN ACCORDANCE WITH SECTION 3.15.4 OF THE IW CODE OF PRACTICE FOR WATER INFRASTRUCTURE. AN OFF-LINE HYDRANT WILL BE LOCATED ON THE PIPEWORK DOWNSTREAM OF THE METER CHAMBER ALONG WITH A SLUICE VALVE.

EXISTING LOCAL AUTHORITY WATERMAIN TRAVERSING THE SITE TO BE REROUTED AS SHOWN.

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CONNECTION OF Ø200 PROPOSED WATERMAIN TO BE DONE TO 10' AC LOCAL AUTHORITY WATERMAIN IN R113 ROAD.

THE RESTRICTIONS ON WATER INFRASTRUCTURE WORKS ADJACENT TO EXISTING TREES WILL BE INCORPORATED INTO FUTURE LANDSCAPING ARRANGEMENT AS PER IRISH WATER STANDARD DETAIL STD-W-12A. THERE WILL BE NO PLANTING IN THE EXCLUSION ZONES WHERE THE SEPARATION DISTANCES ARE LESS THAN OPTIMAL. APPROPRIATE PROTECTION MEASURES (TREE ROOT BARRIERS) WILL BE PROVIDED TO PREVENT ROOT INGRESS TO IRISH WATER PIPE NETWORKS AS PER SECTION 3.26 OF IRISH WATER CODE OF PRACTICE FOR WATER INFRASTRUCTURE.

PL17	15-02-20	PK	0005	ISSUED 15/02/20 PROPOSED WATERMAIN TO 2000
PL16	28-02-20	PK	0005	WATERMAIN DESIGN APPROVED ACCORDING TO WIS
PL15	27-02-20	PK	0005	ISSUED FOR PLANNING REVIEWED ACCORDING TO BODC
PL14	30-02-20	PK	0005	ISSUED FOR PLANNING ADJUSTMENT OF SWALES
PL13	11-02-20	PK	0005	ISSUED FOR PLANNING ADJUSTMENT OF SWALES
PL12	11-02-20	PK	0005	ISSUED FOR PLANNING ADJUSTMENT OF SWALES

PLANNING

RESIDENTIAL DEVELOPMENT @ ST. EDMUNDS PHASE 3, PALMERSTOWN, DUBLIN 20

WATERMAIN LAYOUT & SWEEP PATHS

MOYKERR LIMITED

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PK: PKB, PKC, PKD, PKE, PKF, PKG, PKH, PKI, PKJ, PKK, PKL, PKM, PKN, PKO, PKP, PKQ, PKR, PKS, PKT, PKU, PKV, PKW, PKX, PKY, PKZ

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