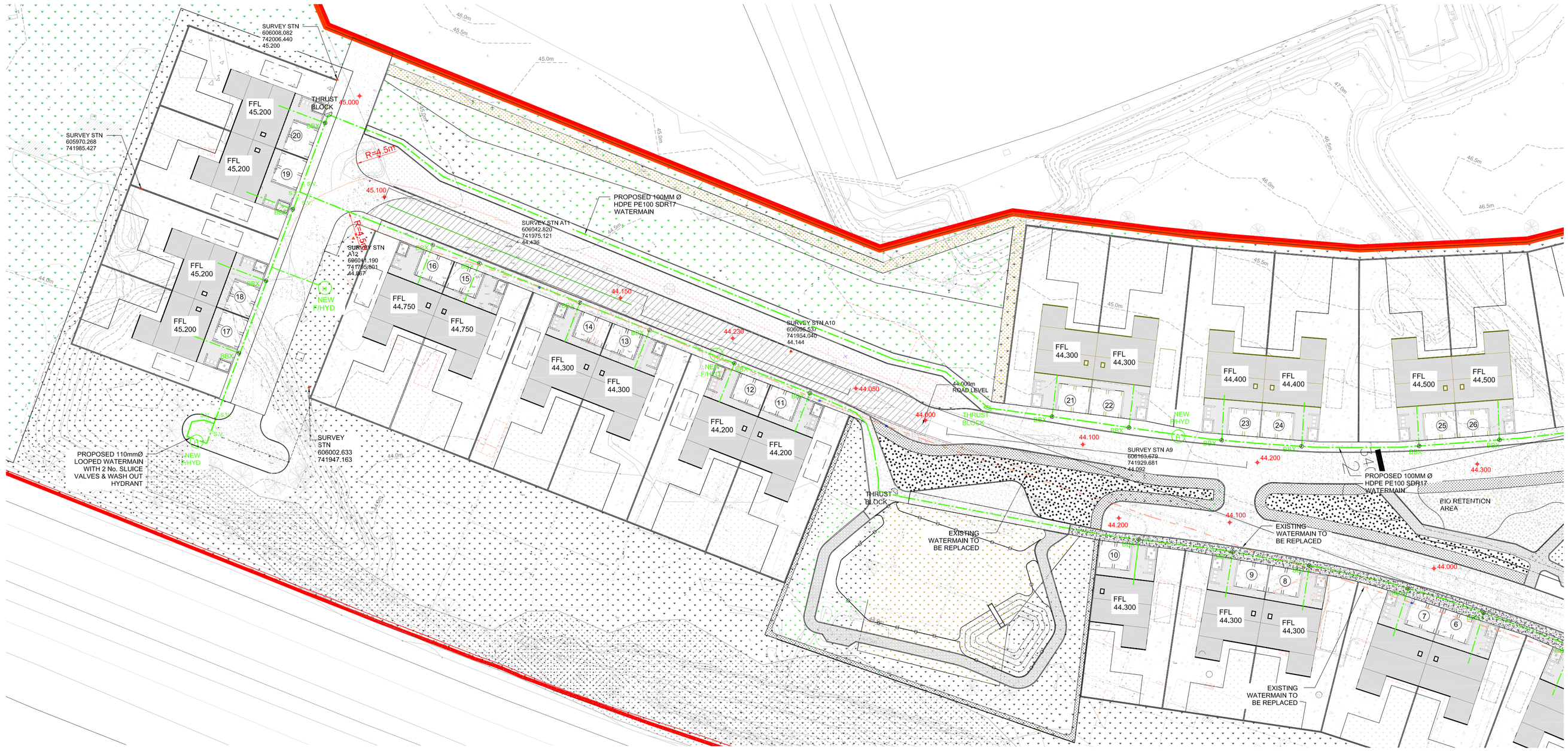
A1



SITE LAYOUT PLAN

SCALE 1:500

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS,ARCHITECTS AND SERVICE ENGINEERS DRAWINGS AND SPECIFICATION.
2. DO NOT SCALE USE FIGURE DIMENSIONS ONLY.
3. ALL LEVELS ARE STRUCTURAL UNLESS NOTED OTHERWISE.
4. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS AND PRIOR TO COMMENCEMENT OF ANY MATERIALS BEING ORDERED AND ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF THE DESIGNERS IMMEDIATELY.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT OF ALL WORK.

ALL FILL MATERIAL TO COMPLY WITH SPECIFICATION FOR ROAD WORKS SERIES 800 (NRA)

ALL EXCAVATIONS AND ROCK BREAKING TO BE CARRIED OUT IN STRICT ACCORDANCE WITH THE SPECIFICATION AND IN STRICT ACCORDANCE WITH SERIES 600, SPECIFICATIONS FOR ROADWORK'S AS PUBLISHED WITH THE NRA

LEGEND

- DENOTES EXISTING SURFACE WATER SEWER
- EX. SMH — DENOTES EXISTING SURFACE WATER MANHOLE
- DENOTES EXISTING FOUL SEWER
- EX. FMH — DENOTES EXISTING FOUL MANHOLE
- DENOTES PROPOSED 225Ø UPVC SURFACE WATER SEWER
- SMH — DENOTES PROPOSED SURFACE WATER MANHOLE
- DENOTES PROPOSED 225Ø UPVC FOUL SEWER
- FMH — DENOTES PROPOSED FOUL MANHOLE
- ACO CHANNEL — DENOTES PROPOSED ACO DRAINAGE CHANNEL WITH STAINLESS STEEL GRATING
- EXISTING SEWERS TO BE REMOVED
- PROPOSED Ø100mm WATERMAIN
- HYD — PROPOSED FIRE HYDRANT
- S.V. — SLUICE VALVE
- BBX — IRISH WATER BOUNDARY BOX / STOP COCK
- T.P — TREE PIT (SUDS MEASURES)
- S.PP — PLANTER PODS (SUDS MEASURES)
- 43.000 — PROPOSED ROAD LEVELS
- BIO-RETENTION AREAS WITH PERFORATED COLLECTION PIPES DISCHARGING TO AJ/MH WITH OVERFLOW CONNECTED TO SURFACE WATER SYSTEM
- GREEN SPACE ALLOCATED WITHIN SITE WHICH IS INSIDE THE AGREED DEVELOPMENT BOUNDARY
- SITE BOUNDARY OUTLINED IN RED
- DEMOLISH WORKS
- DENOTES EXISTING ROAD
- DENOTES PROPOSED ROAD

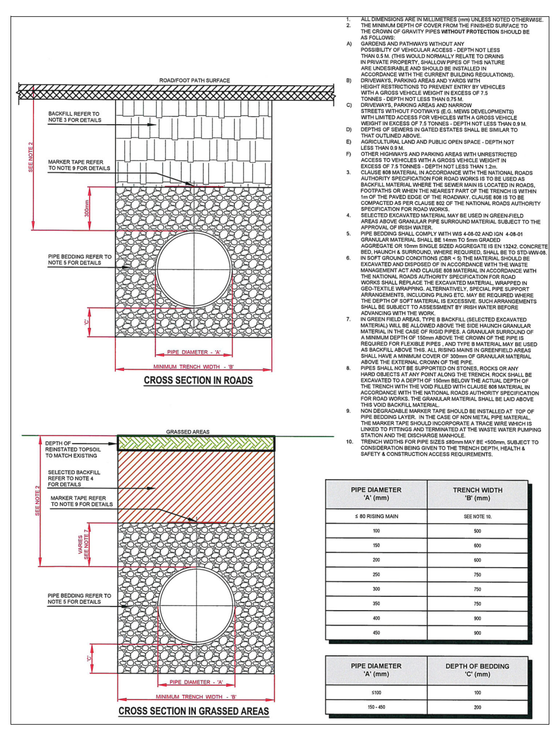
PART 8
PLANNING: 06.06.26

REV.	DESCRIPTION	DATE	BY
PL1	PLANNING / PART 8 / IRISH WATER APPL	28/05/26	JS
PL	PLANNING / PART 8 / IRISH WATER APPL	02/07/24	JS
D1	COORDINATE CHECK	10/06/24	JS
D-	F.F.L. ISSUE	30/05/24	AB

CLIENT	Westmeath County Council
ARCHITECT	OBFA Architects
JOB	Blackberry Lane Athlone, Co.Westmeath
TITLE	Site Layout Plan Watermain Details – Sheet 1

McKenna Consulting Engineers
Civil & Structural
Bank Place, Miltown Malbay, Co Clare.
Email - info@mckennaconsultingengineers.com
Tel. - 065 7085651

SCALES	1:1000 / 1:500
DATE	30/05/'24
DRAWN	AB
CHECKED	JS
APPROVED	TMcK
DRG. No.	23100/CE/005/PL1

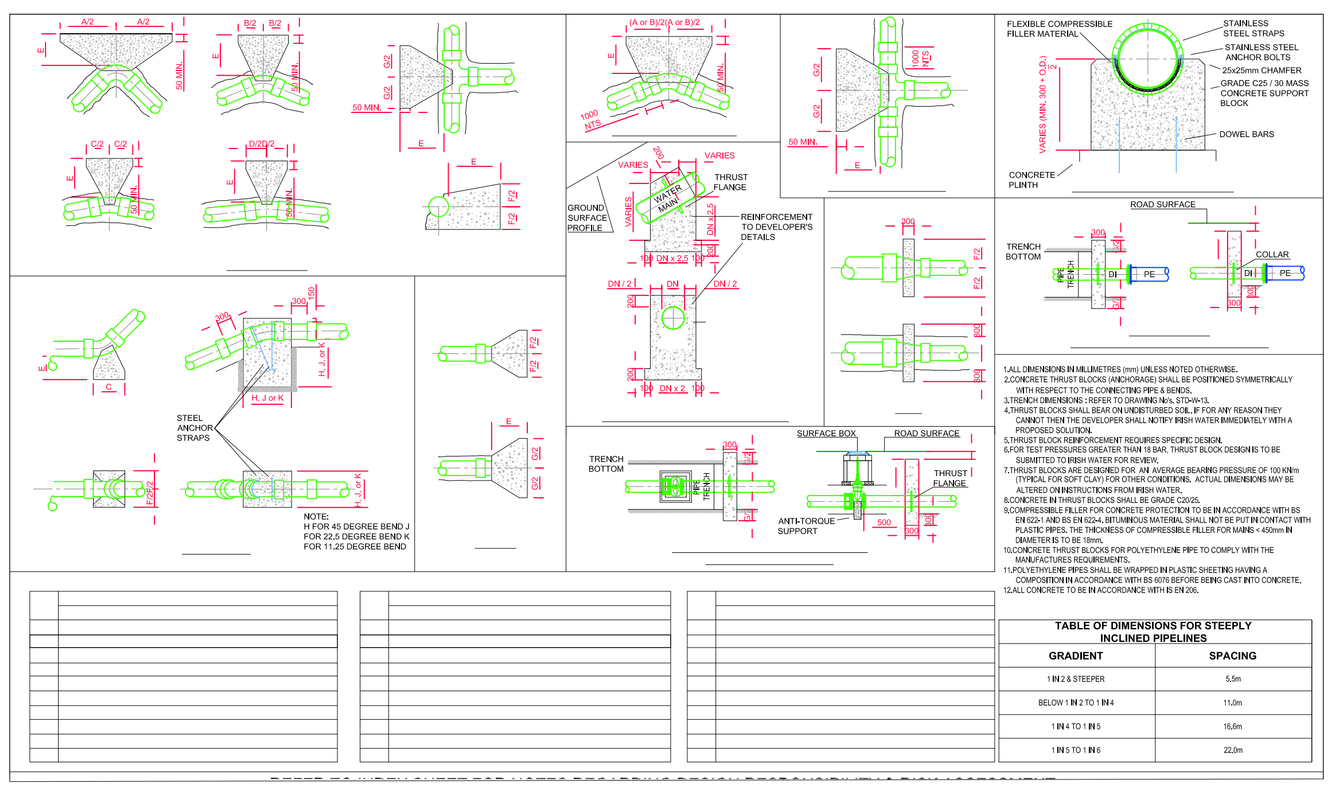


1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO THE TOP OF THE PIPES WITHOUT PROTECTION SHOULD BE AS FOLLOWS:
   A) UNDER ROADS, PARKWAY AND WHERE THERE IS A POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.9 M. (THIS WOULD NORMALLY RELATE TO GROUND LEVELS WITHIN 2.5 M OF THE EDGE OF THE ROAD) ARE UNDERBRIDGE AND SHOULD BE INSTALLED IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS).
   B) UNDER FIELDS, GARDENS AND OPEN SPACE - WHERE HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES ARE NOT REQUIRED - 0.9M.
   C) DRIVEWAYS, PARKING AREAS AND MARKING STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENTS) WHERE HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9 M.
   D) UNDER FOOTWAYS AND PEDESTRIAN AREAS (OTHER THAN THAT OUTLINED ABOVE) - DEPTH NOT LESS THAN 0.6 M.
   E) UNDER GARDENS AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 0.6 M.
   F) OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 1.2m.
3. CLAUSE 804 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION SHALL BE USED AS BEDDING AND BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1.0m OF THE EDGE OF THE ROAD PAVEMENT. THE WORKS SHALL BE CARRIED OUT AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS.
4. SELECTED EXCAVATED MATERIAL MAY BE USED IN GREENFIELD AREAS AS BEDDING AND BACKFILL SURROUNDING MATERIAL SUBJECT TO THE APPROVAL OF IRISH WATER.
5. PIPE BEDDING SHALL COMPLY WITH IWS 4-09-02 AND IDX 4-09-01 AND SHALL BE EITHER CLASS B OR CLASS F GRANULAR AGGREGATE OF 10mm SINGLE SIZED AGGREGATES IN EN 13242: CONCRETE BED, HAUNCH & SURROUND, WHERE REQUIRED, SHALL BE TO STD 6MA-06 OR 6MA-07 AS PER CLAUSE 804 OF THE NRA SPECIFICATION. ALL EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEOTEXTILE MEMBRANE, AS NECESSARY TO PROVIDE SUITABLE BEDDING ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE GROUNDWATER IS ENCOUNTERED. ALL BEDDING ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORKS.
6. BACKFILL MATERIAL SHALL BE B BACKFILL (SELECTED EXCAVATED MATERIAL) WILL BE ALLOWED ABOVE THE BED IN NON-GRANULAR MATERIAL IN THE CASE OF RIGID PIPES. A GRANULAR SURROUND OF 150mm MIN. SHALL BE PROVIDED TO THE SIDES OF THE PIPE AS REQUIRED FOR FLEXIBLE PIPES. AND TYPE B MATERIAL SHALL BE USED AS BACKFILL ABOVE THIS. ALL RISING MAINS IN GREENFIELD AREAS SHALL BE SURROUNDED WITH A MINIMUM OF 150mm OF SAND ABOVE THE EXTERNAL CROWN OF THE PIPE.
7. MINIMUM TRENCH WIDTH = D + 400mm (D = OUTSIDE DIAMETER OF PIPE). HAND OBJECTS AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE OF 150mm ON EACH SIDE OF THE TRENCH WITH THE VOID FILLED WITH GRANULAR MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION. WHERE ROCK IS ENCOUNTERED, GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID MATERIAL.
8. NON-DEGRADABLE MARKER TAPE SHALL BE INSTALLED AT TOP OF BACKFILL MATERIAL, 300mm BELOW FINISHED GROUND LEVEL. THE MARKER TAPE SHALL BE INCORPORATED A TRACE WIRE WHICH IS LINKED TO FITTINGS AND TERMINATED AT THE WASTE WATER PUMPING STATION AND AT THE END OF THE MAIN.
9. TRENCH WIDTHS FOR PIPES GREATER THAN 630mm MAY BE SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS REQUIREMENTS.

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'W' (mm)
4 IRE RISING MAIN	SEE NOTE 7&
160	500
180	600
200	600
250	750
300	750
355	750
400	900
450	900

PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
1100	100
150 / 400	200

WATERMAIN SECTIONS / DETAILS



1.ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2.CONCRETE THRUST BLOCKS (ANCHORAGE) SHALL BE POSITIONED SYMMETRICALLY WITH RESPECT TO THE CONNECTING PIPE & BENDS.
3.TRENCH DIMENSIONS : REFER TO DRAWING NO's. ST-DR-13.
4.THRUST BLOCKS SHALL BEAR ON UNDISTURBED SOIL, IF FOR ANY REASON THEY CANNOT THEN THE DEVELOPER SHALL NOTIFY IRISH WATER IMMEDIATELY WITH A PROPOSED SOLUTION.
5.THRUST BLOCK REINFORCEMENT REQUIRES SPECIFIC DESIGN.
6.FOR TEST PRESSURES GREATER THAN 16 BAR, THRUST BLOCK DESIGNS TO BE SUBMITTED TO IRISH WATER FOR REVIEW.
7.THRUST BLOCKS ARE DESIGNED FOR AN AVERAGE BEARING PRESSURE OF 100 kN/m (TYPICAL FOR SOFT CLAY) FOR OTHER CONDITIONS, ACTUAL DIMENSIONS MAY BE ALTERED ON INSTRUCTIONS FROM IRISH WATER.
8.CONCRETE IN THRUST BLOCKS SHALL BE GRADE C25/30.
9.COMPRESSIBLE FILLER FOR CONCRETE PROTECTION TO BE IN ACCORDANCE WITH BS EN 612-1 AND BS EN 612-4. BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PLASTIC PIPES. THE THICKNESS OF COMPRESSIBLE FILLER FOR MAINS < 450mm IN DIAMETER IS TO BE 10mm.
10.CONCRETE THRUST BLOCKS FOR POLYETHYLENE PIPE TO COMPLY WITH THE MANUFACTURERS REQUIREMENTS.
11.POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
12.ALL CONCRETE TO BE IN ACCORDANCE WITH BS EN 206.

TABLE OF DIMENSIONS FOR STEEPLY INCLINED PIPELINES	
GRADIENT	SPACING
1 IN 2 & STEEPER	5,5m
BELOW 1 IN 2 TO 1 IN 4	11,0m
1 IN 4 TO 1 IN 5	16,6m
1 IN 5 TO 1 IN 6	22,0m

WATERMAIN THRUST BLOCK SUPPORT DETAILS