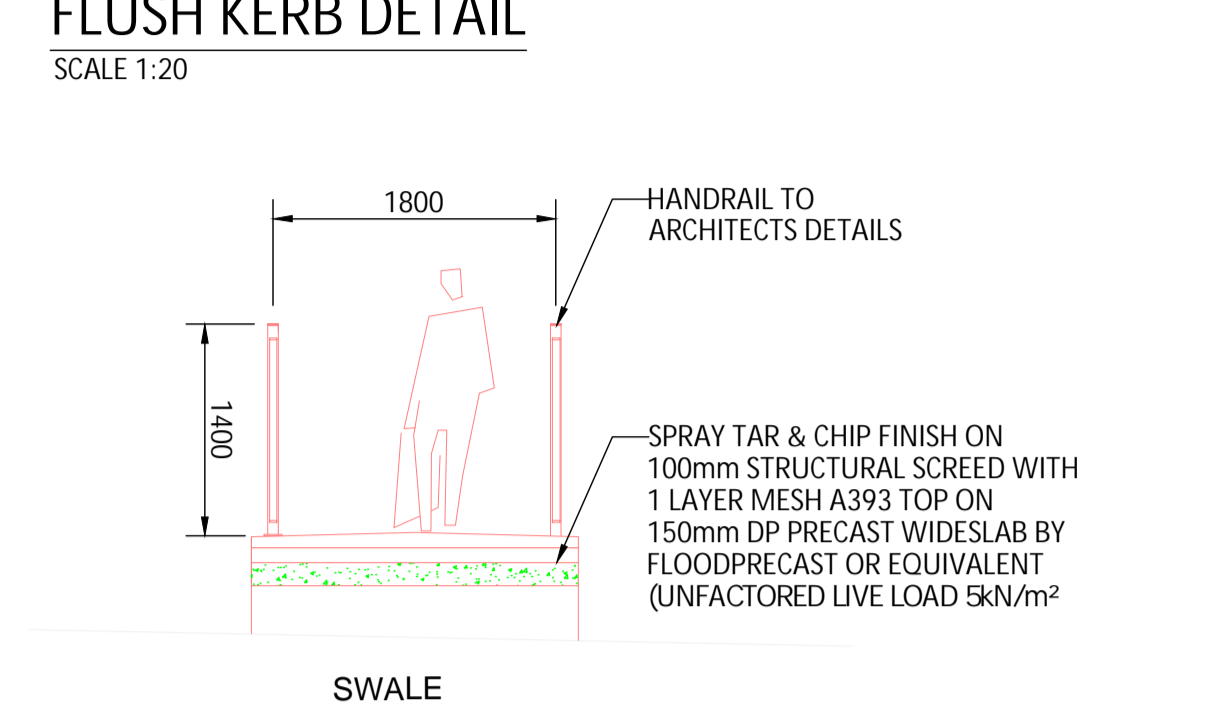
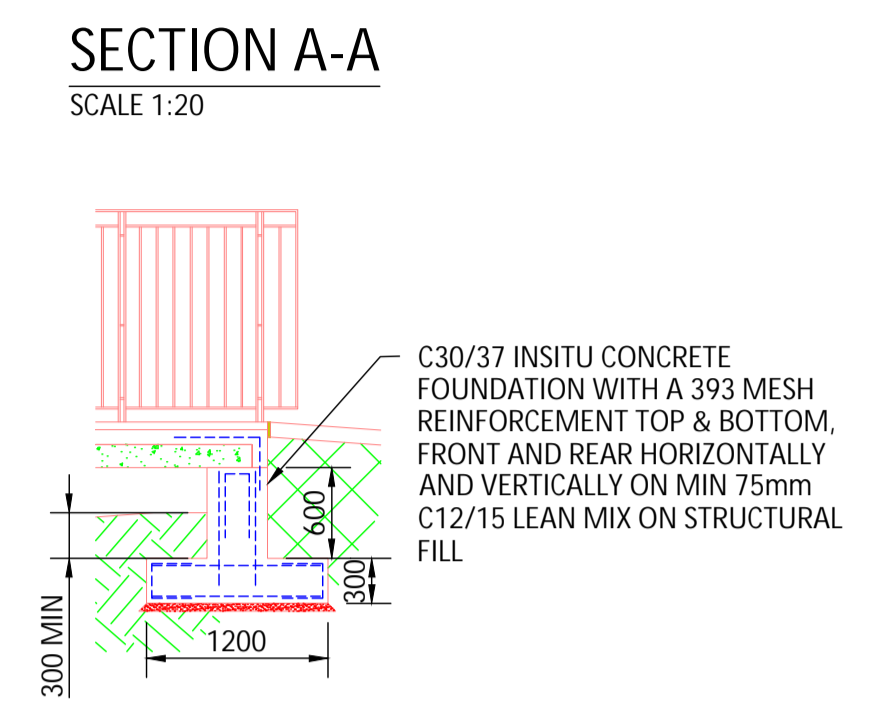
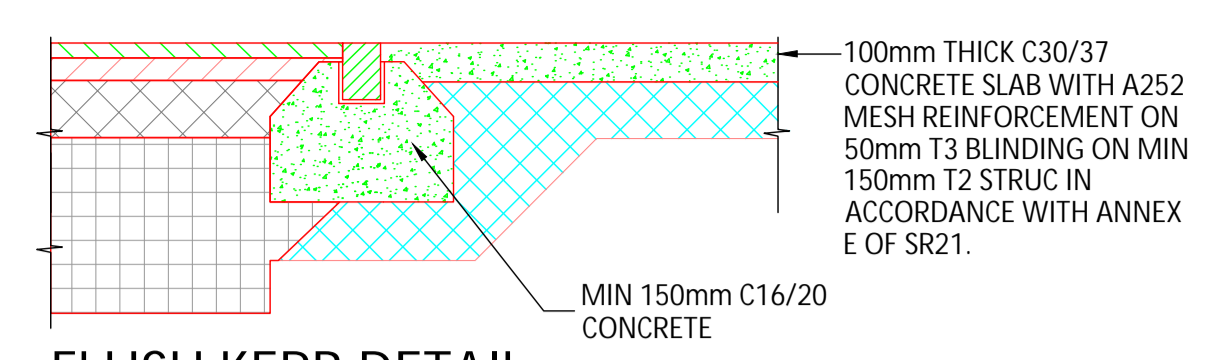
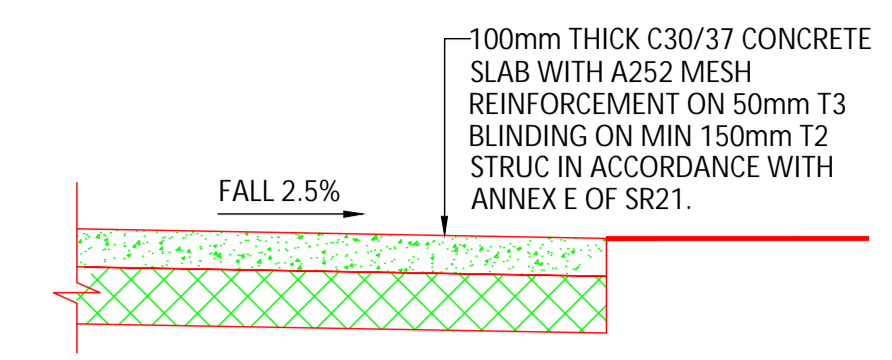
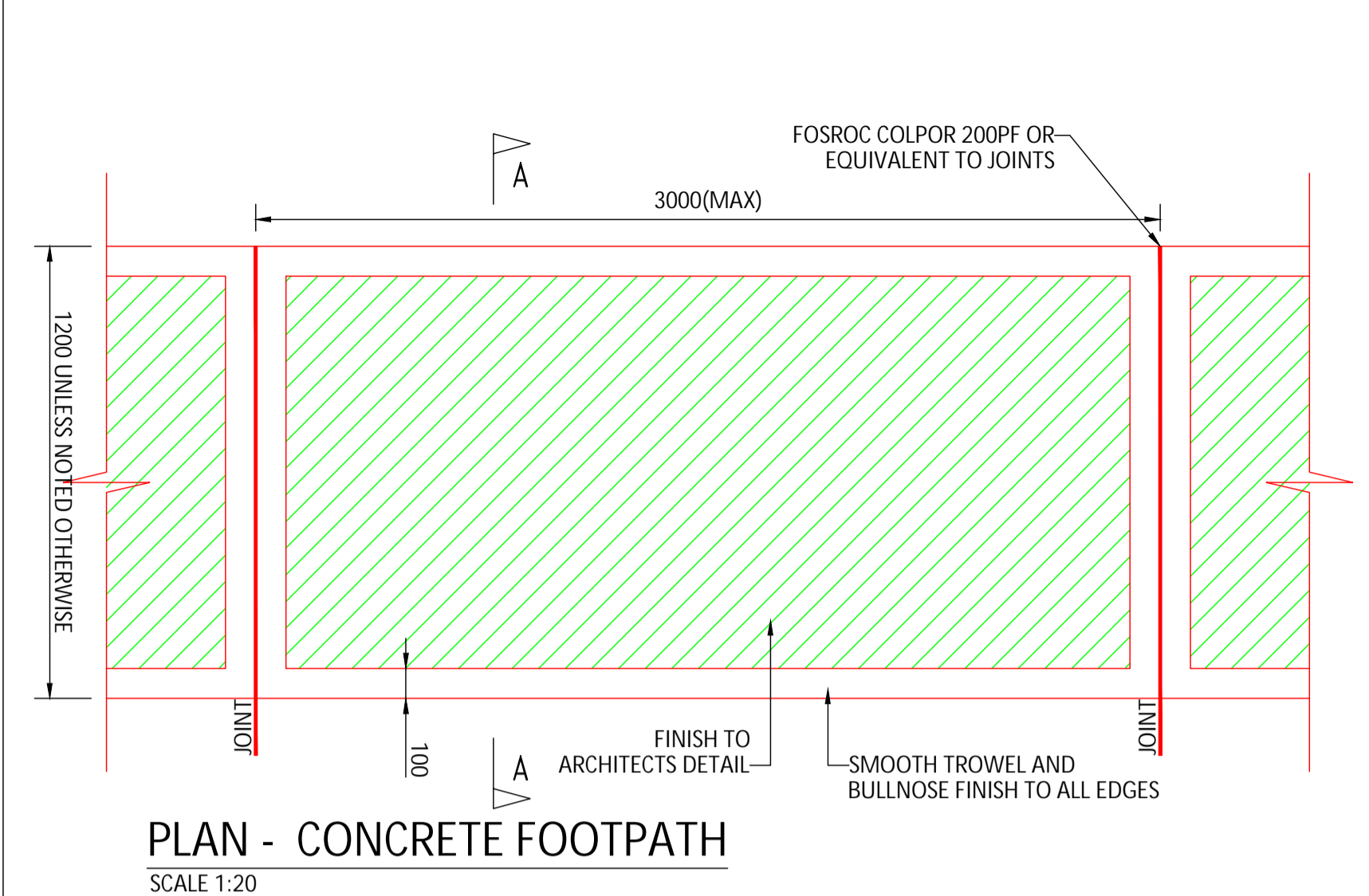


## Document Register

### C&S Drawings

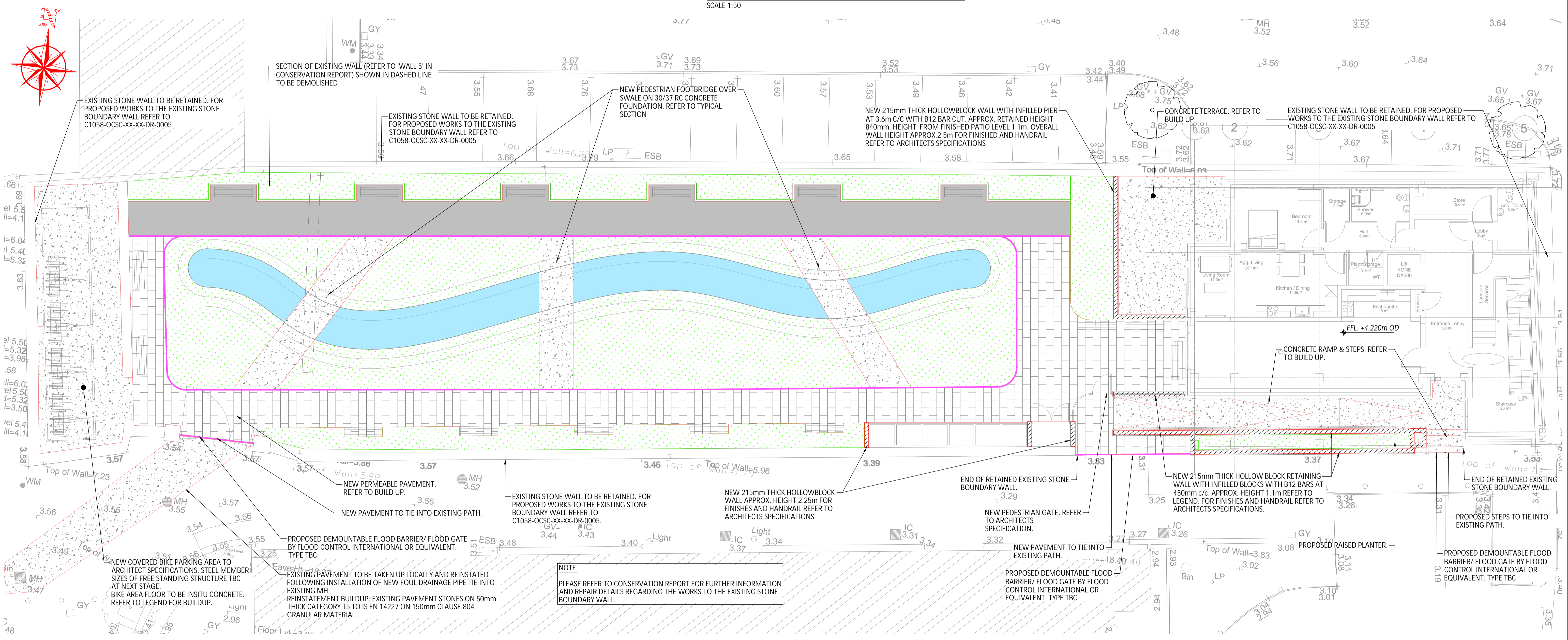
#### Part 8 Development for 16no. units at Distillery Lane Midleton

DRAWING NUMBER	DRAWING TITLE	DRAWING REVISION
C1058 OCSC XX XX DR C 0001	<b>SITE LAYOUT</b>	P02
C1058 OCSC XX XX DR C 0001	<b>DRAINAGE LAYOUT</b>	P02
C1058 OCSC XX XX DR C 0101	<b>DRAINAGE DETAILS SHEET 1 OF 4</b>	P01
C1058 OCSC XX XX DR C 0102	<b>DRAINAGE DETAILS SHEET 2 OF 4</b>	P01
C1058 OCSC XX XX DR C 0103	<b>DRAINAGE DETAILS SHEET 3 OF 4</b>	P01
C1058 OCSC XX XX DR C 0104	<b>DRAINAGE DETAILS SHEET 4 OF 4</b>	P01
C1058 OCSC XX XX DR C 0200	<b>WATERMAIN LAYOUT</b>	P02
C1058 OCSC XX XX DR C 0201	<b>WATERMAIN DETAILS SHEET 1 OF 3</b>	P01
C1058 OCSC XX XX DR C 0202	<b>WATERMAIN DETAILS SHEET 2 OF 3</b>	P01
C1058 OCSC XX XX DR C 0203	<b>WATERMAIN DETAILS SHEET 3 OF 3</b>	P01



**LEGEND:**

- PERMEABLE PAVED PATH: 80mm THICK PAVING STONES TO ARCHITECTS DETAILS, LAID ON 50mm THICK LAYING COURSE CONSISTING OF 6-2mm CLEAN GRIT ON GEOTEXTILE MEMBRANE ON MIN 350mm 20-5mm STONE SUBBASE ON GEOTEXTILE MEMBRANE.
- TARMAC PATH: 20mm BUFF MASTIC ASPHALT WEARING COURSE ON 50mm DBM BINDER COURSE ON 150mm THICK CL.804 SUB BASE ON 250mm 6F1/6F2 CAPPING LAYER. FINAL CAPPING LAYER BUILD UP TO BE DETERMINED VIA CBR RESULTS AND FLEXIBLE PAVEMENT BUILD UP TABLE.
- LANDSCAPING AREAS: REFER TO LANDSCAPE ARCHITECTS SPECIFICATIONS.
- CONCRETE TERRACE & RAMP & STEPS: 100mm THICK C30/37 CONCRETE SLAB WITH A252 MESH REINFORCEMENT ON 50mm T3 BLINDING ON MIN 150mm T2 STRUC IN ACCORDANCE WITH ANNEX E OF SR21.
- WET SWALE: ACCORDING TO CIRIA SUDS MANUAL 2015.
- 440x215mm HOLLOW BLOCK WALL WITH CAST INSITU CAPPING ON 900x300mm DP CONCRETE FOOTING WITH 1 LAYER OF A393 MESH. MIN COVER 50mm. HEIGHT VARIES - REFER TO NOTES ON DRAWINGS.
- FLUSH KERB



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Client: CORK COUNTY COUNCIL  
Project: 16No. APARTMENTS AT DISTILLERY LANE, MIDDLETON CO.CORK  
Title: SITE LAYOUT

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
C1058	OCSC	XX	XX	DR	C	0001	S3	P02

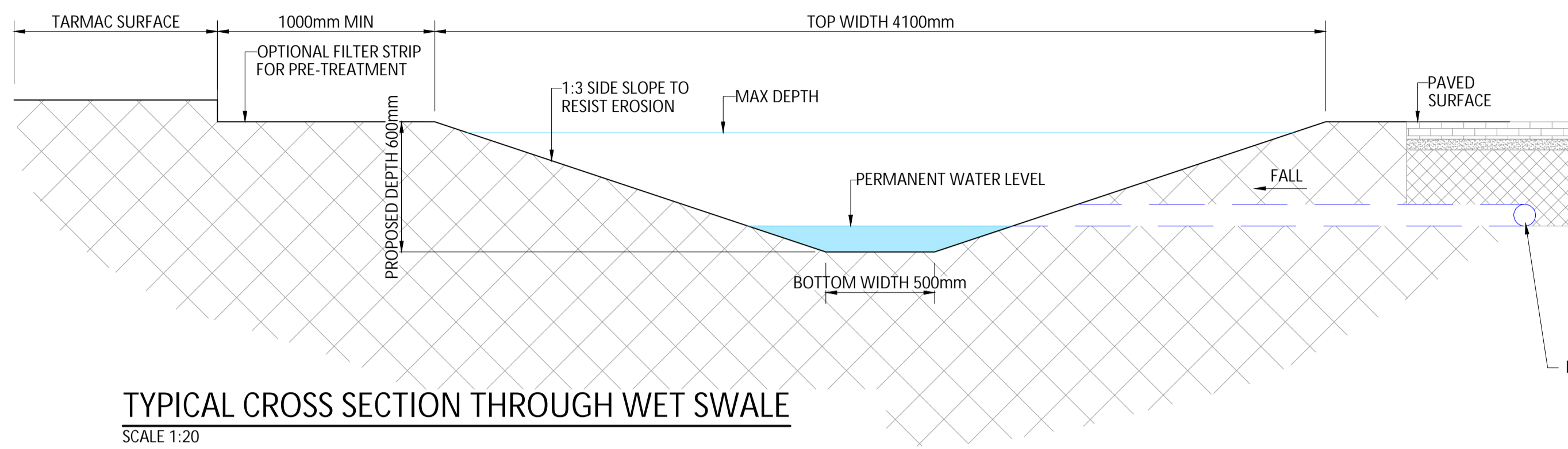
Date: 02/24 Scale @ A1: 1/100 Drn by: CW Chkd by: ANB Aprvd by: JMcB

**FOUL & SURFACE WATER NOTES:**

- FOR SETTING OUT REFER TO ARCHITECT'S DRAWINGS.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND ENGINEERING DRAWINGS AND ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
- FOR UNDER FLOOR DRAINAGE ARRANGEMENT PLEASE REFER TO ARCHITECT'S DRAWINGS.
- DO NOT SCALE THIS DRAWING. USE FIGURE DIMENSIONS ONLY.
- ALL SURFACE WATER SEWERS SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN "RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS" AS PUBLISHED BY DEPARTMENT OF ENVIRONMENT AND LOCAL GOVERNMENT AND IRISH WATER STANDARD DETAILS FOR WASTE WATER INFRASTRUCTURE.
- ALL FOUL SEWER WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE & IRISH WATERS WASTE WATER INFRASTRUCTURE STANDARD DETAILS.
- GROUND LEVELS, COVER LEVELS AND INVERT LEVELS ARE APPROXIMATE ONLY. EXACT LEVELS TO BE CONFIRMED ON SITE.
- THE DEVELOPMENT SHALL BE CONNECTED TO THE PUBLIC SEWER TO THE SATISFACTION OF THE LOCAL AUTHORITY AND IRISH WATER. THE MINIMUM COVER TO ANY SEWER PIPE SHALL BE 1.2m IN ROAD AND 0.9m IN OPEN SPACES AND FOOTPATHS NOT ADJACENT TO CARRIAGEWAYS. WHERE IT IS NOT POSSIBLE TO ACHIEVE THESE MINIMUM COVERS, PIPES SHALL BE BEDDED AND SURROUNDED IN CONCRETE 150thk.
- THE SEWERS AND MANHOLES SHALL BE LAID AND TESTED TO THE SATISFACTION OF IRISH WATER AND THE LOCAL AUTHORITY. LAYING, BEDDING AND BACK FILLING OF SEWERS SHALL BE IN ACCORDANCE WITH THE IRISH WATER STANDARD DETAILS.
- ALL SERVICE TRENCHES IN ROADS SHALL BE BACK FILLED AND PROPERLY COMPACTED WITH GRANULAR MATERIAL IN ACCORDANCE WITH IRISH WATER STANDARD DETAILS FOR WASTEWATER INFRASTRUCTURE.
- GULLIES A) ALL GULLIES AND MANHOLES LOCATED IN THE PUBLIC ROAD SHALL BE LOCKING TYPE. GULLIES TO BE LOCATED EVERY 45m OR 200m<sup>2</sup> OF HARD STANDING. B) DOUBLE GULLIES TO BE PROVIDED AT ALL ROAD SAG CURVES AND CUL DE SACS WHERE INDICATED. SEPARATE CONNECTIONS SHALL BE PROVIDED FOR EACH GULLY.
- MAIN DRAINAGE INDICATED ONLY. ALL SECONDARY DRAINAGE INCLUDING GULLIES, DOOR THRESHOLD DRAINS, BIGTs, RWPs, AJs ETC. OMITTED FOR CLARITY AT THIS STAGE.
- ALL MANHOLE COVERS TO BE D400
- ALL MANHOLE COVERS IN PAVEMENT AREAS TO BE RECESSED
- ALL INTERNAL MANHOLES ARE TO HAVE DOUBLE SEALED, RECESSED MANHOLE COVERS
- ALL BELOW GROUND FLOOR SLAB FOUL AND SURFACE WATER PIPEWORK TO BE MIN 1500 U.N.O.
- REFER TO TYPICAL BELOW GROUND FLOOR SLAB DRAINAGE DETAILS FOR INTERNAL DRAINAGE SUPPORT DETAIL
- FLOOR GULLIES TO BE CAST INTO CONCRETE SLAB/SCREED. MIN B125 RATED COVER. FINISH TO ARCHITECT'S SPECIFICATION

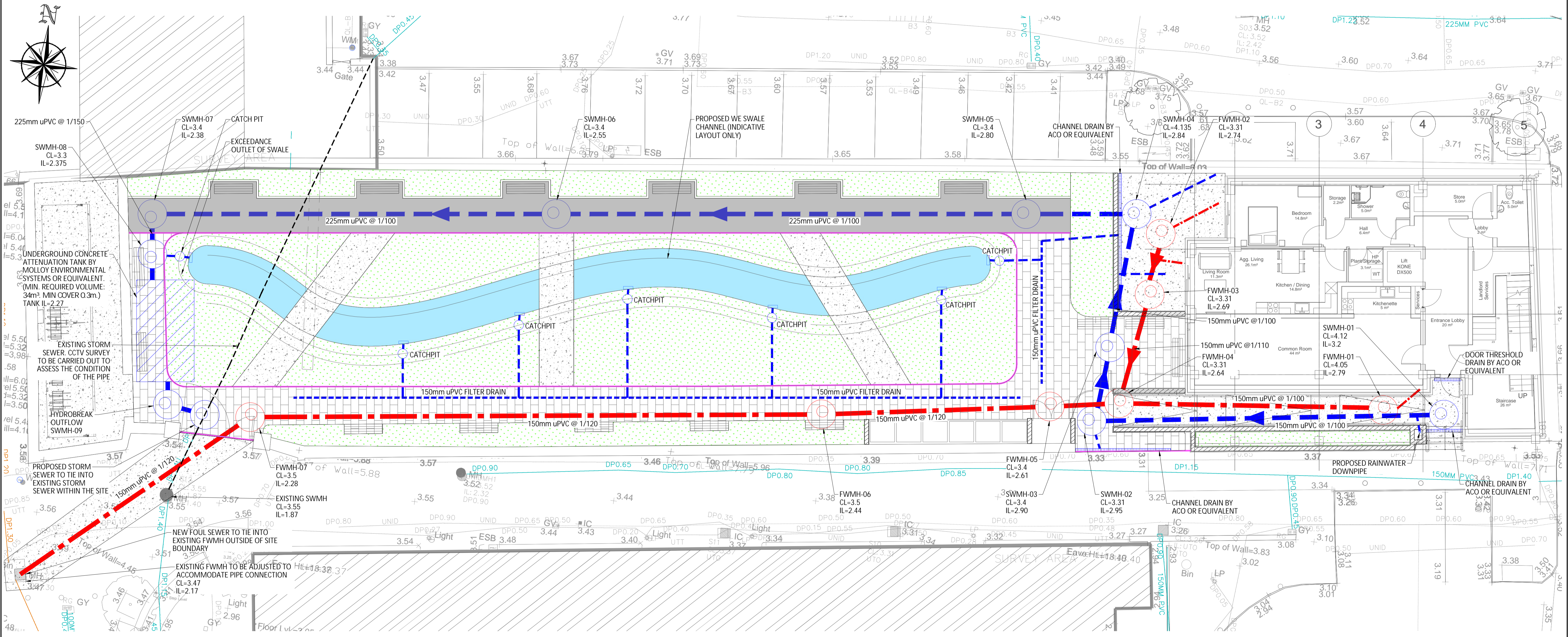
**LEGEND:**

- DENOTES NEW uPVC STORM WATER SEWER WITH PIPE SIZE, GRADE, MANHOLE/IC/AJ/MH REF & INVERT LEVEL TO IRISH WATER CODE OF PRACTICE
- DENOTES NEW uPVC FOUL WATER SEWER WITH PIPE SIZE, GRADE, MANHOLE/IC/AJ/MH REF & INVERT LEVEL TO IRISH WATER CODE OF PRACTICE
- DENOTES FILTER DRAIN UNDER PERMEABLE PAVEMENT
- DENOTES NEW VEGETATED WET SWALE
- DENOTES CHANNEL DRAIN BY ACO OR EQUIVALENT
- DENOTES EXISTING STORM SEWER
- DENOTES EXISTING FOUL SEWER
- SUDS INLET BY ACO OR EQUIVALENT



**TYPICAL CROSS SECTION THROUGH WET SWALE**

SCALE 1:20



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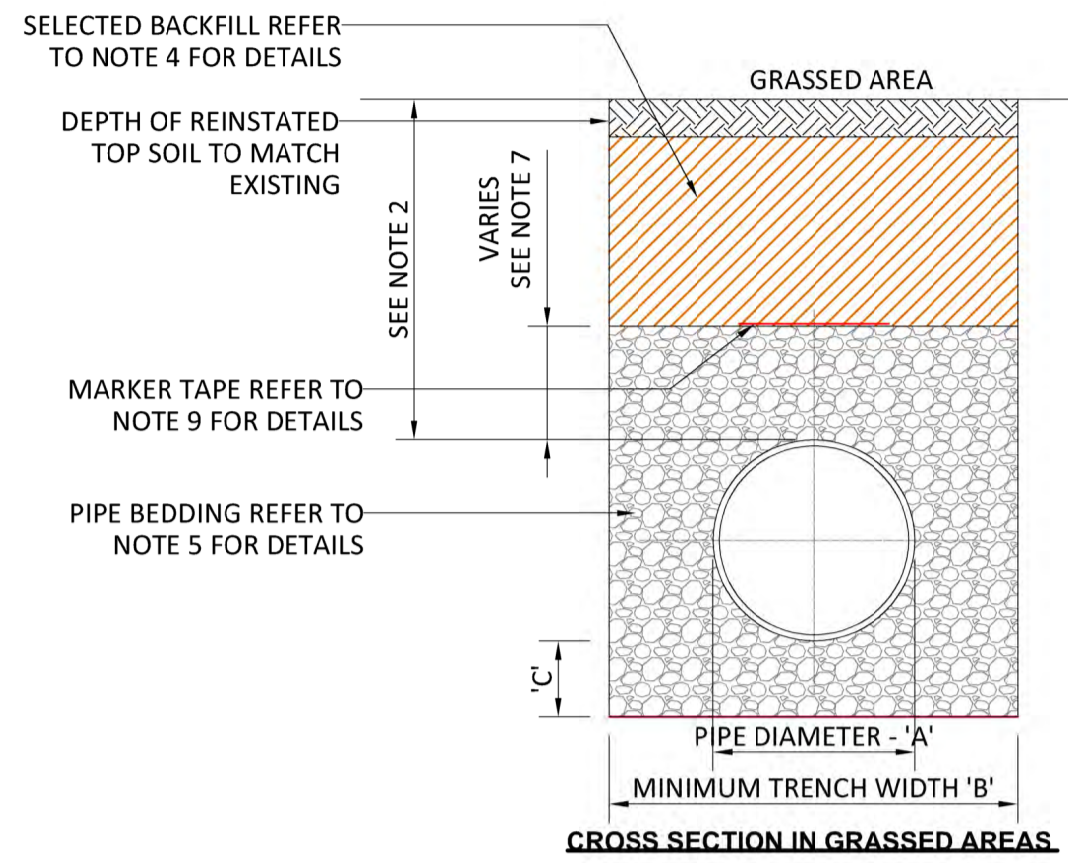
Client: CORK COUNTY COUNCIL  
 Project: 16No. APARTMENTS AT DISTILLERY LANE, MIDDLETON CO. CORK  
 Title: DRAINAGE LAYOUT

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
C1058	OCSC	XX	DR	C	0001	S3	P02	

Date: 02/24 Scale @ A1: 1/100 Drn by: CW Chkd by: ANB Aprvd by: JMCB

**PIPE BEDDING NOTES:**

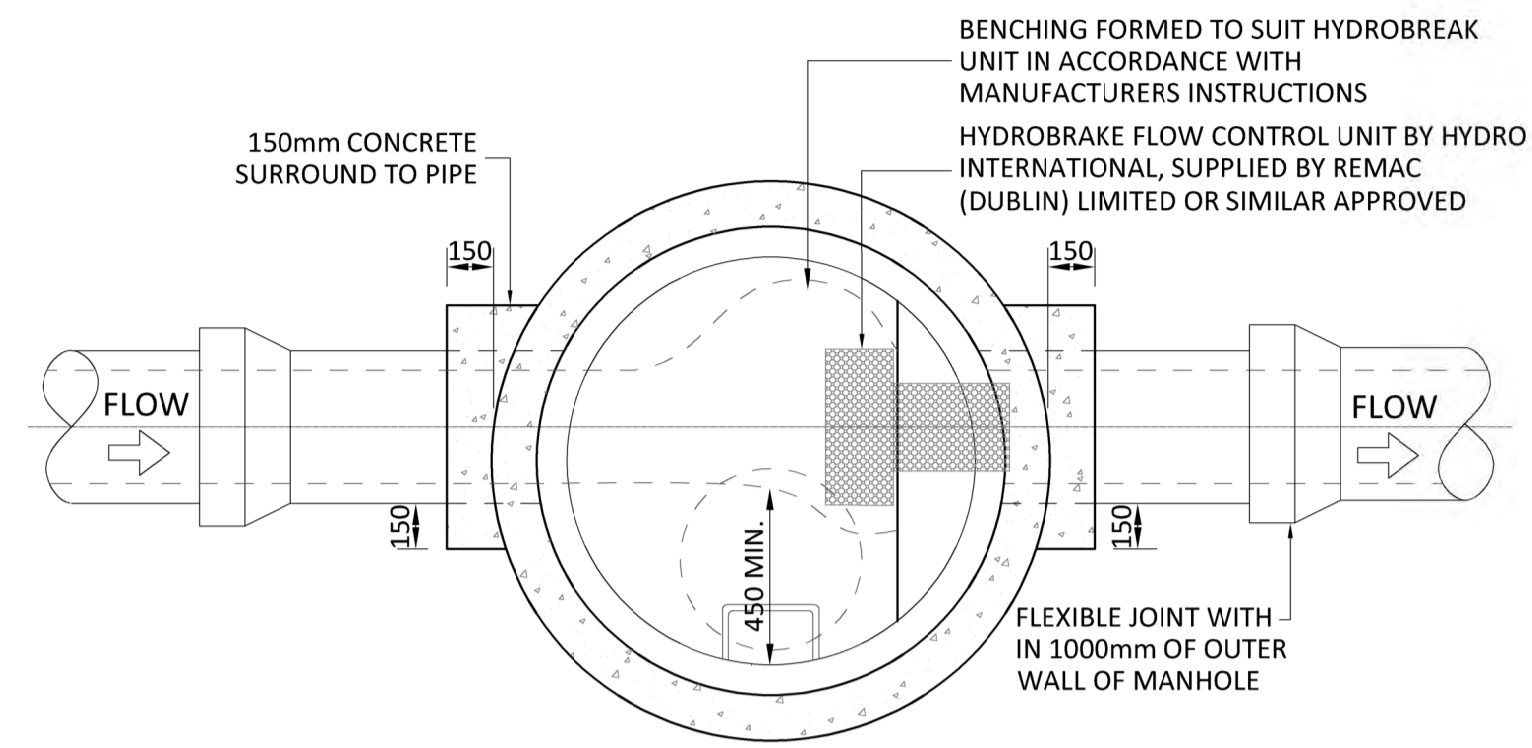
- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO THE CROWN OF GRAVITY PIPES WITHOUT PROTECTION SHOULD BE AS FOLLOWS:
  - GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.5 M. (THIS WOULD NORMALLY RELATE TO DRAINS IN PRIVATE PROPERTY, SHALLOW PIPES OF THIS NATURE ARE UNDESIRABLE AND SHOULD BE INSTALLED IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS)
  - DRIVEWAYS, FOOTWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.75 M
  - DRIVEWAYS, FOOTWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9 M.
  - DEPTH OF SEWER IN GATED ESTATES SHALL BE SIMILAR TO THAT OUTLINED ABOVE
  - AGRICULTURAL LAND AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 0.9m
  - OTHER ROADWAYS, HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 1.2m
- CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 804 / 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. CLAUSE 808 IS TO BE USED WITHIN 500mm OF CEMENT BOUND MATERIALS, CONCRETE PAVEMENTS, CONCRETE STRUCTURES OR CONCRETE PRODUCTS. OTHERWISE CLAUSE 804 MAY BE USED. ALTERNATIVE BACKFILL MATERIAL TO THAT DESCRIBED ABOVE (CLAUSE 804 OR CLAUSE 808) OF THE PIPE TRENCH WILL ONLY BE ALLOWED BY IRISH WATER WHERE THE ROADS AUTHORITY IN WHOSE FUNCTIONAL AREA THE DEVELOPMENT IS LOCATED, PROVIDES WRITTEN APPROVAL TO THE DEVELOPER TO THE USE SUCH ALTERNATIVE MATERIAL EVIDENCE OF THIS WRITTEN APPROVAL TO BE PROVIDED TO IRISH WATER IN ADVANCE OF THE COMMENCEMENT OF WORKS.
- SELECTED EXCAVATED MATERIAL COMPLYING WITH THE REQUIREMENTS OF "ACCEPTABLE MATERIAL" AS OUTLINED ON CLAUSE 601 OF THE TII SPECIFICATION FOR ROADWORKS, TABLE 6/1, CLASS 8, CLASS 2. MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO REVIEW BY IRISH WATER
- PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01. THE PIPE BEDDING GRANULAR MATERIAL SHALL BE 14mm TO 5mm (d/D 2/14) GRADED AGGREGATE OR 10mm (d/D 4/10) SINGLE SIZED AGGREGATE TO IS EN 13242. CONCRETE BED, HAUNCH, & SURROUND, WHERE REQUIRED, SHALL BE TO STD-WW-08.
- IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEO-TEXTILE WRAPPING. ALTERNATIVELY, SPECIAL PIPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE THE DEPTH OF SOFT MATERIAL IS EXCESSIVE. SUCH ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORK.
- IN GREEN FIELD AREAS, TYPE B BACKFILL (SELECTED EXCAVATED MATERIAL COMPLYING WITH THE REQUIREMENTS OF "ACCEPTABLE MATERIAL" AS OUTLINED ON CLAUSE 601 OF THE TII SPECIFICATION FOR ROADWORKS, TABLE 6/1, CLASS 8, CLASS 2.) WILL BE ALLOWED ABOVE THE SIDE HAUNCH GRANULAR MATERIAL IN THE CASE OF RIGID PIPES. A GRANULAR SURROUND OF A MINIMUM, DEPTH OF 150mm ABOVE THE CROWN OF THE PIPE IS REQUIRED FOR FLEXIBLE PIPES AND TYPE B MATERIAL MAY BE USED AS BACKFILL ABOVE THIS. ALL RISING MAINS IN GREENFIELD AREAS SHALL HAVE A MINIMUM COVER OF 300mm OF GRANULAR MATERIAL ABOVE THE EXTERNAL CROWN OF THE PIPE.
- PIPES SHALL NOT BE SUPPORTED ON STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
- NON DEGRADABLE MARKER TAPE SHOULD BE INSTALLED AT THE TOP OF PIPE BEDDING LAYER FOR SEWERS AND RISING MAINS. IT SHOULD RUN CONTINUOUSLY AROUND MANHOLES. IN THE CASE OF NON METAL PIPE MATERIAL, THE MARKER TAPE SHOULD INCORPORATE A TRACE WIRE WHICH IS LINKED TO FITTINGS AND TERMINATED AT THE WASTE WATER PUMPING STATION (IF PROVIDED) AND THE DISCHARGE MANHOLE.
- TRENCH WIDTHS FOR PIPE SIZES ≤80mm MAY BE <500mm, SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS REQUIREMENTS
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.



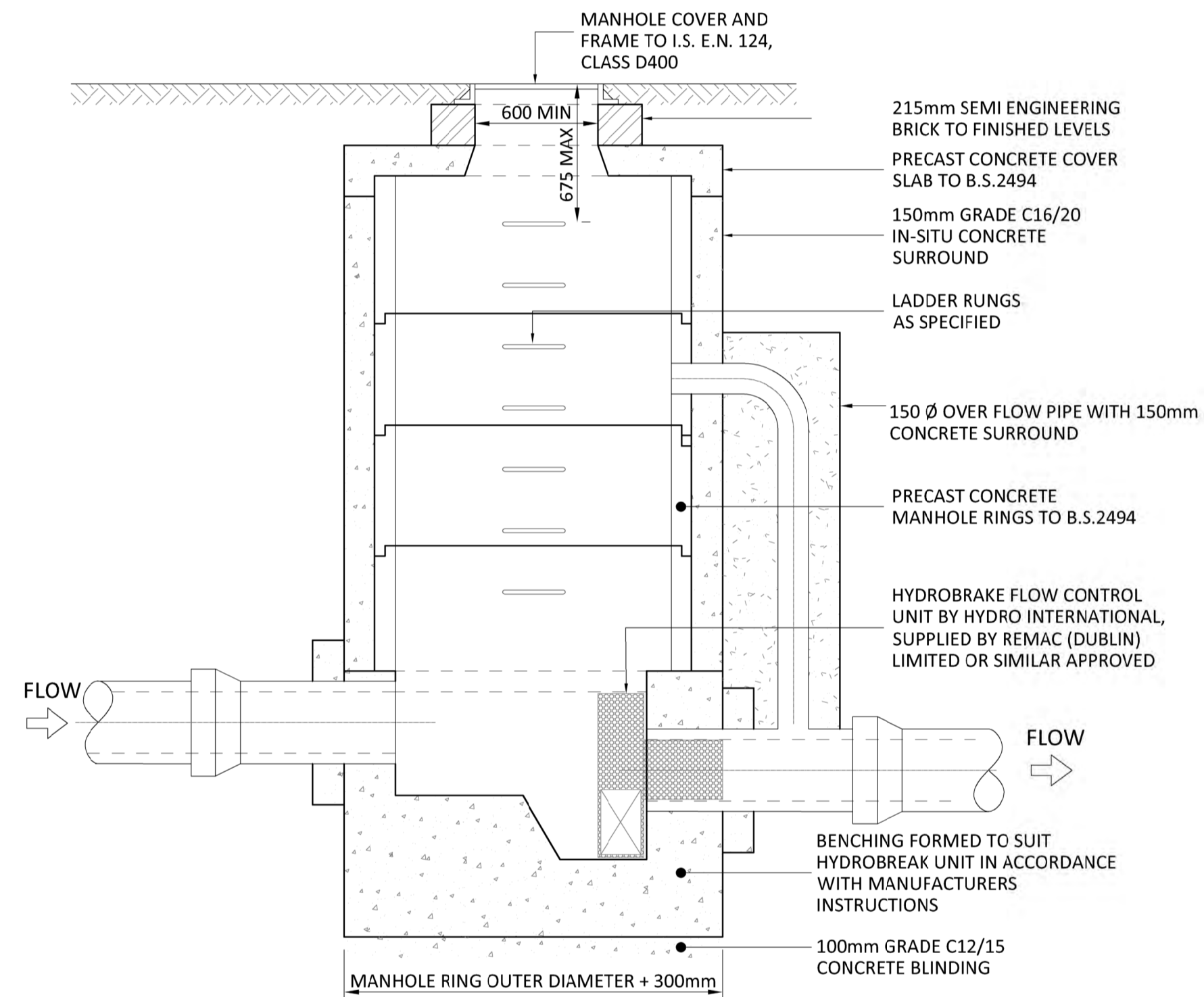
PIPE DIAMETER 'A'(mm)	TRENCH WIDTH 'B'(mm)
≤ 80 RISING MAIN	SEE NOTE 10.
100	500
150 - 200	600
>200 - 350	750
>350 - 450	900

PIPE DIAMETER 'A'(mm)	DEPTH OF BEDDING 'C' (mm)
≤ 100	100
150-450	200



**PLAN ON HYDROBRAKE CHAMBER**  
 MAX. DEPTH G.L. TO I.L. - 3.0m  
 SCALE 1:25



**HYDROBRAKE CHAMBER**  
 MAX. DEPTH G.L. TO I.L. - 3.0m  
 SCALE 1:25

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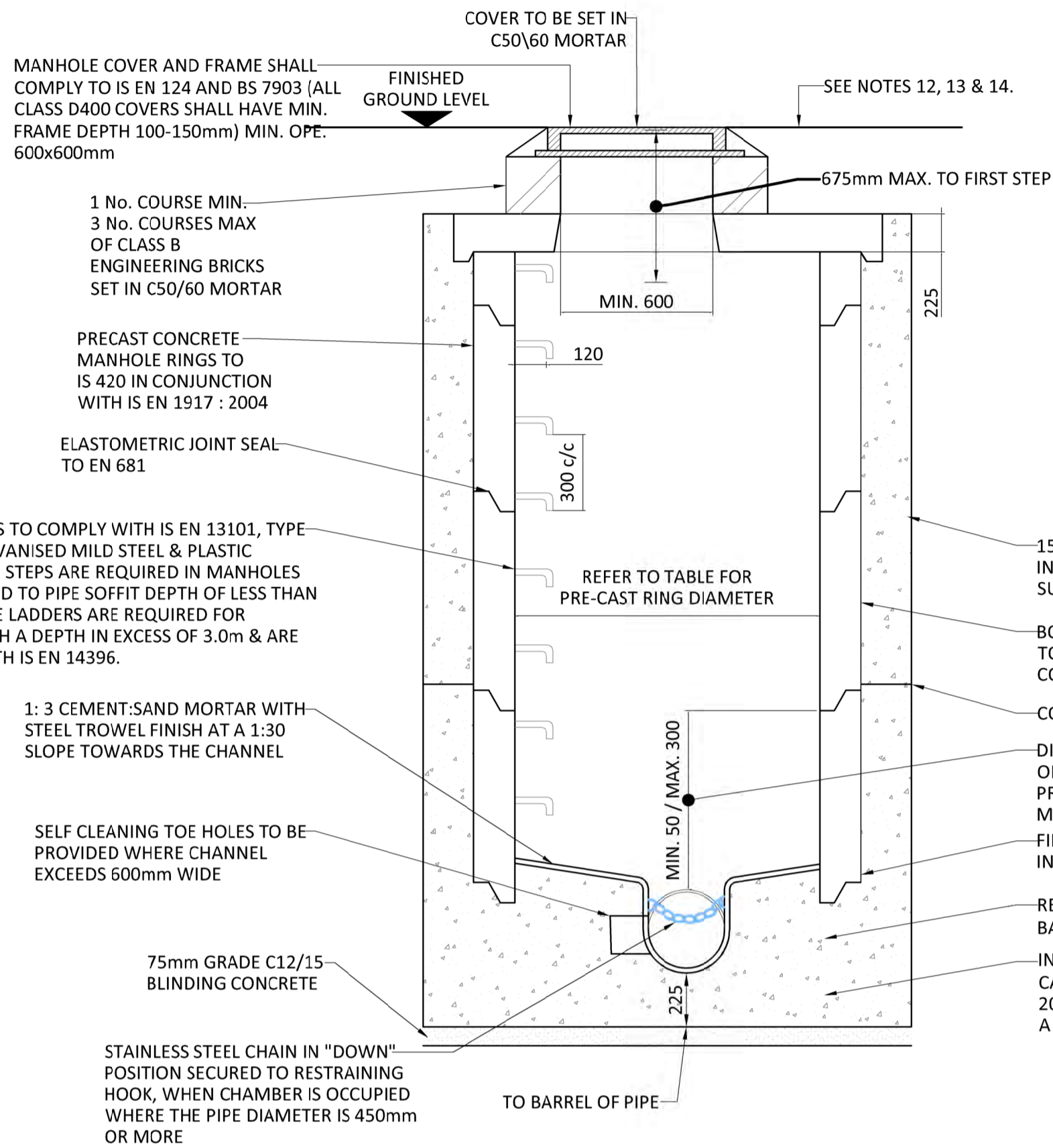
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 Title: DRAINAGE DETAILS SHEET 1 OF 4

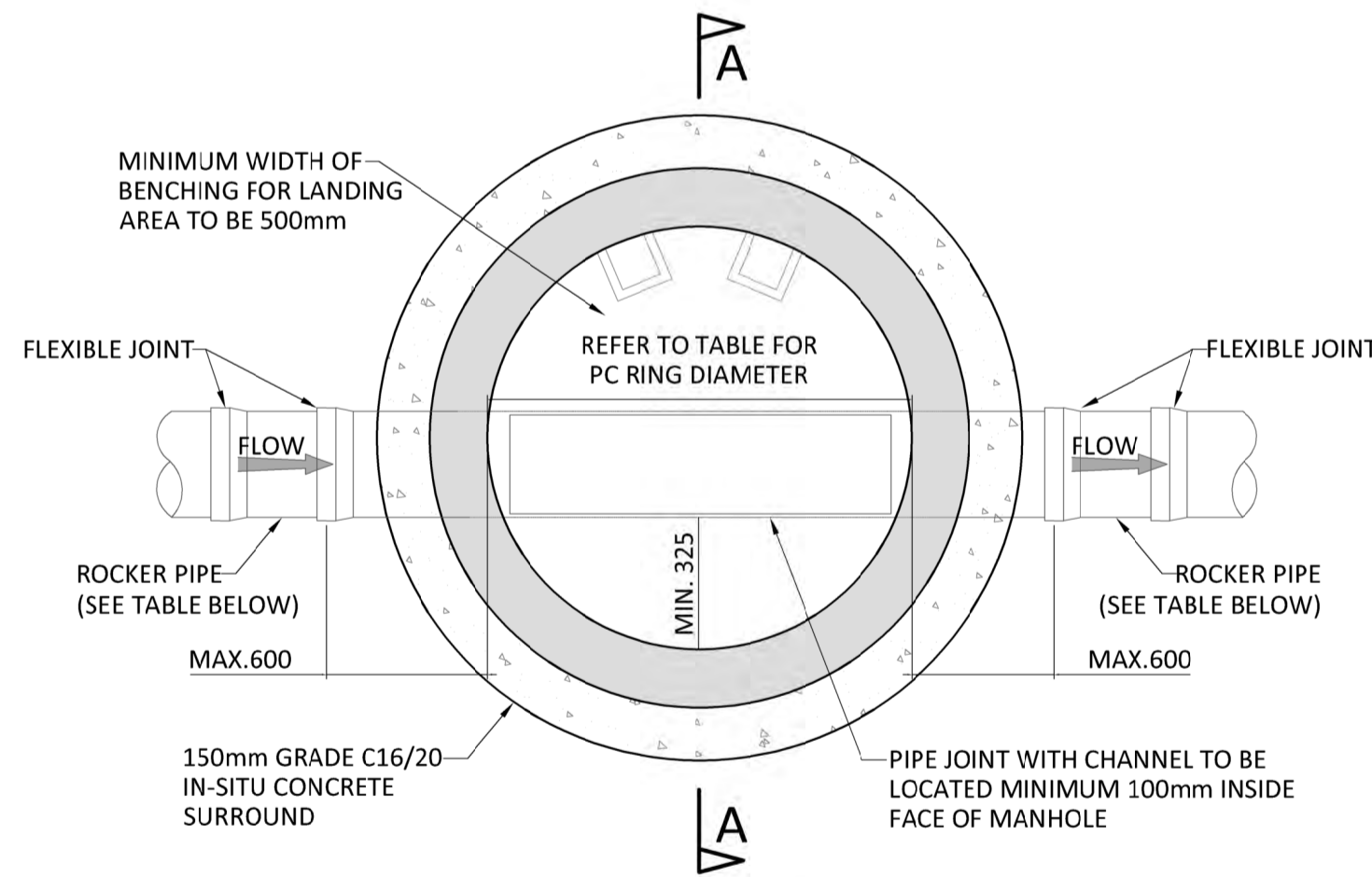
Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
C1058	OCSC	XX	XX	DR	C	0101	S3	P01

Date: 02/24 Scale @ A1: A/S Drn by: CW Chkd by: CM Aprvd by: JMcB

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. PRE-CAST MANHOLES UNITS: COMPLYING WITH REQUIREMENTS OF IS EN 1917 AND BS 5911-PART 3.
3. THICKER MANHOLE BASES REQUIRED FOR SEWERS IN EXCESS OF 3m DEEP WHERE THE SIZE IS GREATER THAN THE STANDARD MINIMUM SIZE.
4. APPROVED PRE-CAST CONCRETE BASES MAY BE USED INCORPORATING CHANNELS, BENCHING ETC. SUBJECT TO IRISH WATER REVIEW AND COMPLYING WITH BS 5911-PART 4 2002.
5. STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
6. MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER REVIEW.
7. MANHOLE ROOFS SHALL CONSIST OF A RE-INFORCED CONCRETE SLAB OF IN-SITU CONCRETE, C30/37, WITH A MINIMUM THICKNESS OF 225mm DESIGNED TO CARRY ALL LIVE AND DEAD LOADS. ALTERNATIVELY, APPROVED PRE-CAST CONCRETE ROOF SLABS MAY BE USED SUBJECT TO IRISH WATER REVIEW AND COMPLIANCE WITH BS 5911 PART 4: 2002.
8. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
9. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
10. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.
11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 : 2013.
12. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
13. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
14. EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.
15. IF DEPTH FROM GROUND TO PIPE SOFFIT IS GREATER THAN 6m DEEP, A SITE SPECIFIC ENGINEERED SOLUTION FOR ACCESS SHALL BE PROVIDED.
16. PROPRIETARY WATERTIGHT PCC MANHOLE RING SYSTEMS WITH A WALL THICKNESS > 125mm, & A WATER TIGHT JOINT SEALING SYSTEM, MAY BE USED WITHOUT CONCRETE SURROUND, SUBJECT TO THE GROUND WATER LEVEL AT THE MANHOLE BEING LOW, & SUBJECT TO REVIEW BY IRISH WATER



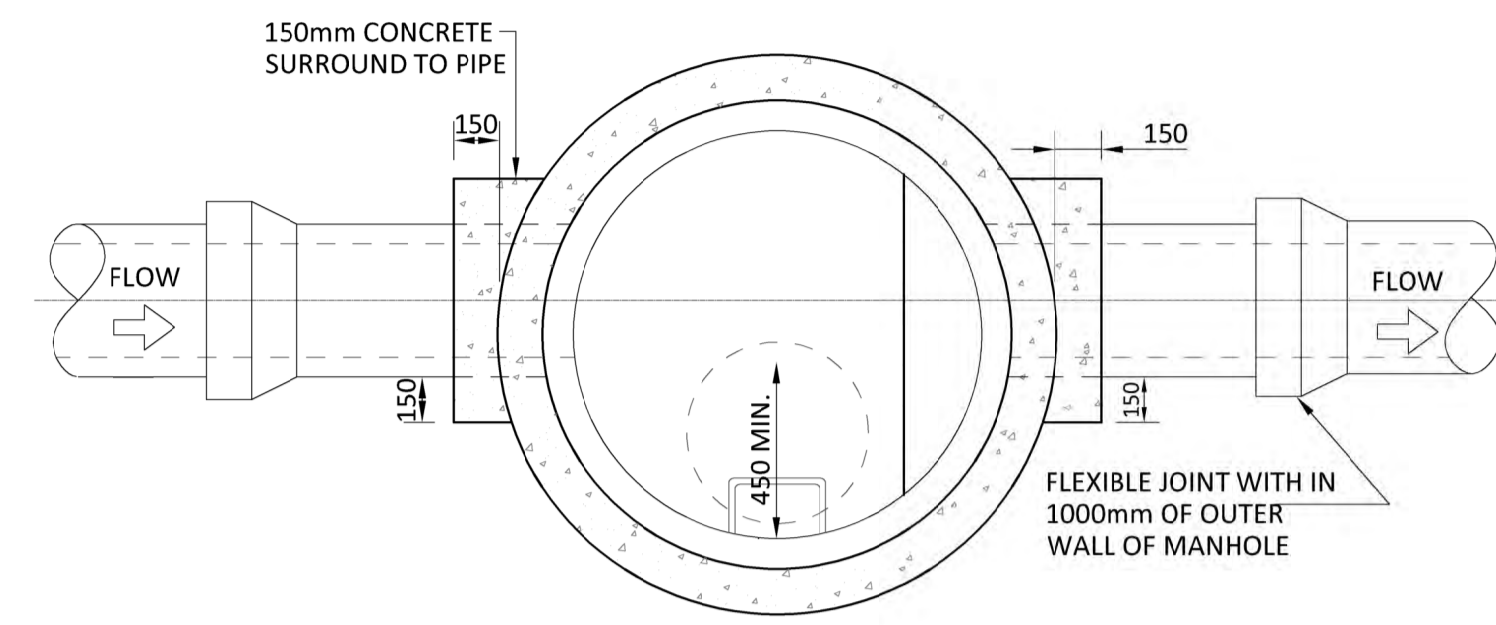
**SECTION A-A**  
SCALE 1:20



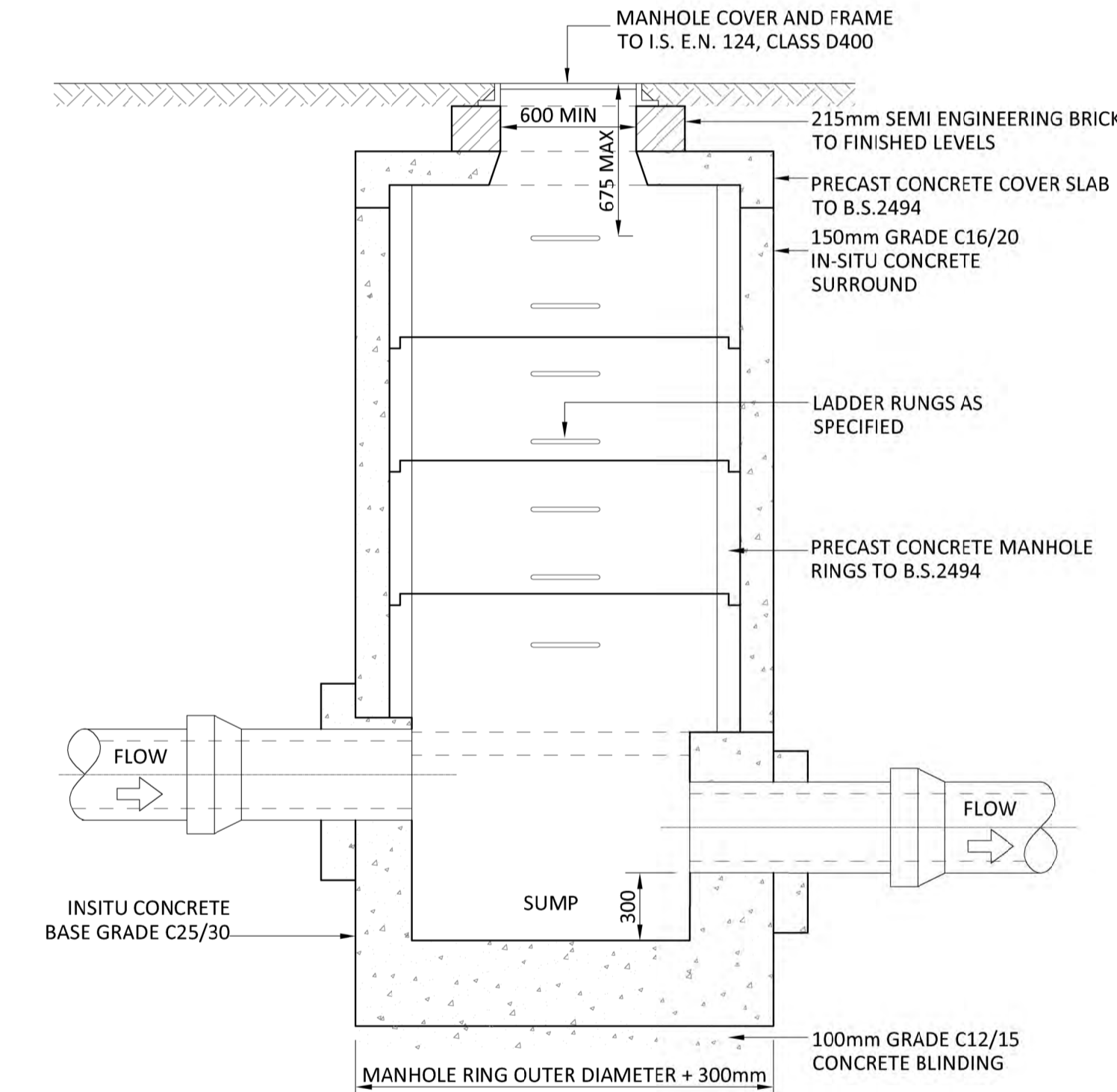
**PLAN OF PRECAST CONCRETE RING MANHOLE**  
SCALE 1:20

MINIMUM MANHOLE DIAMETERS	
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375 TO 450	1350
500 TO 750	1500

ROCKER PIPE LENGTH	
PIPE DIAMETER (mm)	ROCKER PIPE LENGTH (mm)
150 TO 600	600
GREATER THAN 600 TO 750	1000
GREATER THAN 750	1250



**PLAN ON SUMP MANHOLE CHAMBER**  
MAX. DEPTH G.L. TO I.L. -3.0m  
SCALE 1:25



**PRECAST SUMP MANHOLE CHAMBER**  
MAX. DEPTH G.L. TO I.L. - 3.0m  
SCALE 1:25

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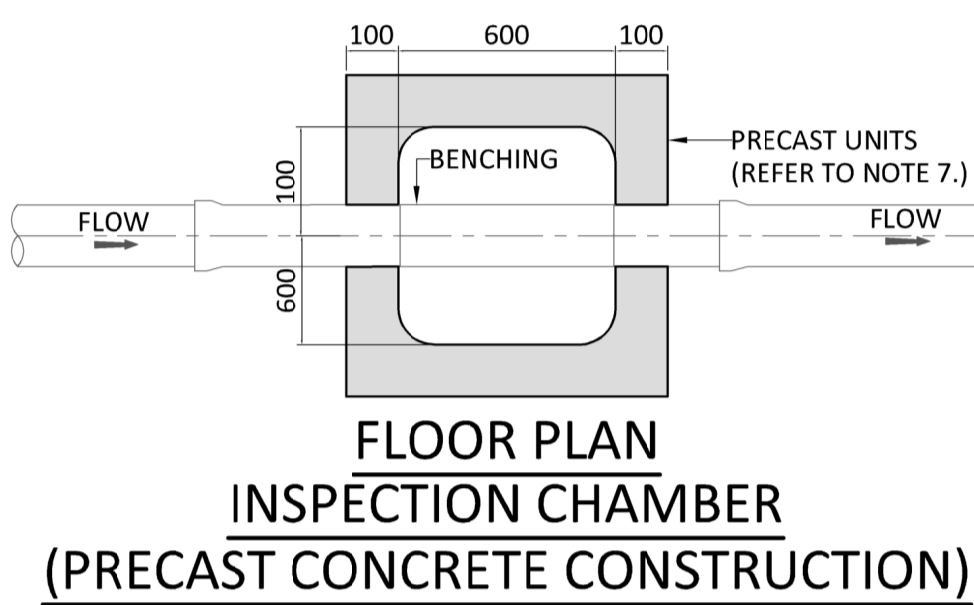
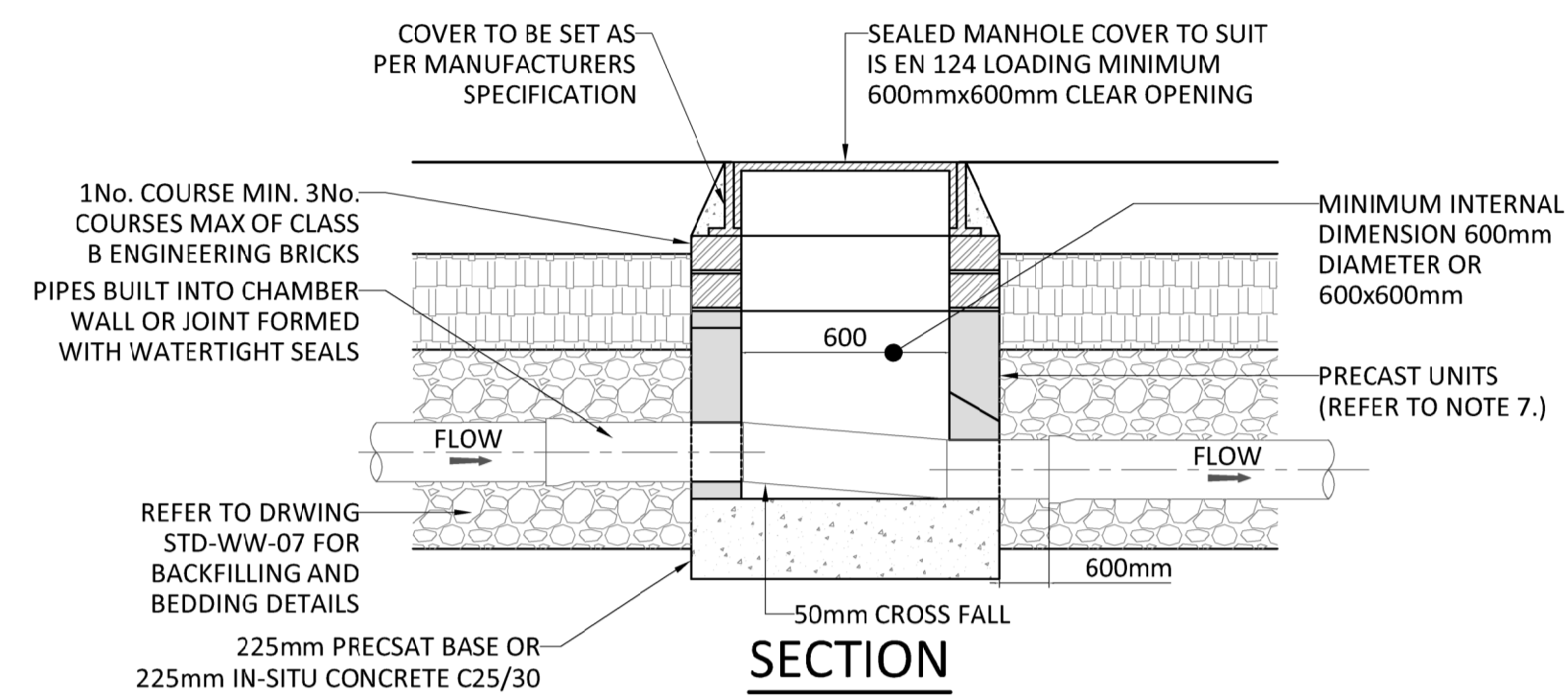
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P01	25/02/24	ISSUED FOR PLANNING	MA	ABN

Rev No.	Date	Revision Note	Drn by	Chkd by

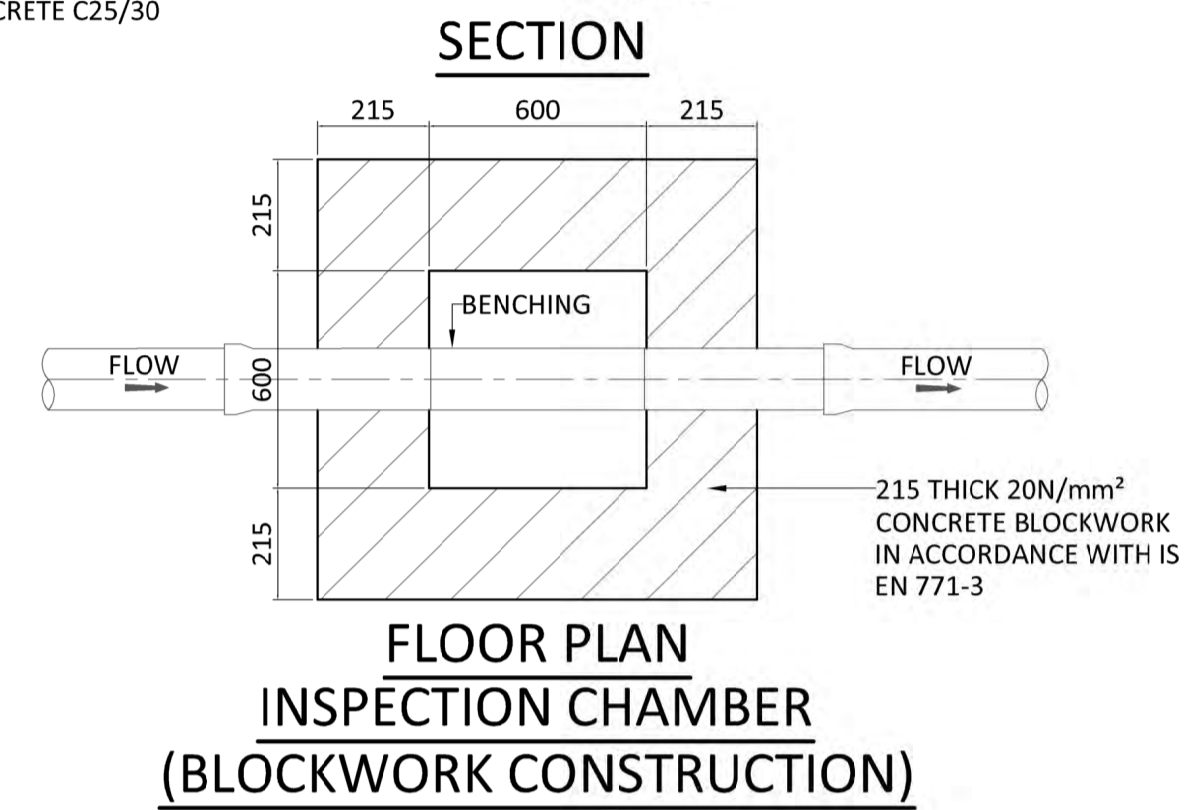
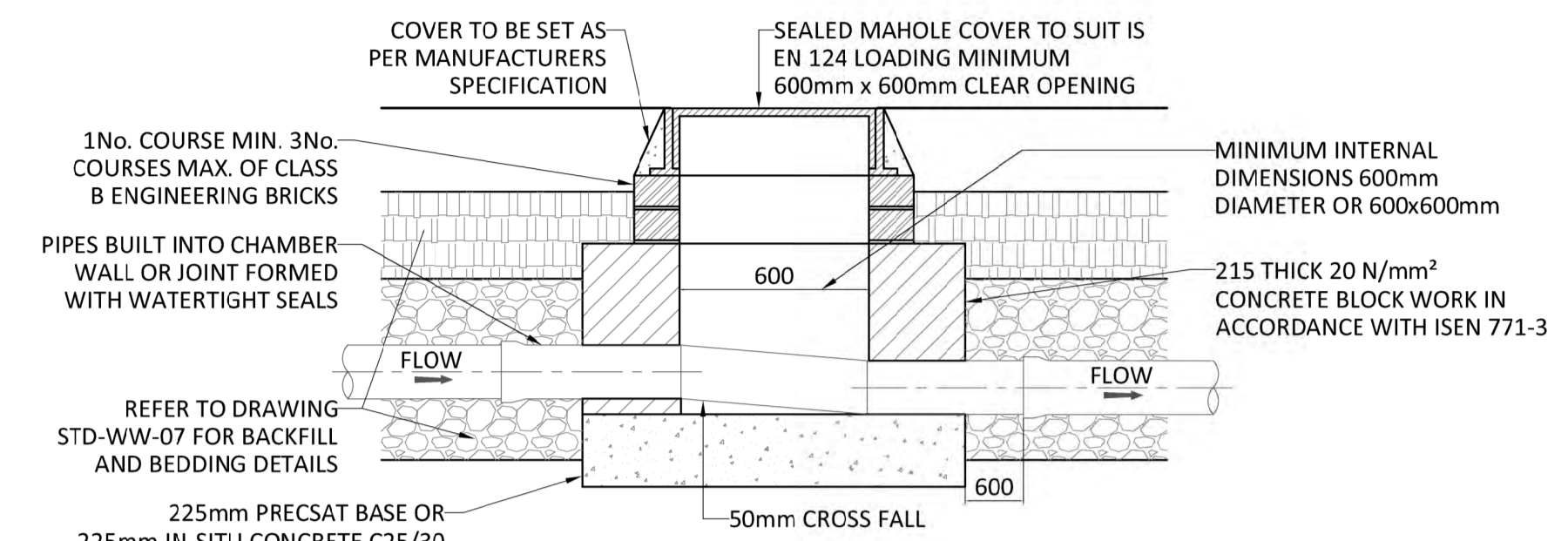


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Client:	CORK COUNTY COUNCIL							
Project:	16No. APARTMENTS AT DISTILLERY LANE, MIDDLETON CO. CORK							
Title:	DRAINAGE DETAILS SHEET 2 OF 4							
Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
C1058	OCSC	XX	XX	DR	C	0102	S3	P01
Date: 02/24	Scale: @ A1: A/S	Drn by: CW	Chkd by: CM	Aprvd by: JMcB				



1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AN INSPECTION CHAMBER SHOULD BE LOCATED AT OR WITHIN 1m OF THE PROPERTY BOUNDARY AT THE UPSTREAM END OF EACH SERVICE CONNECTION ON THE PRIVATE SIDE OF THE CURTLAGE, IF PRACTICABLE, CONSULT WITH IRISH WATER ON ALTERNATIVE LOCATIONS.
3. ANY PIPE AND ASSOCIATED ACCESS UPSTREAM OF THE POINT OF CONNECTION TO A PUBLIC SEWER IS A PRIVATE DRAIN AND SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE BUILDING REGULATIONS.
4. ACCESS POINTS SHOULD BE LOCATED SO THAT THEY ARE ACCESSIBLE AND APPARENT TO THE MAINTAINER AT ALL TIMES FOR USE. THEY SHOULD AVOID REAR GARDENS OR ENCLOSED LOCATIONS AND THEY SHOULD NEVER BE overlain WITH SURFACE DRESSING, TOPSOIL, ETC.
5. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
6. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
7. PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
8. CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 804 OR CLAUSE 808 MATERIAL AS PER STD-WW-07.



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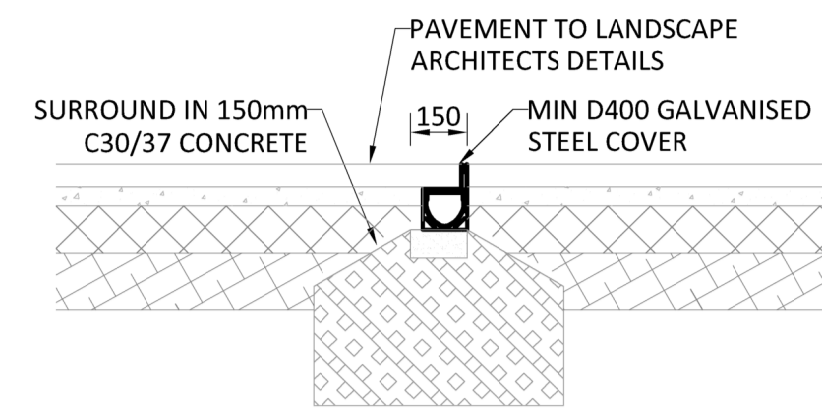
Rev No.	Date	Revision Note	Drn by	Chkd by
P01	26/02/24	ISSUED FOR PLANNING	MA	ABN

Rev No.	Date	Revision Note	Drn by	Chkd by

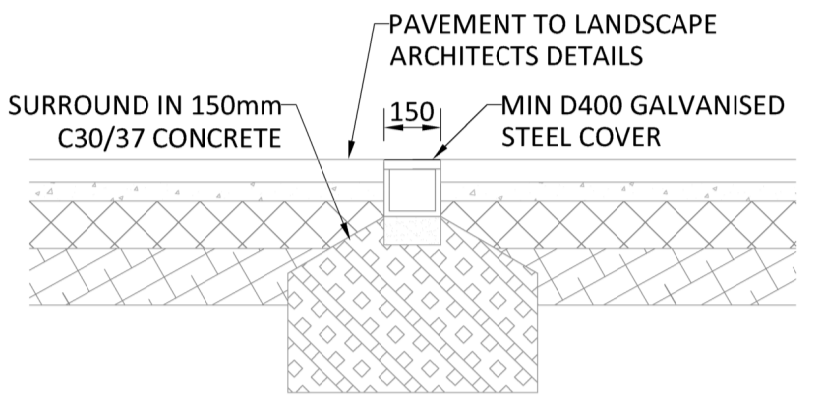


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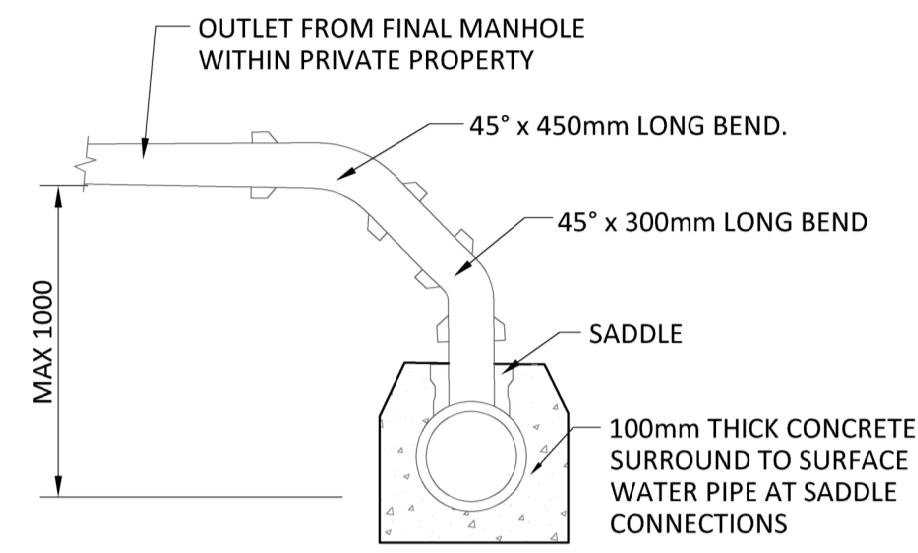
Client: CORK COUNTY COUNCIL		Project: 16No. APARTMENTS AT DISTILLERY LANE, MIDELTON CO.CORK						
Title: DRAINAGE DETAILS		SHEET 3 OF 4						
Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
C1058	OCSC	XX	XX	DR	C	0103	S3	P01
Date: 02/24	Scale: @ A1:A5	Drn by: CW	Chkd by: CM	Aprvd by: JMcB				



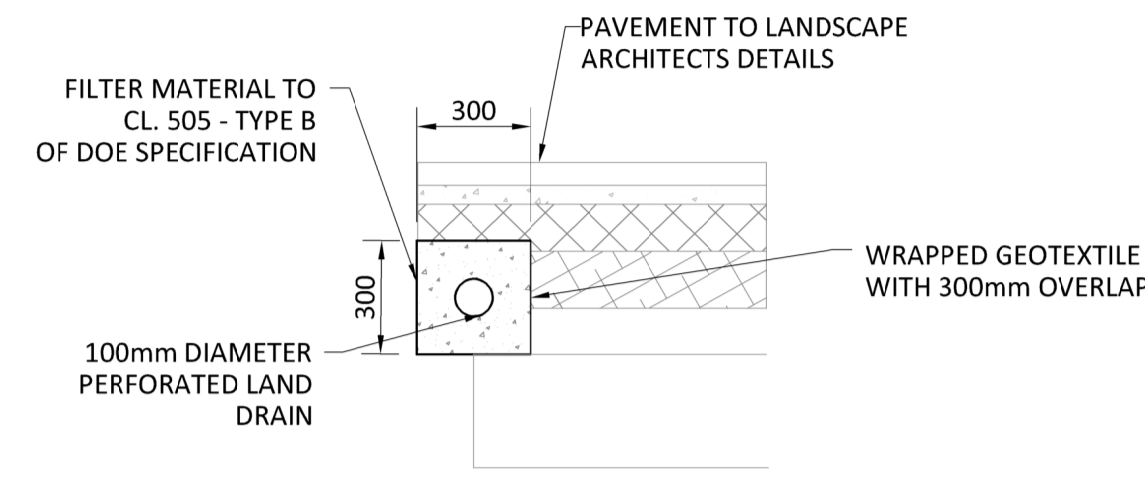
**TYPICAL SLOT CHANNEL DRAIN/  
DOOR THRESHOLD DETAIL**  
SCALE 1:20



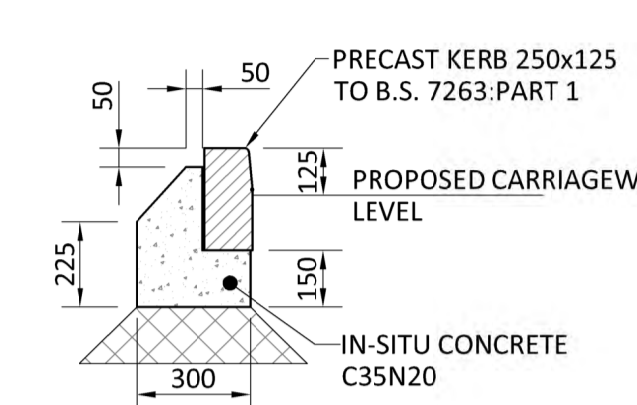
**TYPICAL CHANNEL DRAIN DETAIL**  
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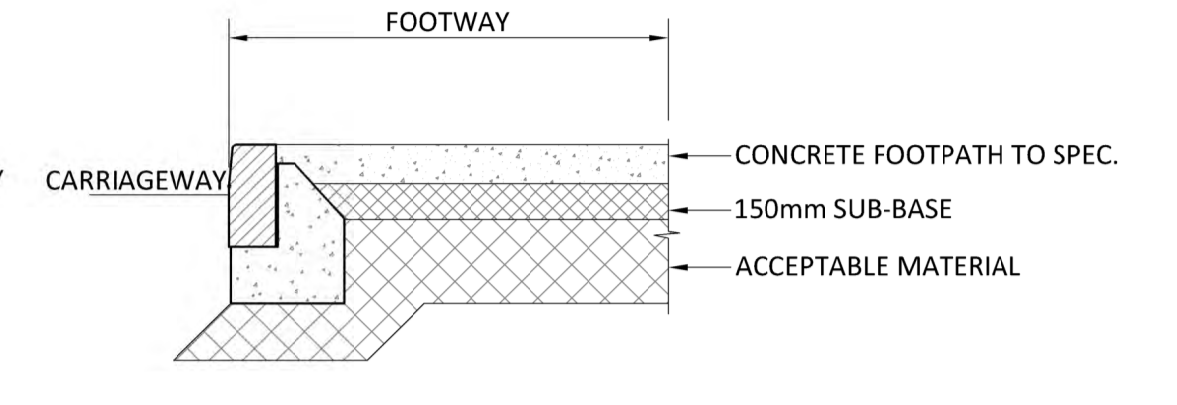
**TYPICAL SADDLE  
CONNECTION DETAIL TO  
PUBLIC SEWER**  
SCALE 1:25



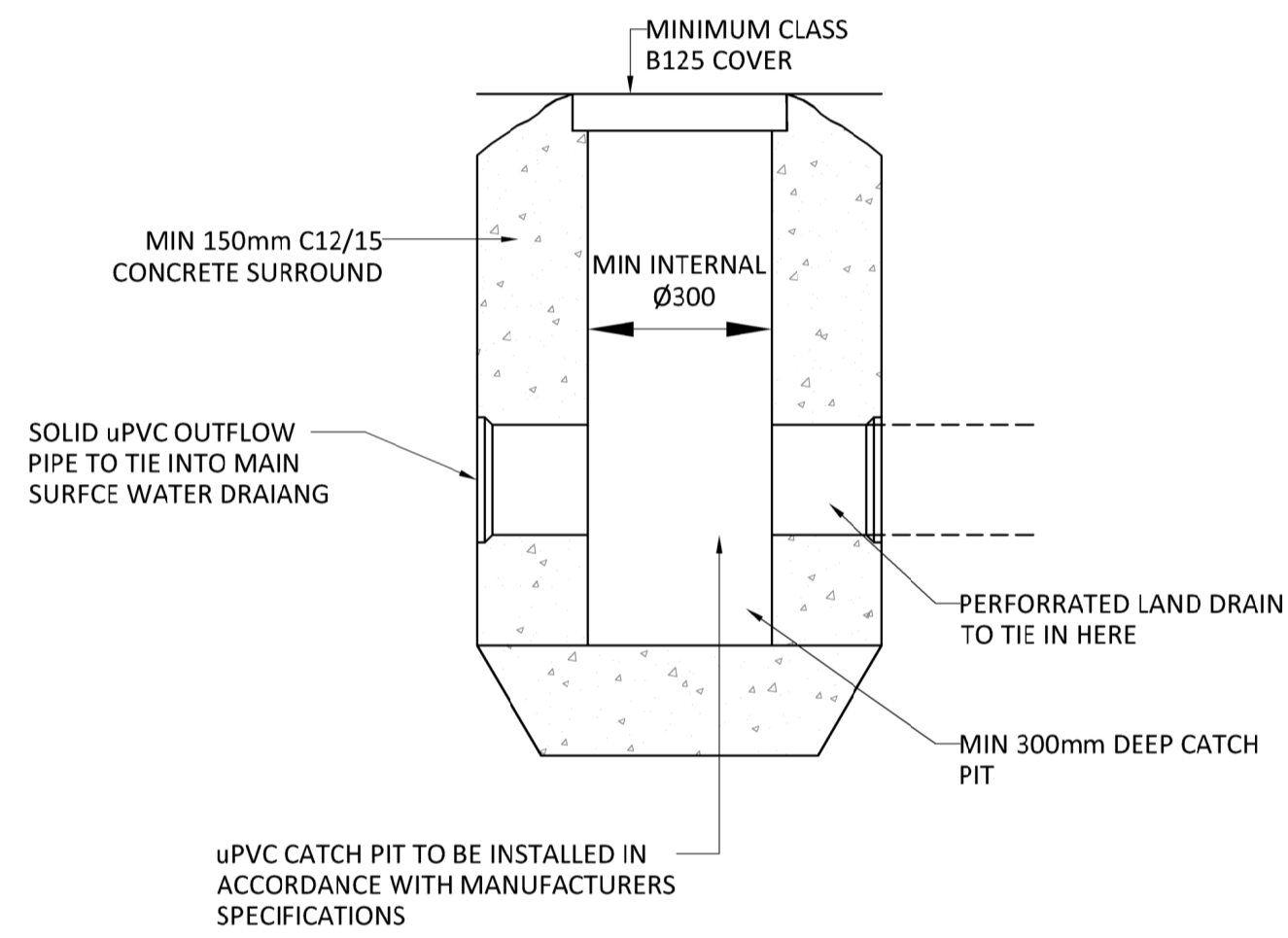
**FILTER DRAIN DETAIL**  
SCALE 1:20



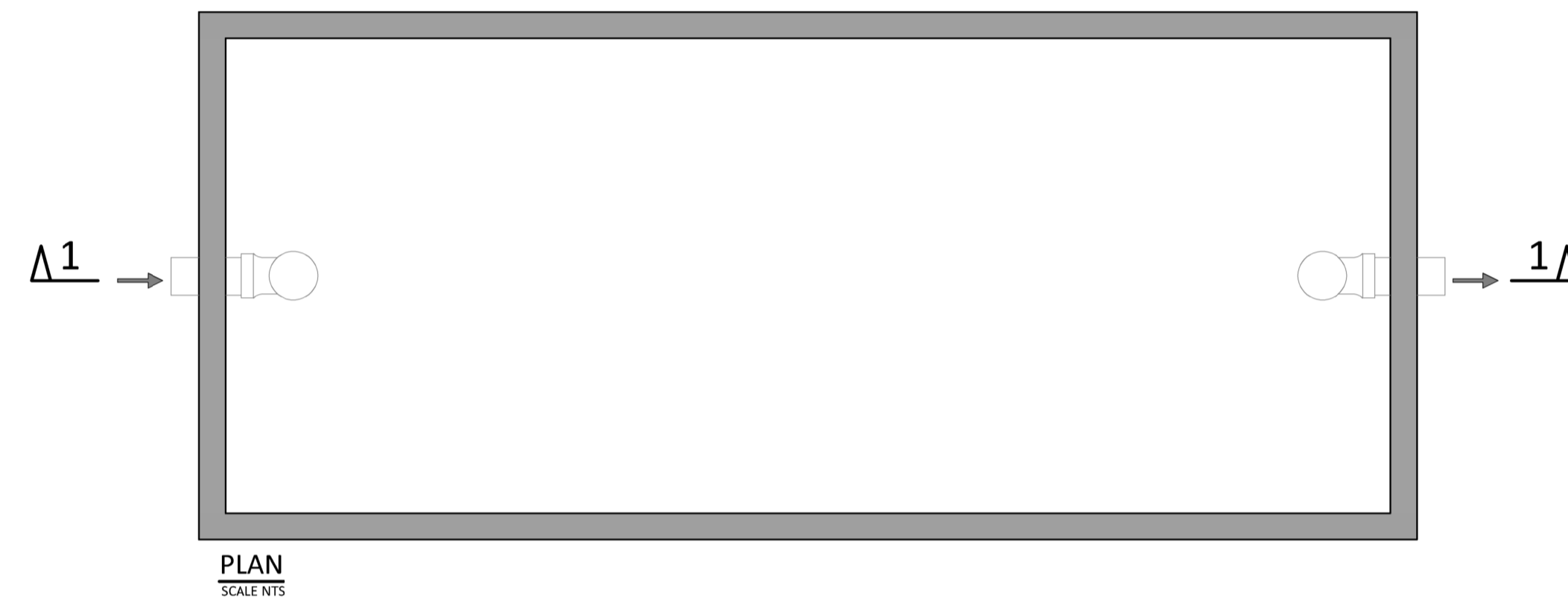
**125mm HIGH KERB**  
SCALE 1:20



**FLUSH KERB DETAIL**  
SCALE 1:20



**CATCH PIT DETAIL 1**  
SCALE 1:10



**PLAN**  
SCALE NTS



**SECTION 1-1**  
SCALE NTS

**TYPICAL RC CONCRETE ATTENUATION TANK (SECTION AND PLAN VIEW) - SIZE TBC**  
SCALE NTS

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Client: CORK COUNTY COUNCIL		Project: 16No. APARTMENTS AT DISTILLERY LANE, MIDDLETON CO. CORK		Title: DRAINAGE DETAILS SHEET 4 OF 4				
Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
C1058	OCSC	XX	DR	C		0104	S3	P01
Date: 02/24	Scale: @ A1:A5	Drn by: CW	Chkd by: CM	Aprvd by: JMcB				

**THRUST BLOCKS:**

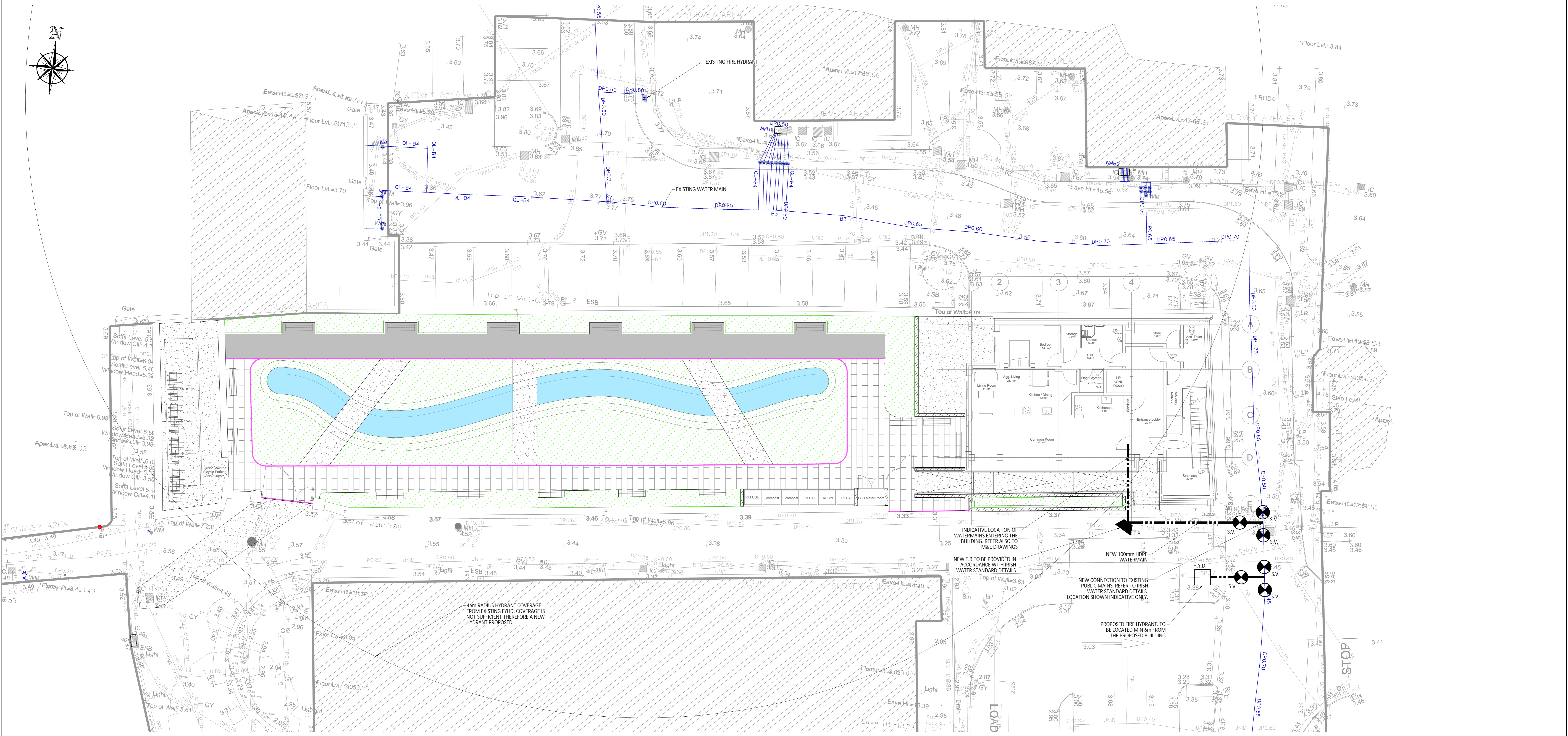
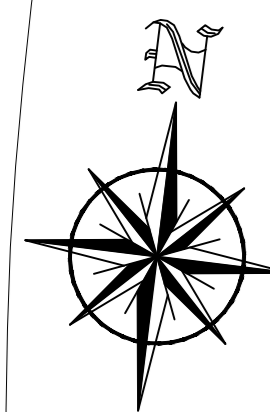
- THRUST BLOCKS / ANCHOR BLOCKS**
- ANCHOR BLOCKS SHALL BE GRADE C25/30 CONCRETE AND SHALL BE PLACED AROUND PRESSURE PIPES AT BOTH SIDES OF ALL VALVE CHAMBERS AND AT BENDS OF GREATER CURVATURE THAN 225°
  - BLOCKS SHALL BE TAKEN 150MM BELOW THE PIPE INVERT FOR THE FULL WIDTH OF TRENCH AND SHALL ENCASE THE PIPES TO 150MM OVER THE TOP OF THE BARREL.
  - THE MIN. LENGTH OF ANCHOR BLOCK SHALL BE 600MM FOR PIPES UP TO 150 FOR PIPES GREATER THAN 150 THE MINIMUM LENGTH SHALL BE TAKEN AS 900MM.
  - ANCHOR BLOCKS SHALL BE PROVIDED AT ALL DEAD ENDS, TEES & TAPERS.
  - STEELY INCLINED PIPELINES SHALL BE SECURED BY TRANSVERSE ANCHOR BLOCKS SPACED IN ACCORDANCE WITH THE FOLLOWING TABLE.
- | GRADIENT           | SPACING |
|--------------------|---------|
| 1 IN 2 AND STEEPER | 05.9M   |
| 1 IN 2 - 1 IN 4    | 11.0M   |
| 1 IN 4 - 1 IN 5    | 16.0M   |
| 1 IN 5 - 1 IN 6    | 22.0M   |
- ANCHOR BLOCKS ON STEELY INCLINED PIPELINES SHALL PROJECT EQUALLY INTO EACH SIDE. OTHER DIMENSIONS SHALL BE AS DETAILED ABOVE.

**WATERMAIN NOTES:**

- FOR SETTING OUT REFER TO ARCHITECT'S DRAWINGS.
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND ENGINEERING DRAWING AND ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE THIS DRAWING. USE FIGURE DIMENSIONS ONLY.
- ALL WORKS SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN "RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS" AS PUBLISHED BY DEPARTMENT OF ENVIRONMENT AND LOCAL GOVERNMENT AND IRISH WATER STANDARD DETAILS FOR WATER INFRASTRUCTURE.
- WATERMAIN SHALL BE MINIMUM 100mm HDPE LAID OUT AS INDICATE ON SITE PLAN IN ADDITION ON SITE PLAN, SLUICE VALVES SHALL BE FITTED ON EACH CUL-DE-SAC SLUICE VALVE TYPE SHALL BE AGREED WITH IRISH WATER BEFORE INSTALLATION.
- EACH DEAD - END MAIN SHALL TERMINATE WITH A HYDRANT FOR FLUSHING PURPOSES.
- STOPCOCKS SHALL BE PROVIDED ON EACH SERVICE PIPE AND SHALL COMPLY WITH BS 1070. AN APPROPRIATE WATER SERVICE CONTROL UNIT, TO BE INSTALLED AT POINT OF INDIVIDUAL CONNECTION TO BE THE WATERMAIN.
- MINIMUM COVER TO ALL WATERMAIN SHALL BE 900mm AND MINIMUM COVER TO ALL SERVICE PIPE SHALL BE 600mm.
- A COMBINATION METERING SYSTEM SHALL BE FITTED TO THE WATERMAIN AS AGREED WITH IRISH WATER.
- WATERMAIN SHALL BE LAID AND TESTED TO THE SATISFACTION OF IRISH WATER.
- MARKER STRIPS SHALL BE LAID IN THE TRENCHES IDENTIFYING THE SERVICES UNDERNEATH.
- INDICATOR PLATES SHALL BE ERECTED ADJACENT TO ALL FIRE HYDRANTS AND SLUICE VALVES.

**LEGEND:**

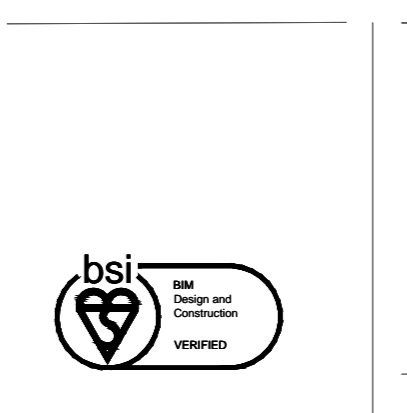
- S.V. SLUICE VALVE
- S.C. STOP COCK
- F.M. FLOW METER
- F.H.D. FIRE HYDRANT
- T.B. THRUST BLOCK
- HDPE WATERMAIN
- EXISTING WATERMAIN



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Client: CORK COUNTY COUNCIL  
 Project: 16No. APARTMENTS AT DISTILLERY LANE, MIDDLETON CO. CORK  
 Title: WATERMAIN LAYOUT  
 Code | Originator | Zone | Level | Type | Role | Number | Status | Revision  
 C1058 | OCSC | XX | XX | DR | C | 0200 | S3 | P02  
 Date: 02/24 Scale @ A0: 1/100 Drn by: CW Chkd by: ANB Aprvd by: J.M.C.B.



- THE SEPARATION DISTANCES OUTLINED ARE MINIMUM REQUIREMENTS.
- SPECIFIC SEPARATION CLEARANCE DISTANCES IN EXCESS OF THESE MINIMA SHALL BE PROVIDED FOR SERVICES SUCH AS GAS, ELECTRICITY, FIBRE-OPTIC OR OIL FILLED CABLES AS THE CASE MAY BE. THE PARTICULAR UTILITY PROVIDERS SHALL BE CONSULTED TO DETERMINE THESE MINIMUM SEPARATION DISTANCES AND EVIDENCE OF THIS CONSULTATION, WITH THE SPECIFIED SEPARATION DISTANCES, SHALL BE PROVIDED TO IRISH WATER AT DESIGN STAGE.
- WATERMAIN (PROPOSED) SEPARATION DISTANCES  
 HORIZONTAL  
 300mm TO DISTRIBUTION MAINS OF LESS THAN 300mm DIAMETER. 500mm TO TRUNK MAINS BETWEEN 300mm AND 450mm DIAMETER. 3m TO ARTERIAL WATER MAINS OF GREATER THAN 450mm DIAMETER.  
 VERTICAL  
 300mm TO DISTRIBUTION MAINS OF LESS THAN 300mm DIAMETER. 500mm TO TRUNK/ARTERIAL MAINS OF DIAMETER GREATER THAN 300mm.  
 ANY PROPOSED PIPE CROSSING SHOULD BE LOCATED MID-WAY BETWEEN THE WATER JOINTS WITH MINIMUM CLEAR DISTANCE OF 300mm AND UP TO 500mm. ALL CROSSINGS SHOULD BE AT LEAST 500mm AWAY FROM FITTINGS OR JOINTS.
- WATERMAIN (EXISTING) SEPARATION DISTANCES  
 HORIZONTAL  
 500mm AT EITHER SIDE OF MAINS UP TO AND INCLUDING 200mm IN DIAMETER.  
 1m AT EITHER SIDE OF MAINS OF 225mm TO 250mm DIAMETER.  
 2m AT EITHER SIDE OF MAINS OF 300mm TO 375mm IN DIAMETER.  
 5m AT EITHER SIDE OF MAINS OF 400mm AND 450mm IN DIAMETER.  
 SPECIFIC IRISH WATER ADVISED DISTANCES FOR MAINS IN EXCESS OF 475mm DIAMETER.
- NOTIFICATION IN WRITING IS REQUIRED SHOULD WORKS BE WITHIN THE FOLLOWING DISTANCES FROM AN EXISTING WATER MAIN OR WASTEWATER RISING MAIN:-  
 HORIZONTAL  
 1000mm AT EITHER SIDE OF EXISTING MAINS LESS THAN OR EQUAL TO 200mm DIAMETER 2000mm AT EITHER SIDE OF EXISTING MAINS OF 250mm TO 350mm DIAMETER 5000mm AT EITHER SIDE OF EXISTING MAINS OF DIAMETER GREATER THAN 350mm DIAMETER

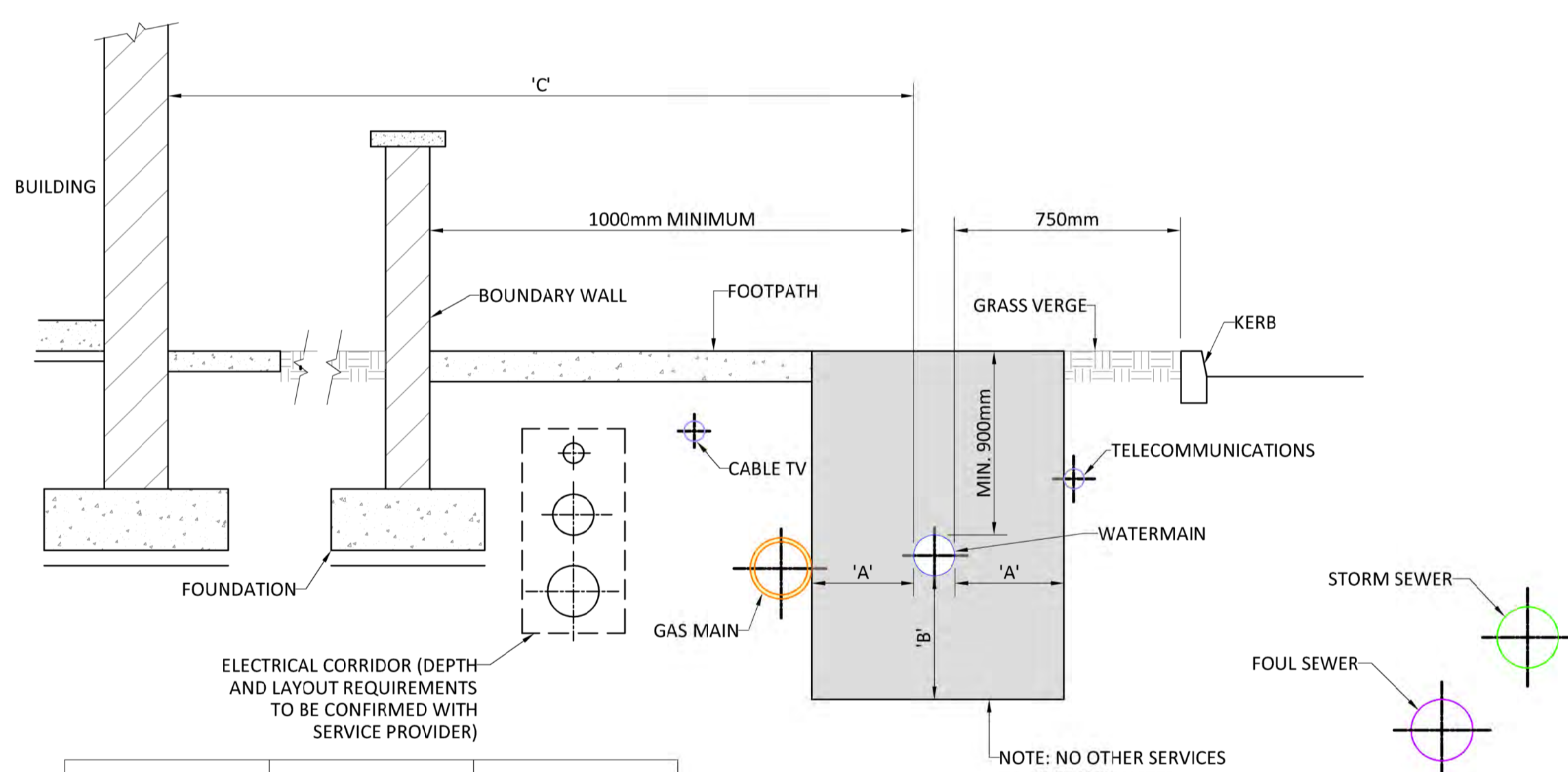
WHERE DUCTS OR PIPES ARE TO BE LAID CLOSE TO AN EXISTING WATERMAIN OR SEWER IN THE OWNERSHIP OF IRISH WATER, NOTIFICATION IN WRITING SHALL BE PROVIDED A MINIMUM OF 10 DAYS AHEAD OF ADVANCEMENT OF THE WORK

NOTIFICATION IN WRITING IS REQUIRED SHOULD WORKS BE WITHIN 1.5m DISTANCE OF A WASTEWATER SEWER.

REQUIREMENTS SHALL ALSO APPLY TO TRIAL HOLES OR SLIT TRENCHES TO LOCATE THE MAIN OR GAIN GROUND INFO DATA. LARGER DIAMETERS >300mm DISTRIBUTION AND TRUNK MAINS, IRISH WATER MUST BE NOTIFIED AT LEAST 1 MONTH IN ADVANCE.

DEVELOPERS SHALL ALSO COMPLY WITH ANY NOTIFICATION REQUIREMENTS OF OTHER UTILITY PROVIDERS (ESB, GAS MAIN, TELECOMMUNICATION ETC).

- DETAILED PROPOSALS, INCLUDING WORK METHOD STATEMENTS, INSURANCE CONFIRMATION AND DETAILS OF WORK COMPLETED OF A SIMILAR NATURE MUST BE SUBMITTED TO IRISH WATER FOR REVIEW. ALL SUCH WORKS IN THE VICINITY OF ARTERIAL WATER MAINS AND SEWER (MAINS GREATER THAN 400mm) SHALL BE SUBJECT TO WRITTEN AGREEMENT WITH IRISH WATER BEFORE CONSTRUCTION COMMENCES ON SITE. THIS AGREEMENT SHALL ALSO INCLUDE ANY NECESSARY PROTECTION FOR WATER MAINS
- ANY DAMAGE SHALL BE NOTIFIED IMMEDIATELY TO IRISH WATER. THE PERSON WHO CAUSES THE DAMAGE TO A WATER MAIN OR FITTING WILL BE DEEMED TO HAVE COMMITTED AN OFFENCE UNDER SECTION 45 OF THE WATER SERVICES ACT 2007.
- WATERMAINS OF ANY SIZE SHALL NOT BE WITHIN 1m OF THE BOUNDARY TO A PREMISES.
- UNDER NO CIRCUMSTANCES WILL IRISH WATER ACCEPT WATERMAIN INSTALLATIONS UNDER STRUCTURES, EXISTING OR PROPOSED, OR IN CLOSE PROXIMITY TO ANY EXISTING STRUCTURES OF FEATURES THAT WILL INHIBIT ACES FOR POST INSTALLATION MAINTENANCE AND ACCESS.
- WHERE THE DESIGN DEVIATES FROM STANDARD DETAIL, THE DESIGN SHALL BE SUBJECT TO THE REVIEW OF IRISH WATER.
- SEPARATION DISTANCES BETWEEN UTILITIES MAY BE INCREASED TO PROVIDE FOR CHAMBER THRUST BLOCKS AT BENDS.

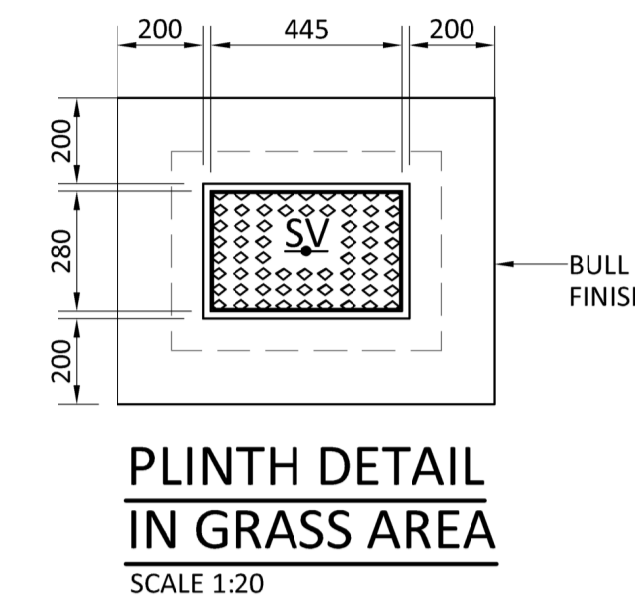


DIAMETER (mm)	'A' (mm)	'B' (mm)
<300	300	300
300-450	500	500
>450	3000	500

DIAMETER (mm)	'C' (mm)
≤150	3000
200-600	5000
>600	8000

**SERVICE LAYOUT AND SEPARATION DISTANCES**

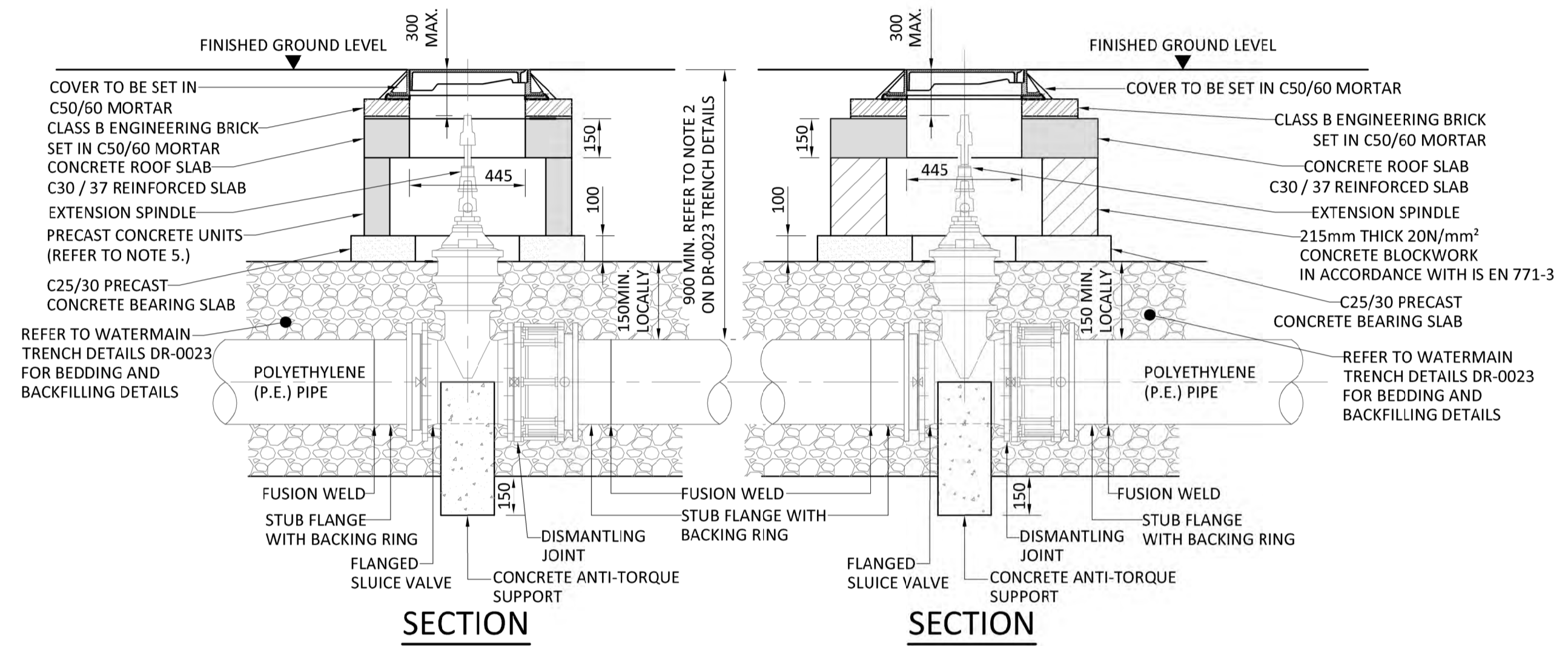
NOTE: NO OTHER SERVICES TO BE CONSTRUCTED WITHIN THIS ZONE



**PLINTH DETAIL IN GRASS AREA**

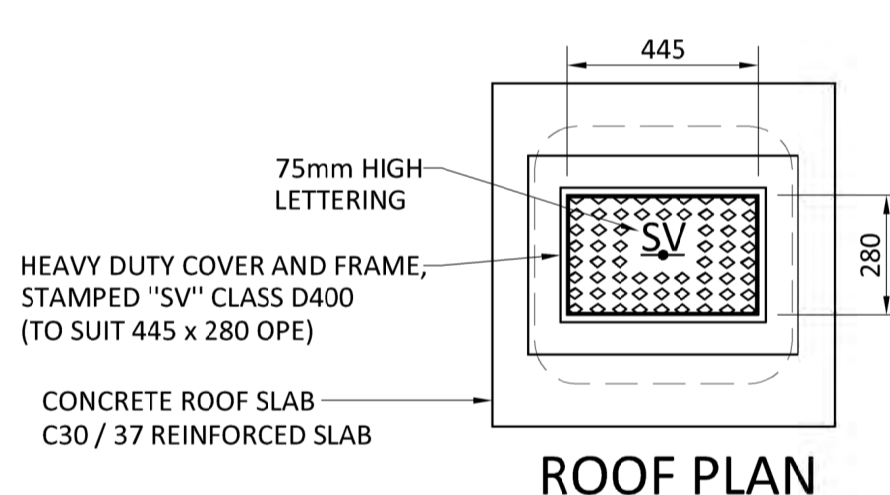
SCALE 1:20

- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- SLUICE VALVE CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- SLUICE VALVES SHALL BE RESILIENT SEATED AND SHALL COMPLY WITH BS 5163-1, BS 5163-2, IS EN 1074-1, IS EN 1074-2, OR EQUIVALENT E.U. SPECIFICATIONS.
- ALL SLUICE VALVES SHALL BE ANTI-CLOCKWISE CLOSING.
- VALVE CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, & CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 150mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH BS 5911, Part 4.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER WATERMAIN TRENCH DETAILS DR-0023.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD STANDARD THRUST BLOCK DETAIL DR-0023 AND THRUST BLOCK NOTES DR-0021 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- 450 x 450mm INTERNAL DIMENSION CHAMBERS MAY BE PROVIDED SUBJECT TO REVIEW BY IW. SUCH CHAMBERS SHALL BE PROVIDED WITH GRADE "A" HEAVY DUTY COVER & FRAME & STAMPED "SV".
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.
- ALL DETAILS TO COMPLY WITH IRISH WATER STANDARD DETAILS AND CODE OF PRACTICE FOR WATER INFRASTRUCTURE

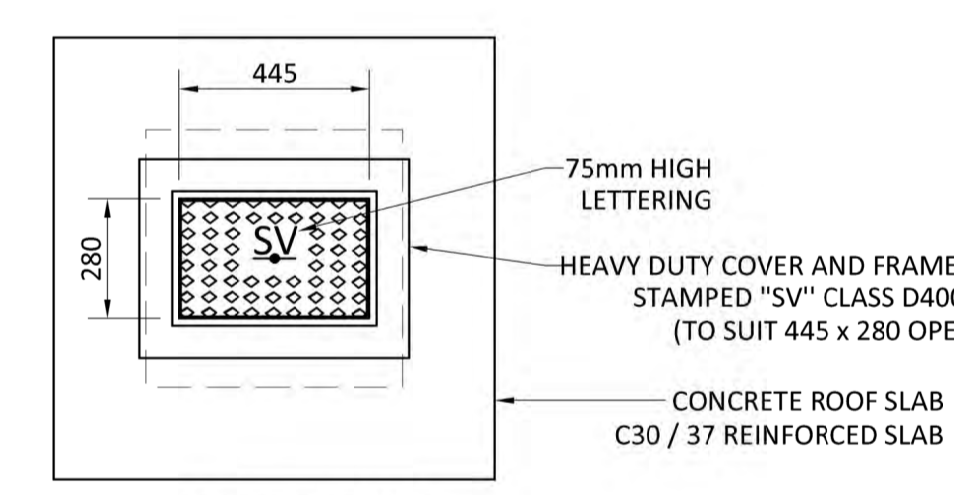


**SECTION**

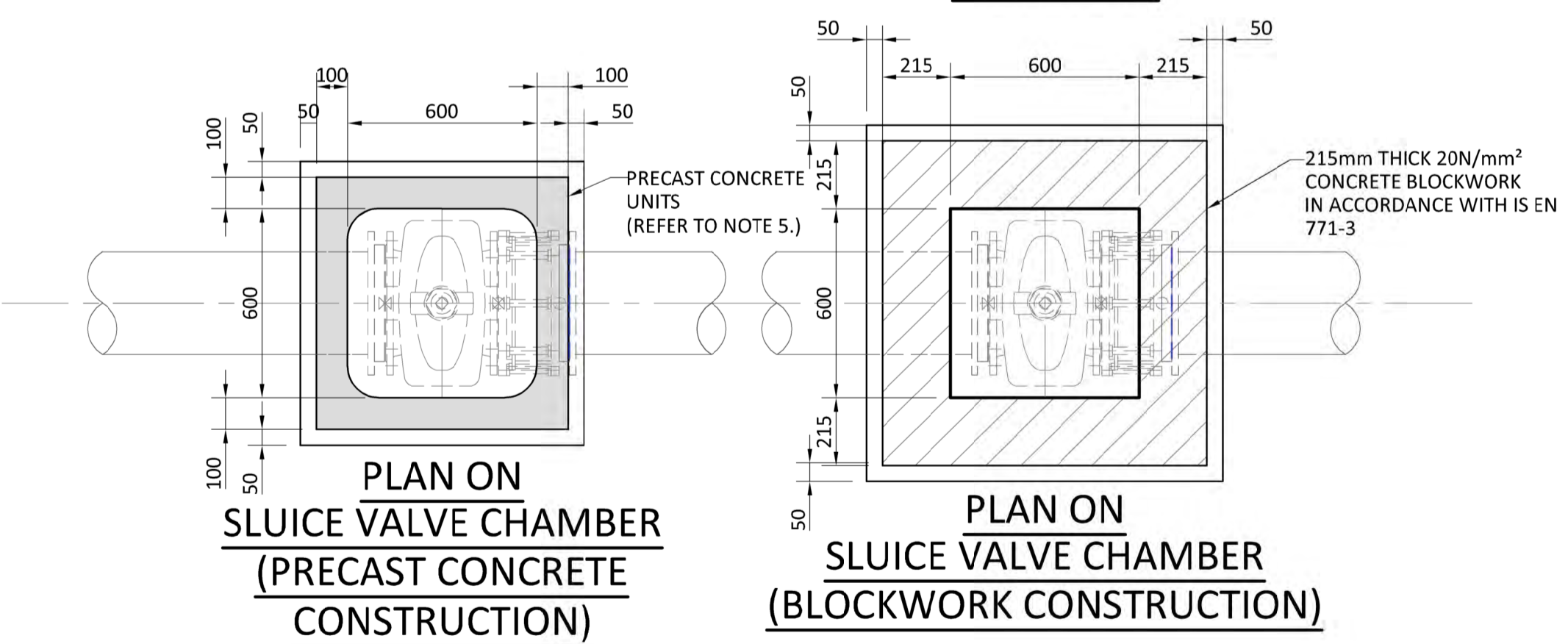
**SECTION**



**ROOF PLAN**



**ROOF PLAN**



**PLAN ON SLUICE VALVE CHAMBER (PRECAST CONCRETE CONSTRUCTION)**

**PLAN ON SLUICE VALVE CHAMBER (BLOCKWORK CONSTRUCTION)**

**SLUICE VALVE DETAILS**

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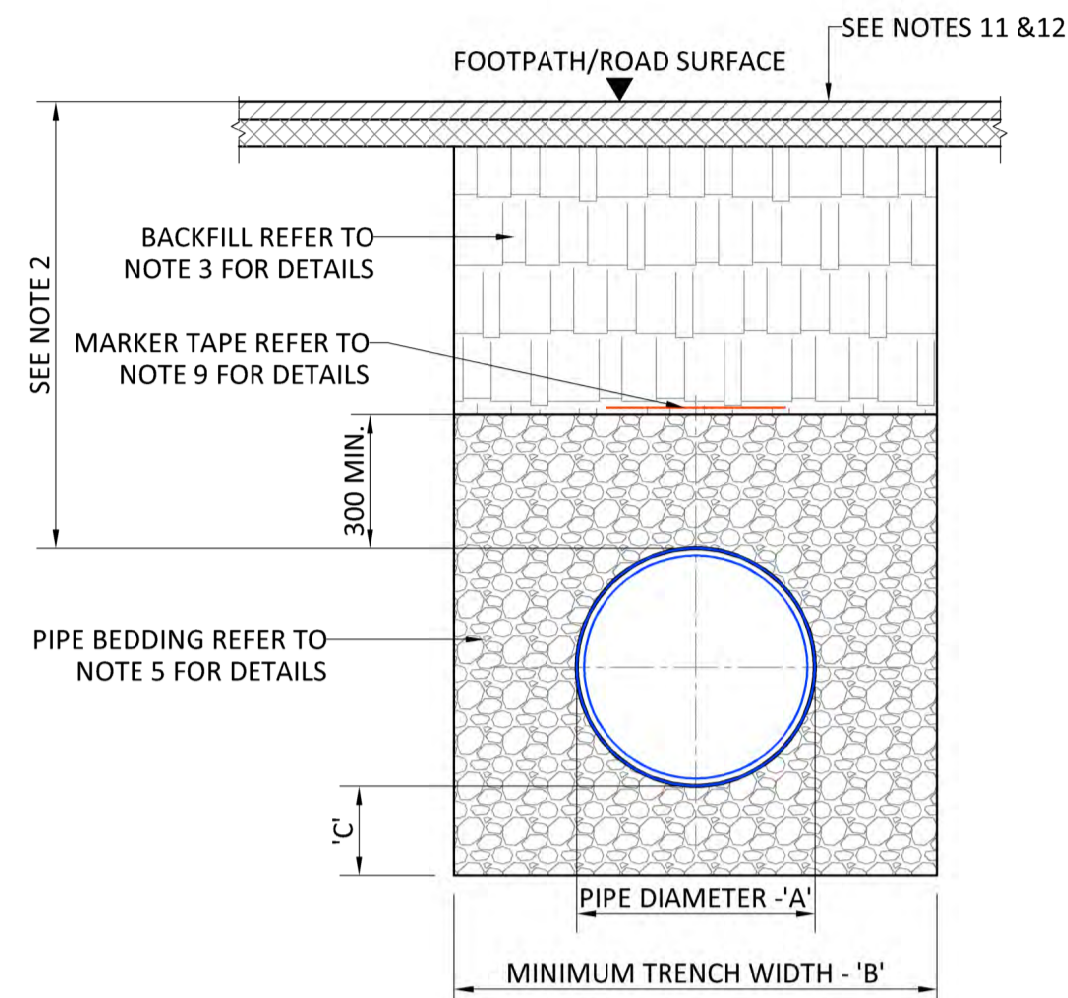
Rev No.	Date	Revision Note	Drn by	Chkd by
P01	26/02/24	ISSUED FOR PLANNING	MA	ABN

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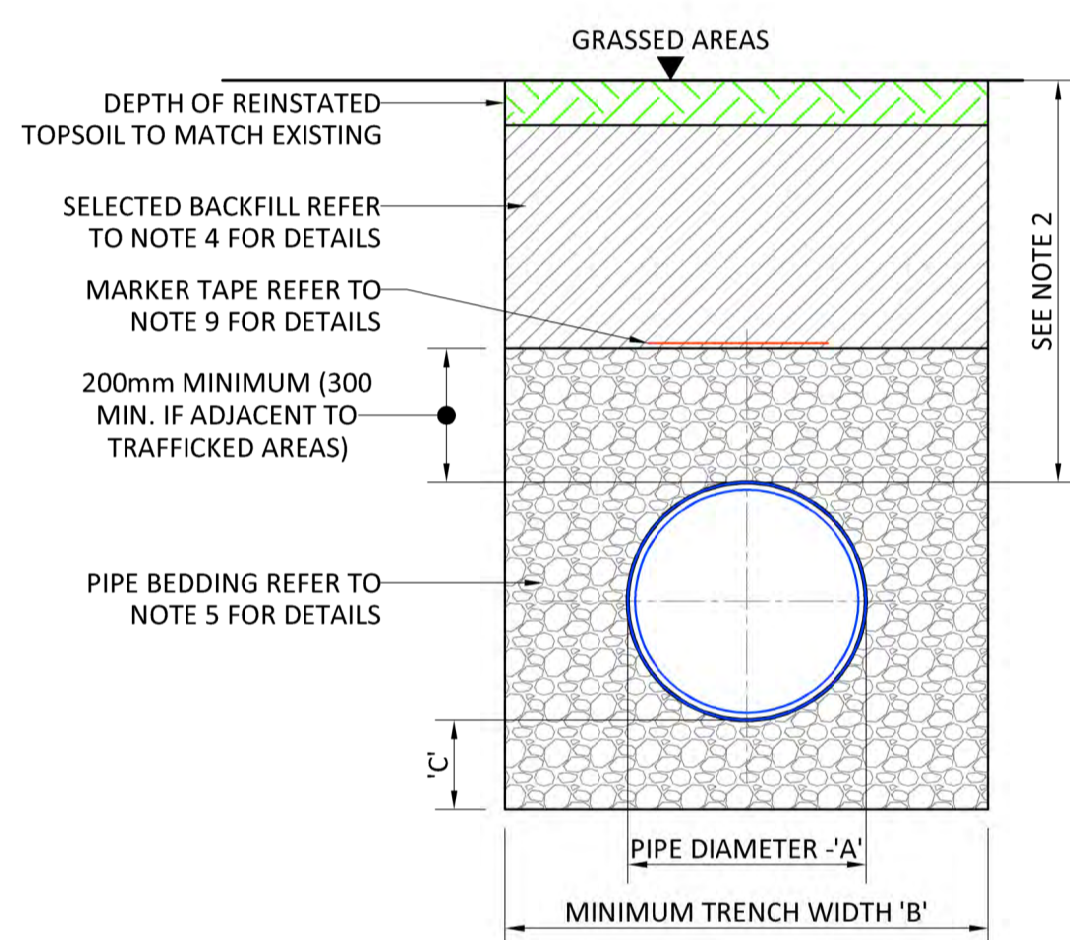


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Client: CORK COUNTY COUNCIL  
 Project: 16No. APARTMENTS AT DISTILLERY LANE, MIDDLETON CO. CORK  
 Title: WATERMAIN DETAILS SHEET 1 OF 3  
 Code | Originator | Zone | Level | Type | Role | Number | Status | Revision  
 C1058 | OCSC | XX | XX | DR | C | 0201 | S3 | P01  
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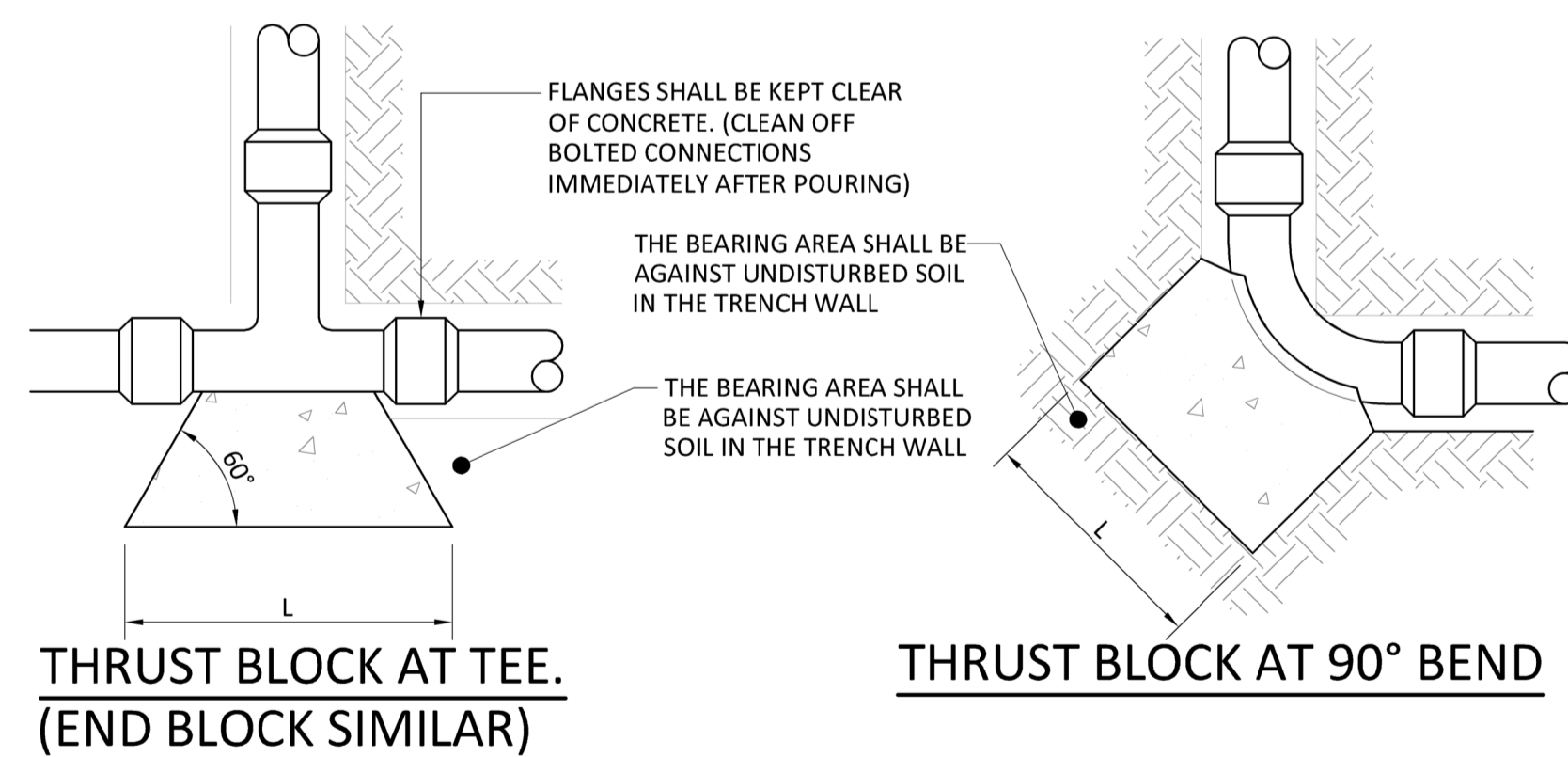


**WATERMAIN TRENCH DETAILS  
CROSS SECTION IN ROADWAYS**



**WATERMAIN TRENCH DETAILS  
CROSS SECTION IN GRASSED AREAS**

**WATERMAIN TRENCH DETAILS**



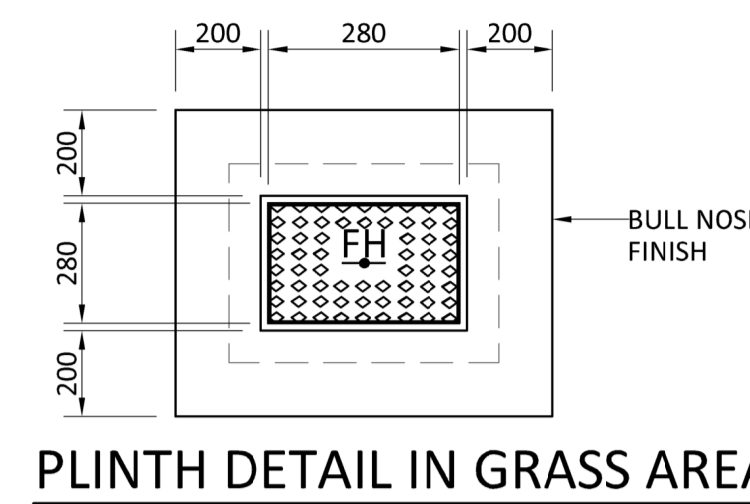
**THRUST BLOCK AT TEE.  
(END BLOCK SIMILAR)**

**THRUST BLOCK AT 90° BEND**

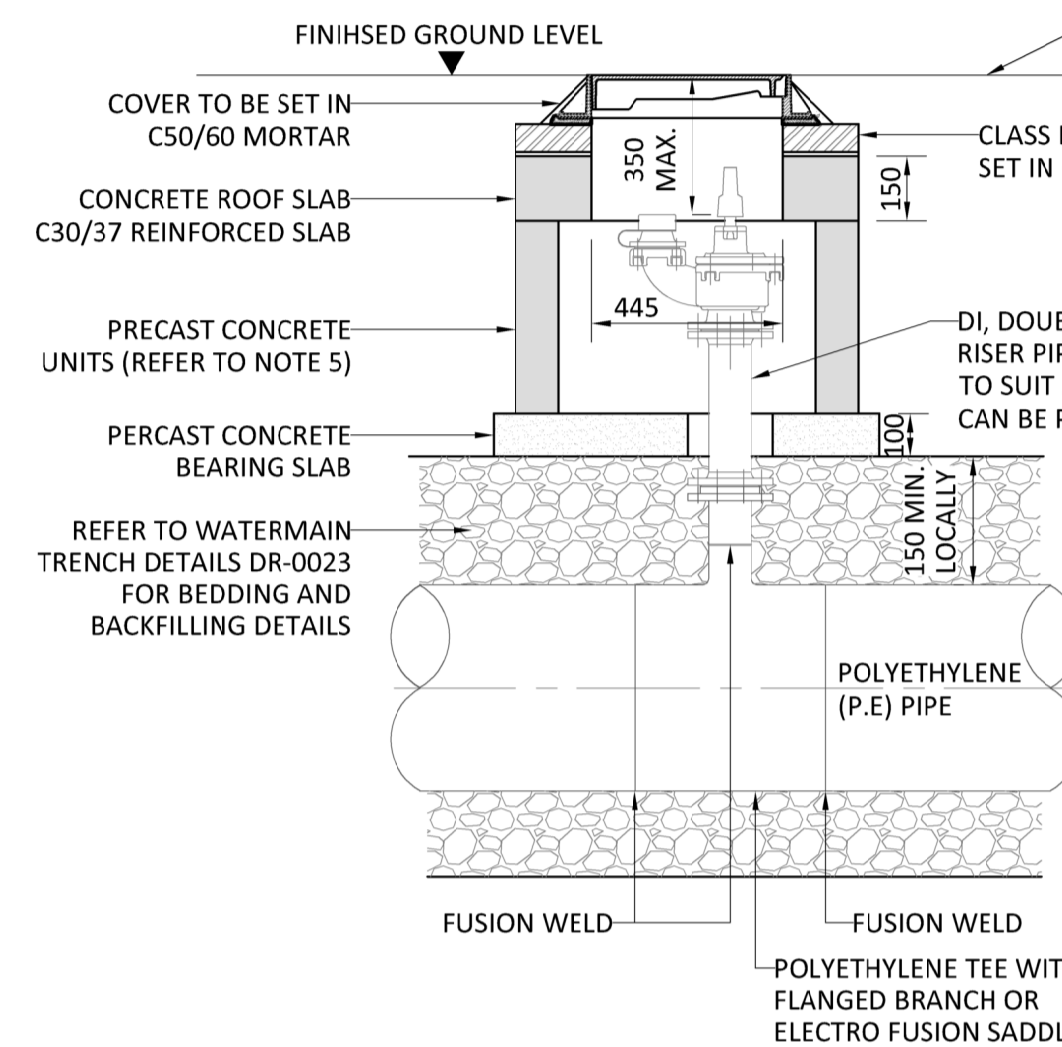
**WATERMAIN ANCHOR/  
THRUST BLOCK DETAILS  
SCALE 1:50**

- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF THE PIPE SHALL BE 900mm WHERE THE PIPE IS TO BE LOCATED IN HOUSING ESTATE ROADS. GREATER DEPTHS OF COVER AND/OR PIPE STRENGTH AND/OR A HIGHER CLASS OF BEDDING MATERIAL MAY BE REQUIRED WHERE HIGH TRAFFIC LOADING IS ANTICIPATED. THE DESIRABLE COVER FOR A WATERMAIN SHOULD BE 1200mm, WHERE PRACTICABLE & SHOULD NOT EXCEED 3.0m.
- CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE WATER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 804 / 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. CLAUSE 808 IS TO BE USED WITHIN 500mm OF CEMENT BOUND MATERIALS, CONCRETE PAVEMENTS, CONCRETE STRUCTURES OR CONCRETE PRODUCTS. OTHERWISE CLAUSE 804 MAY BE USED. ALTERNATIVE BACKFILL MATERIAL TO THAT DESCRIBED ABOVE (CLAUSE 804 OR CLAUSE 808) OF THE PIPE TRENCH WILL ONLY BE ALLOWED BY IRISH WATER WHERE THE ROADS AUTHORITY IN WHOSE FUNCTIONAL AREA THE DEVELOPMENT IS LOCATED, PROVIDES WRITTEN APPROVAL TO THE DEVELOPER TO THE USE SUCH ALTERNATIVE MATERIAL.
- SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO REVIEW BY IRISH WATER.
- PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm GRADED AGGREGATE OR 10mm SINGLE SIZED AGGREGATE TO IS EN 13242.
- IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED OUT AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEO-TEXTILE WRAPPING. ALTERNATIVELY, SPECIAL PIPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE THE DEPTH OF SOFT MATERIAL IS EXCESSIVE. SUCH ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORK.
- PIPES SHALL NOT BE SUPPORTED ON STONES OR ROCKS, OR ANY HARD OBJECT AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
- SHOULD MINIMUM COVER NOT BE ACHIEVABLE, CONCRETE GRADE C3/10 SHALL BE USED AS BACKFILL MATERIAL.
- MARKER TAPE TO BE 400mm WIDE BLUE POLYETHYLENE MATERIAL IN ACCORDANCE WITH EN 12163. PLASTIC PIPES SHALL HAVE WARNING TAPE INCORPORATED A REINFORCED BAND BRACING WIRE. SERVICE PIPES SHALL HAVE 200mm WIDE MESH TAPE. MARKER TAPE TO BE LAID AT TOP OF PIPE BEDDING LAYER.
- TRENCH WIDTHS FOR PIPE SIZES ≤80mm MAY BE <500mm, SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY & CONSTRUCTION ACCESS REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.
- ALL DETAILS TO COMPLY WITH IRISH WATER STANDARD DETAILS AND CODE OF PRACTICE FOR WATER INFRASTRUCTURE.

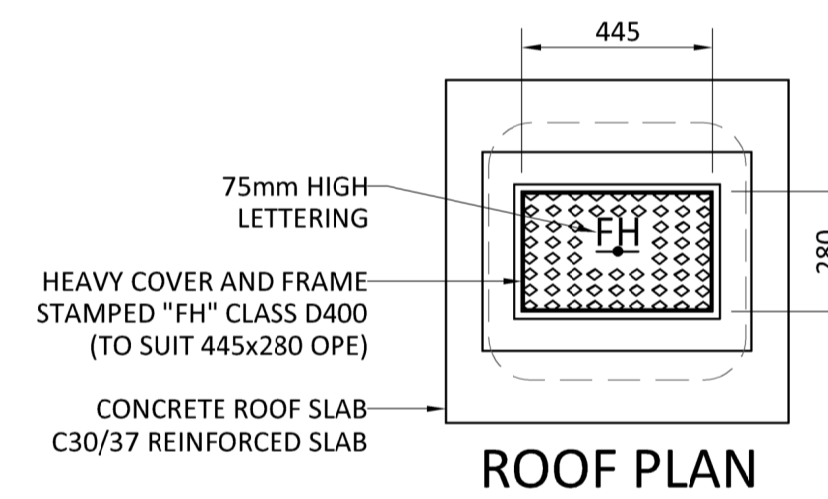
PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C'(mm)	PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C'(mm)
≤80	SEE NOTE 10	≤200	150
100	500	≥ 250	200
150	600		
200	600		
250	750		
300	750		
350	750		
400	900		
450	900		



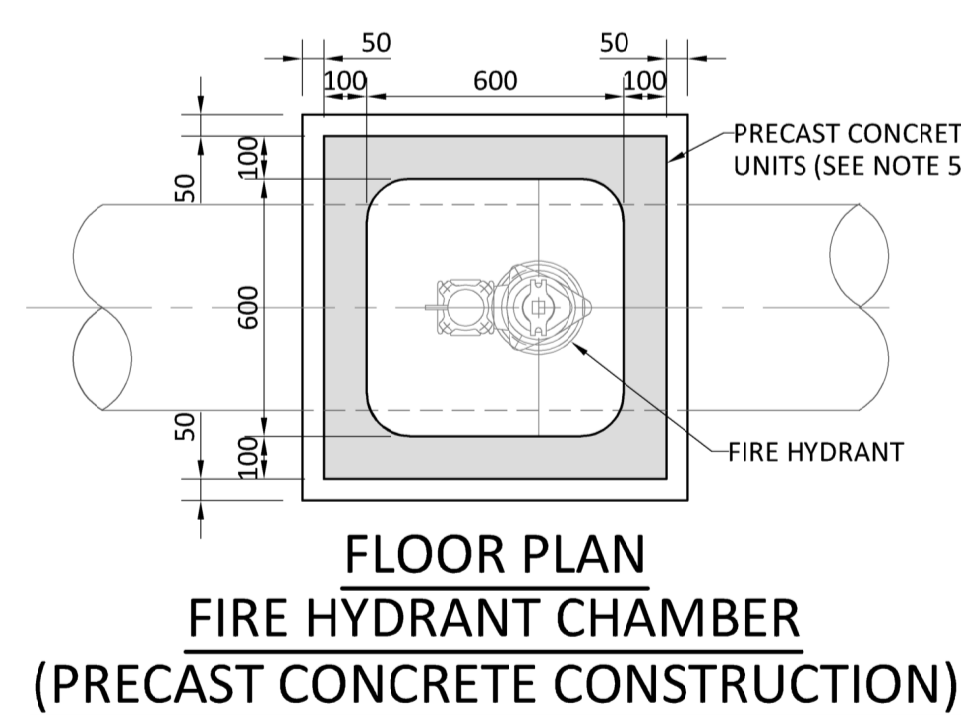
**PLINTH DETAIL IN GRASS AREA**



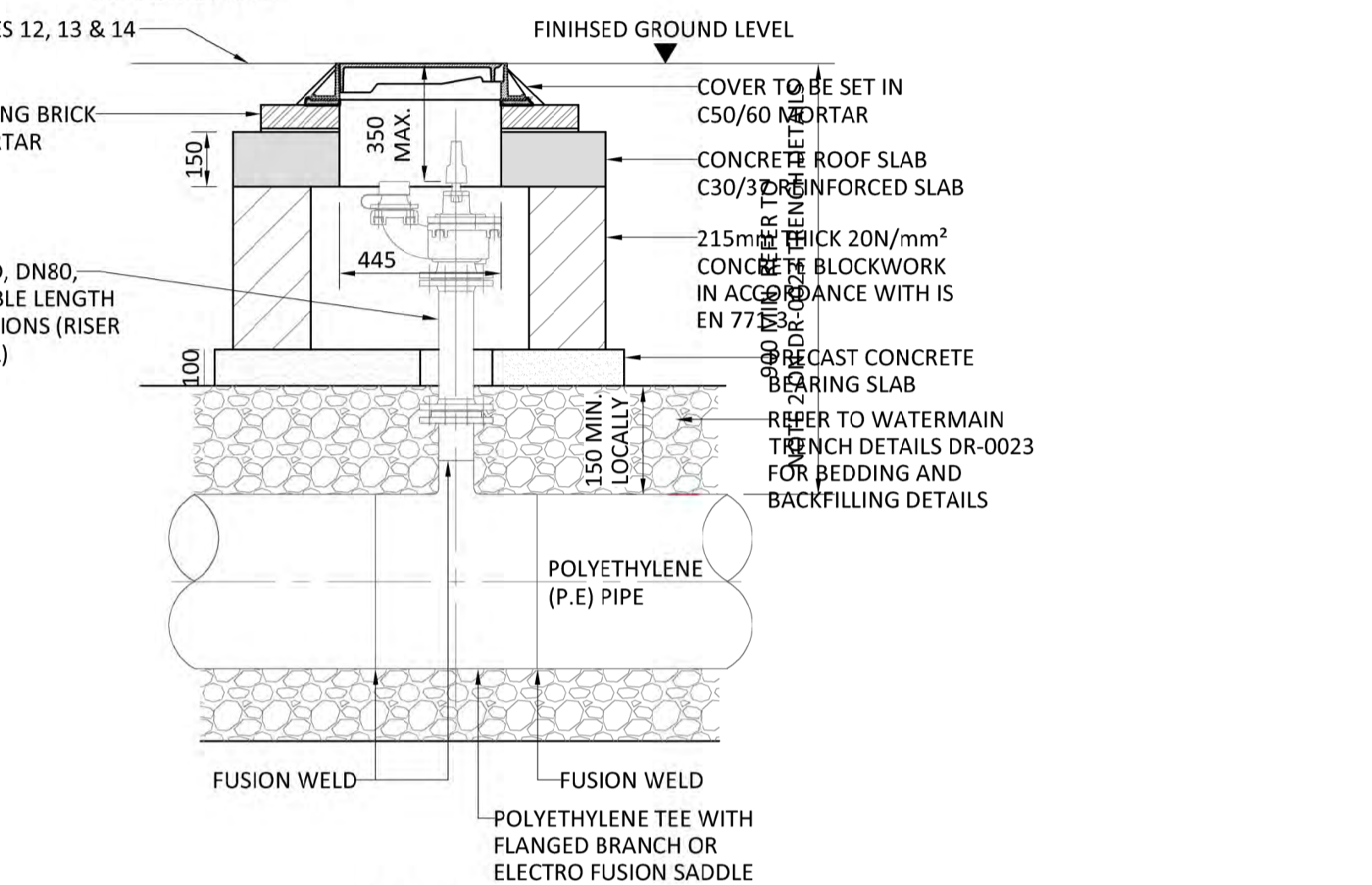
**SECTION**



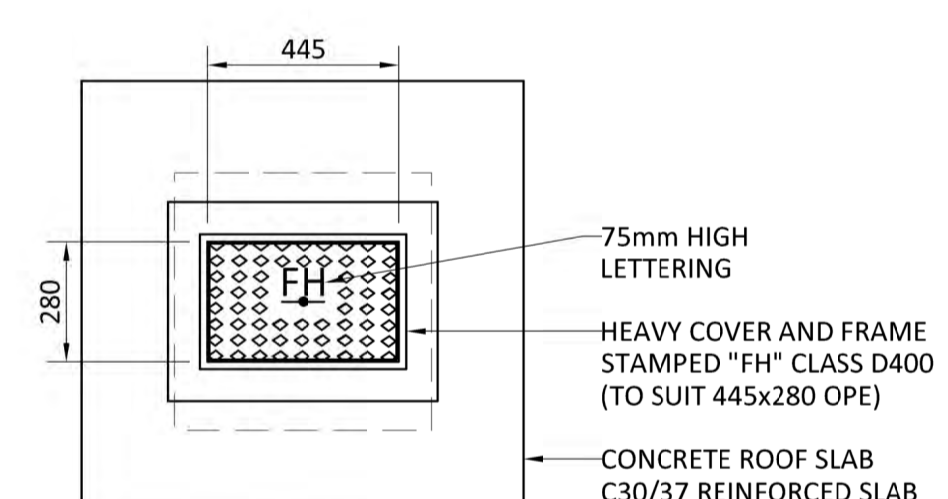
**ROOF PLAN**



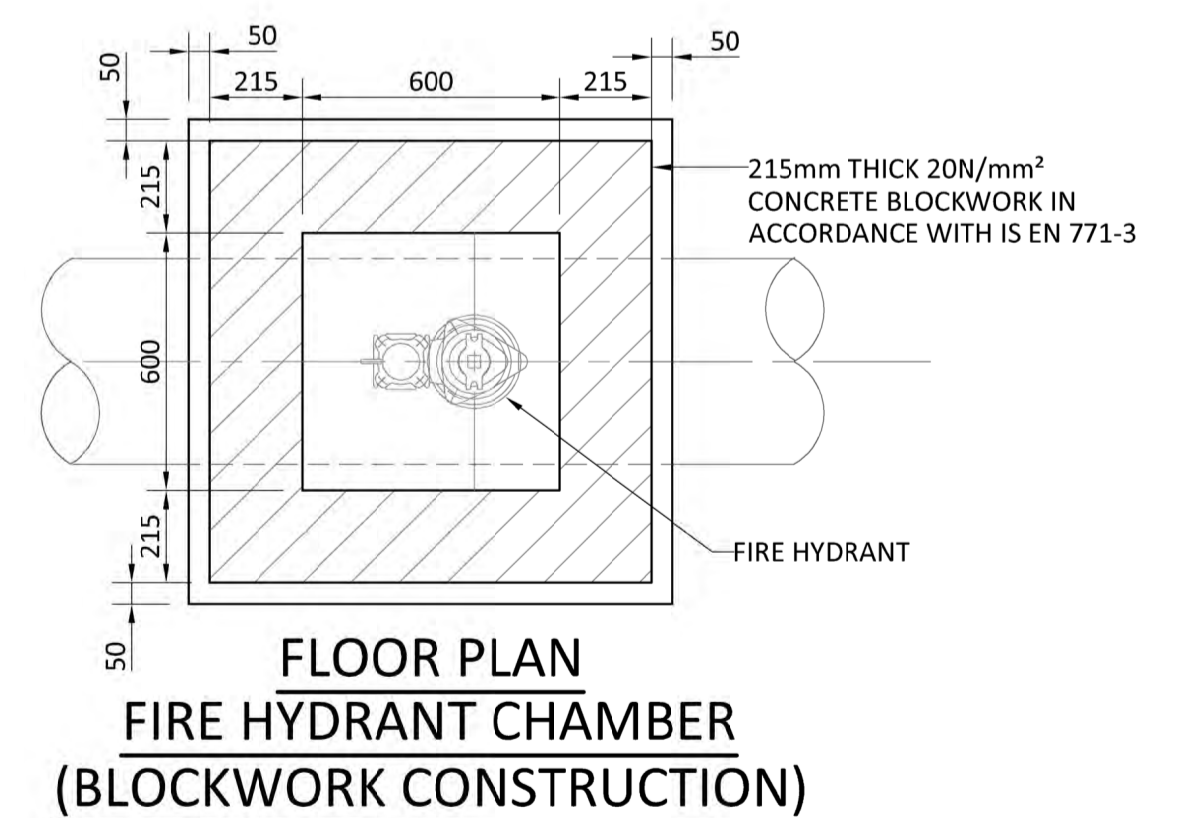
**FLOOR PLAN  
FIRE HYDRANT CHAMBER  
(PRECAST CONCRETE CONSTRUCTION)**



**SECTION**



**ROOF PLAN**



**FLOOR PLAN  
FIRE HYDRANT CHAMBER  
(BLOCKWORK CONSTRUCTION)**

**ON-LINE HYDRANT DETAILS**

- THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DESIGN TEAM DRAWINGS AND SPECIFICATIONS.
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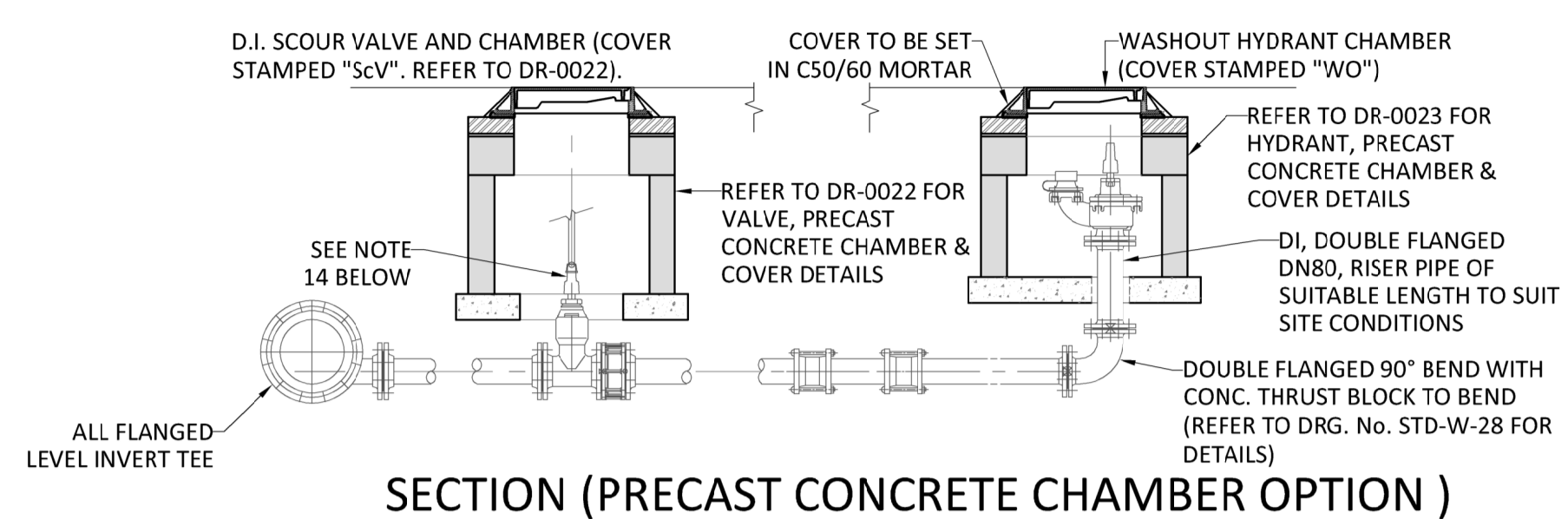
Rev No.	Date	Revision Note	Drn by	Chkd by
P01	25/02/24	ISSUED FOR PLANNING	MA	ABN

Rev No.	Date	Revision Note	Drn by	Chkd by

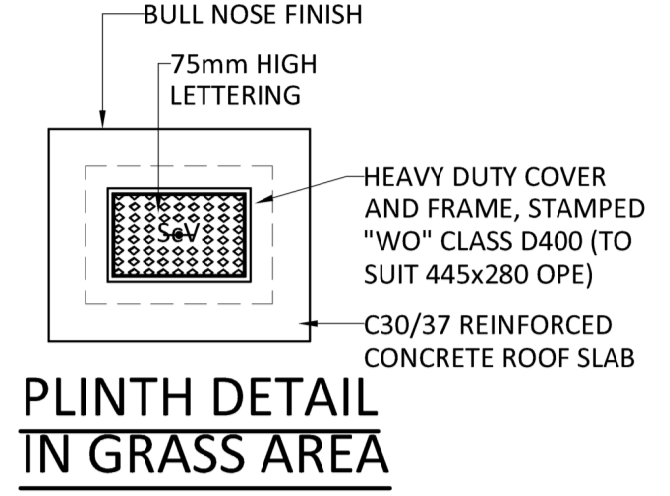


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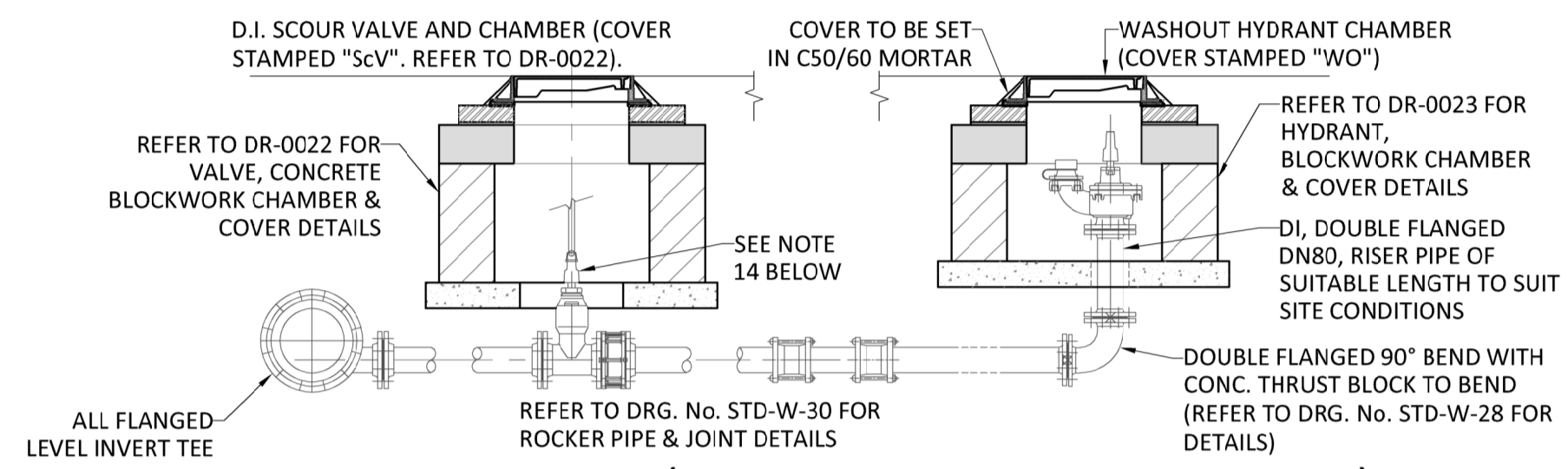
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Project: 16No. APARTMENTS AT DISTILLERY LANE, MIDDLETON CO. CORK  
Title: WATERMAIN DETAILS SHEET 2 OF 3  
Code | Originator | Zone | Level | Type | Role | Number | Status | Revision  
C1058- OCSC · XX · XX · DR · C · 0202 · S3 · P01  
Date: 02/24 Scale @ A1: A/S Drn by: CW Chkd by: CM Aprvd by: JMCB



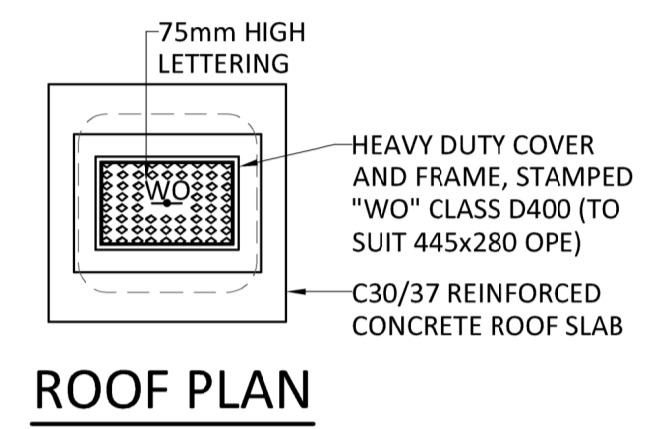
**SECTION (PRECAST CONCRETE CHAMBER OPTION)**



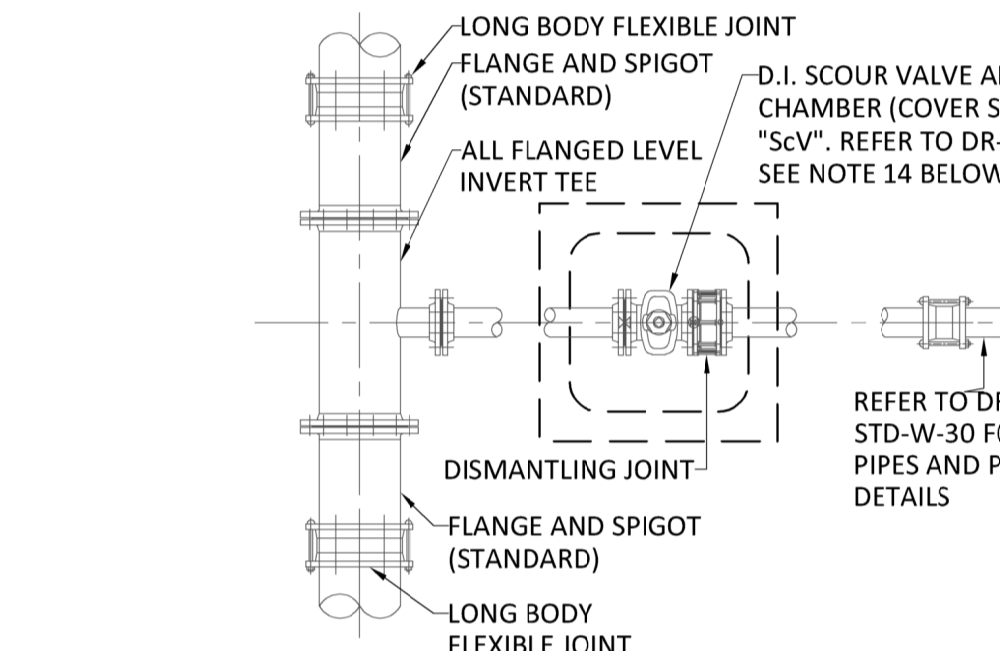
**PLINTH DETAIL IN GRASS AREA**



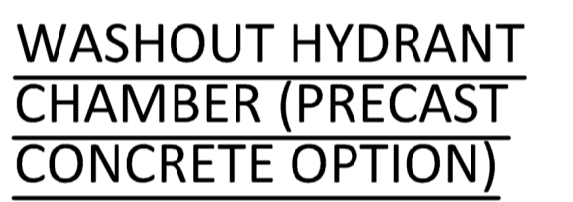
**SECTION (BLOCKWORK CHAMBER OPTION)**



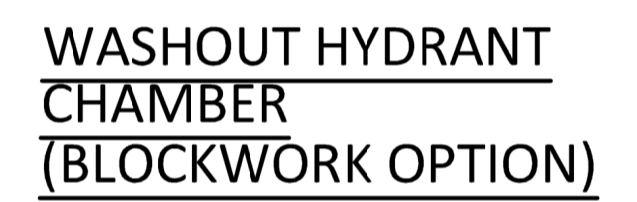
**ROOF PLAN**



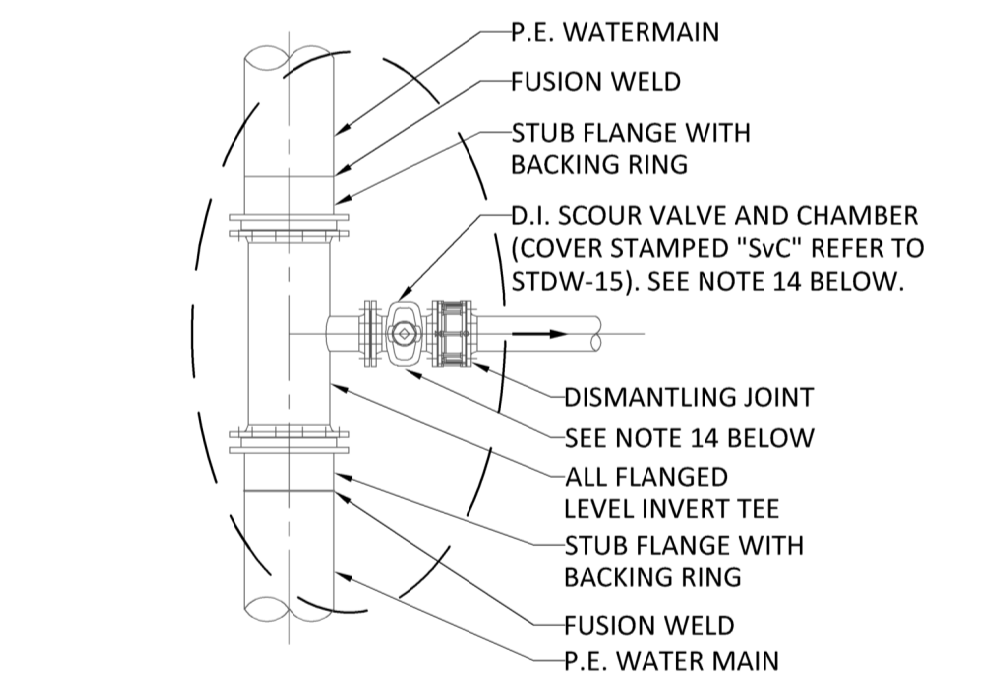
**PLAN (DUCTILE IRON WATERMAIN)**



**WASHOUT HYDRANT CHAMBER (PRECAST CONCRETE OPTION)**



**WASHOUT HYDRANT CHAMBER (BLOCKWORK OPTION)**



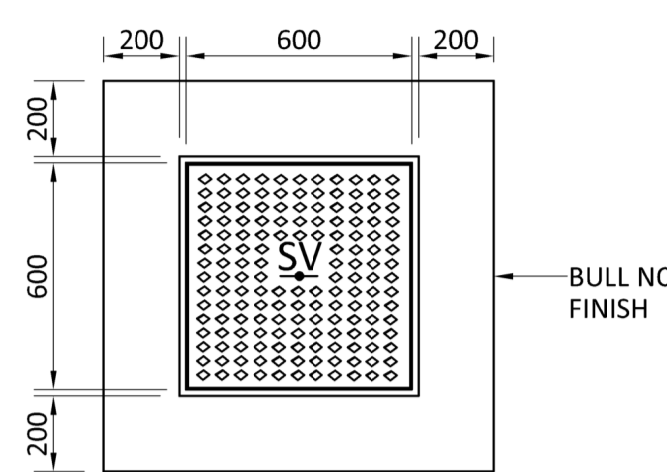
**PLAN (POLYETHYLENE WATERMAIN)**

- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- STRUCTURAL REINFORCEMENT AND DESIGN DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
- HYDRANT CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 AND BS 5834 COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- HYDRANTS SHALL BE DOUBLE FLANGED DRILLED TO PN 16. THEY SHALL COMPLY WITH BS 750: 2012. THE HYDRANT SHALL INCORPORATE A SCREW DOWN GATE VALVE, UNDERGROUND "GUIDE TO HEAD" TYPE WITH SCREW DOWN CONNECTION OUTLET AND FALSE SPINDLE CAP AND IRON CHAIN.
- ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
- HYDRANT CHAMBER & SCOUR VALVE CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW FROM IRISH WATER. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, & CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 150mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH BS 5911, Part 4.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER WATERMAIN TRENCH DETAILS DR-0023.
- 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD THRUST BLOCK DETAILS DR-0023 AND THRUST BLOCK NOTES DR-0021 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL PIPEWORK AND FITTINGS FOR WASHOUT HYDRANT CHAMBER CONNECTION SHALL BE DUCTILE IRON. PIPES AND FITTINGS ON MAIN LINE SHALL BE: PE PIPES & FITTINGS IN ACCORDANCE WITH IS EN 12201:2011, OR DUCTILE IRON PIPES AND FITTINGS IN ACCORDANCE WITH IS EN 545.
- ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO AGREEMENT WITH IRISH WATER.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- WHERE HYDRANTS ARE INSTALLED ON TRUNK MAINS OR PRINCIPAL MAINS, A SEPARATE SCOUR VALVE IS REQUIRED. THE PURPOSE OF THE SCOUR VALVE IS TO ISOLATE THE WASHOUT HYDRANT FOR MAINTENANCE PURPOSES & ALSO TO REDUCE THE VELOCITY OF THE DISCHARGE FLOW WHERE HIGH HEAD VALUES ARE CONCERNED. A "SANDWICH"

**WASHOUT HYDRANT DETAILS**

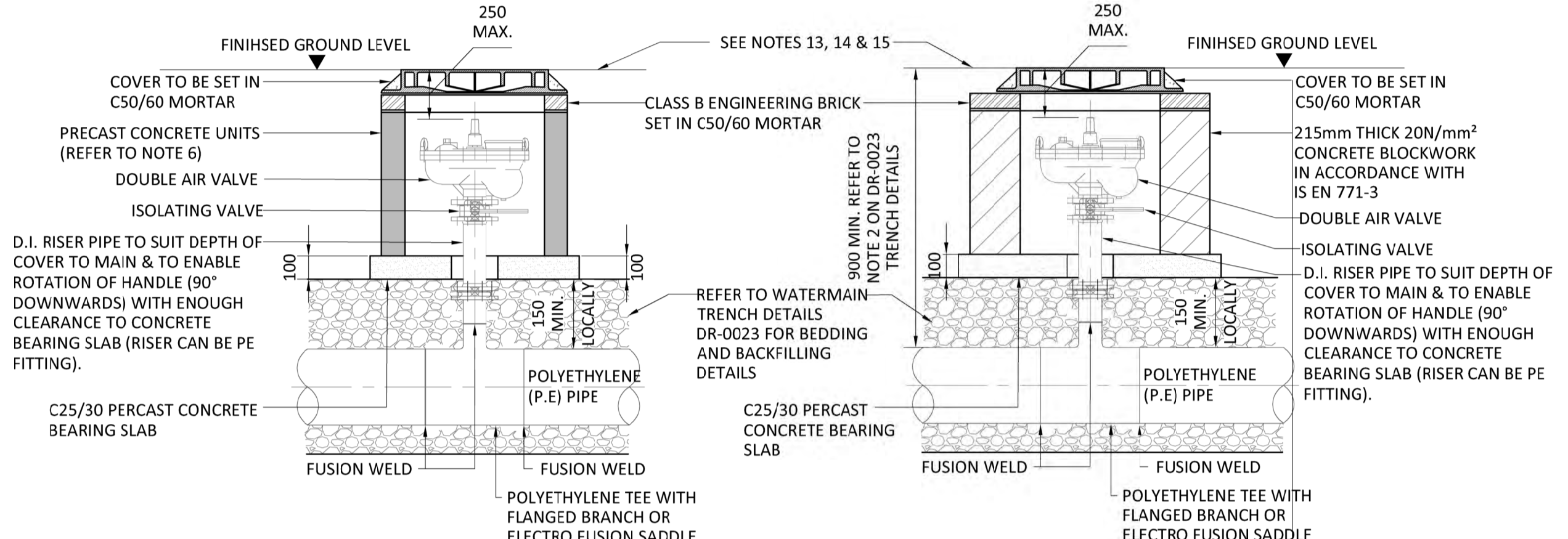
**NOTES:**

- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY DUCTILE IRON COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- AIR VALVES SHALL COMPLY WITH THE REQUIREMENTS OF IS EN 1074-4. AIR VALVES SHALL BE DOUBLE ORIFICE TYPE AND SHALL INCLUDE AN ISOLATING VALVE. THE ISOLATING VALVE SHALL BE EITHER A GATE VALVE CONFORMING TO IS EN 1074-2 & SHALL BE OF A BOLTLESS BONNET DESIGN, OR A BUTTERFLY VALVE TO IS EN 1074-2.
- SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2m OF THE AIR VALVE LOCATION.
- AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVE PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
- PRECAST CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER WATERMAIN TRENCH DETAILS DR-0023.
- DUCTILE IRON PIPES / FITTINGS AND PE PIPES / FITTINGS TO BE IN ACCORDANCE WITH IS EN 545 AND IS EN 12201:2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD THRUST BLOCK DETAIL DR-0023 AND THRUST BLOCK NOTES DR-0021 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- THE LOCATION OF THE AIR VALVE SHALL BE THE SUBJECT OF PARTICULAR AGREEMENT WITH IRISH WATER TO ENSURE THAT THE RISK OF CONTAMINATION THROUGH THE VALVE IS ELIMINATED.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.



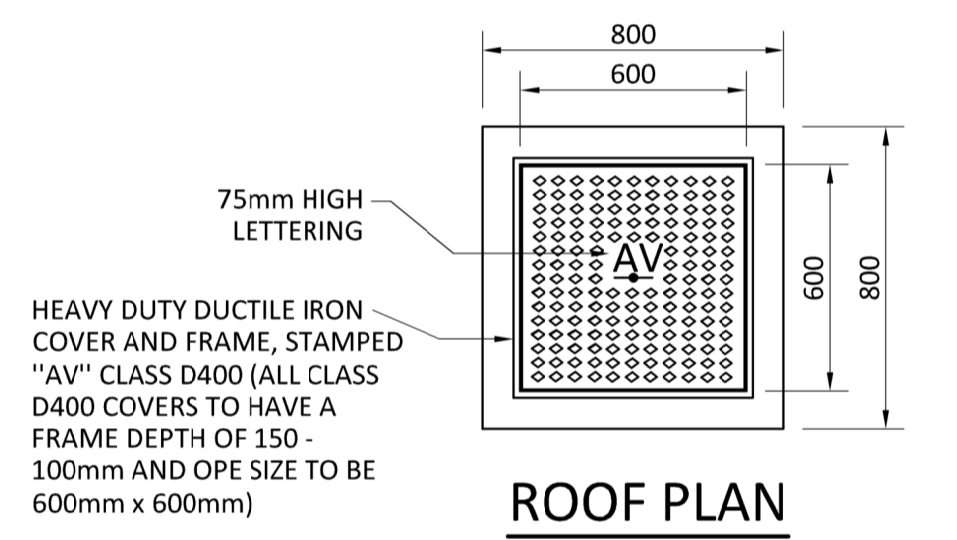
**PLINTH DETAIL IN GRASS AREA**

SCALE 1:20

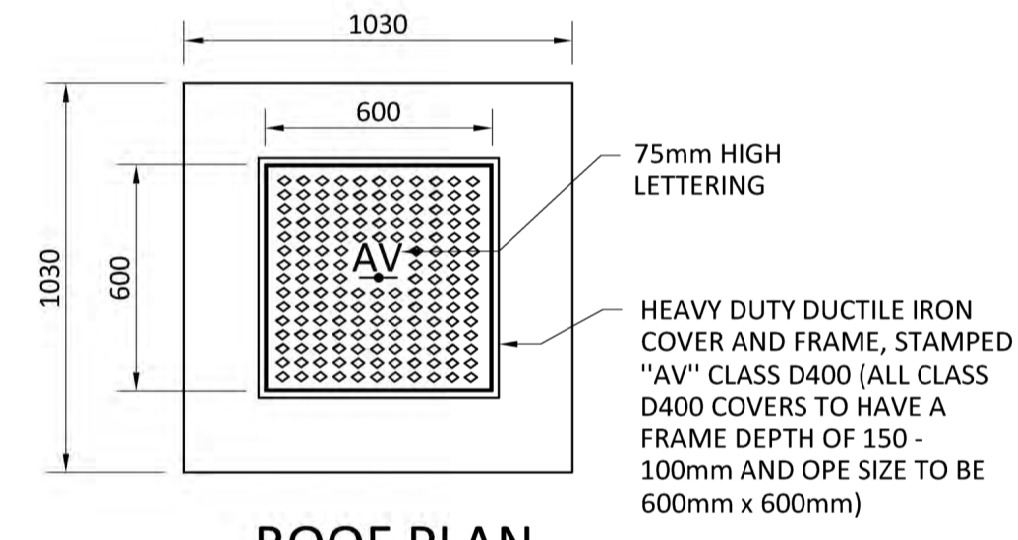


**SECTION**

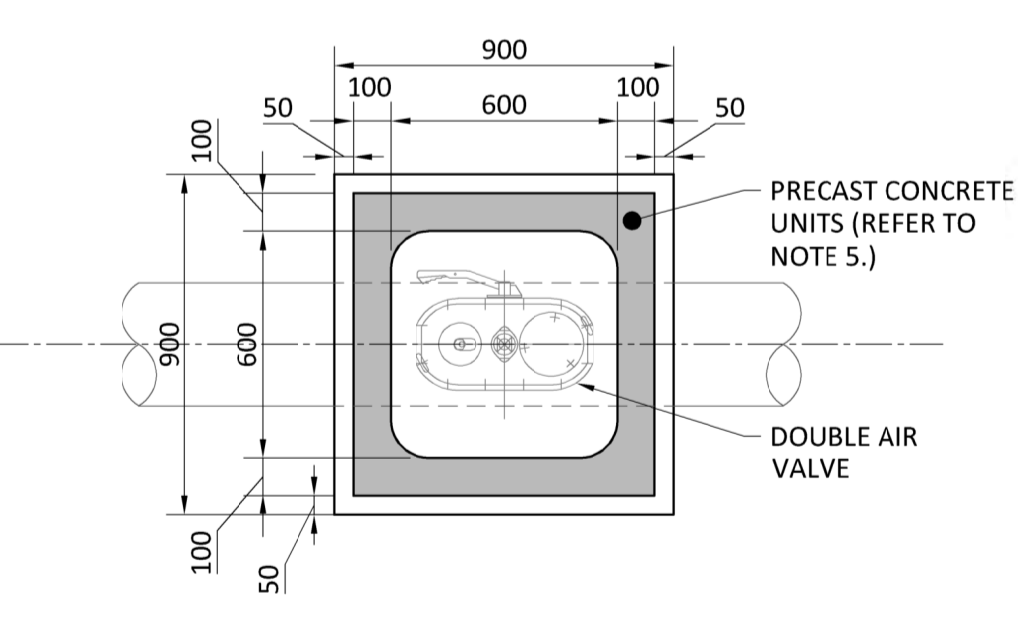
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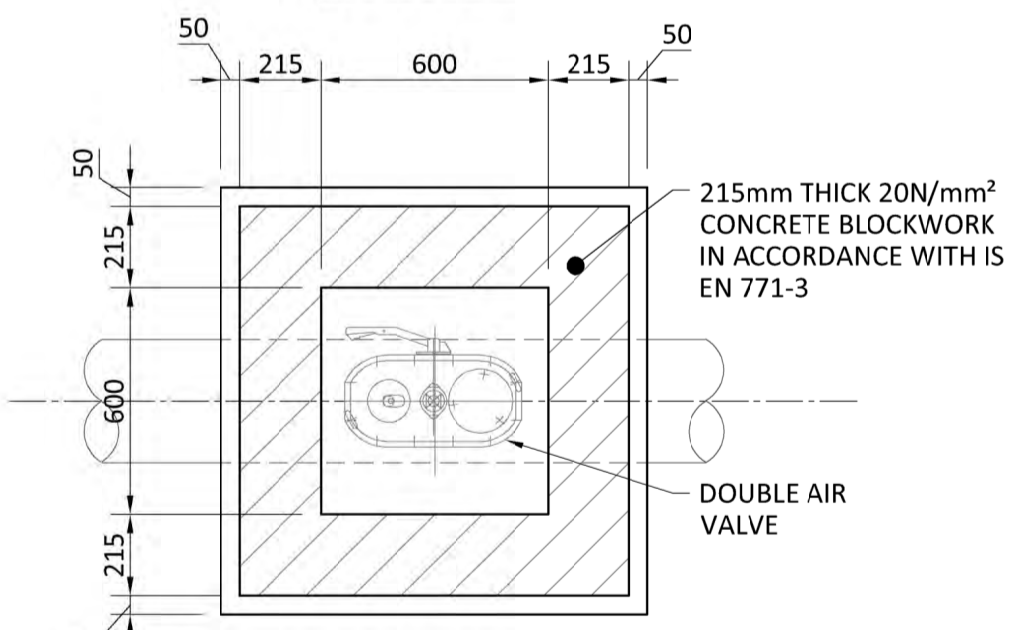
**ROOF PLAN**



**ROOF PLAN**



**FLOOR PLAN DOUBLE AIR VALVE (PRECAST CONCRETE CONSTRUCTION)**



**FLOOR PLAN DOUBLE AIR VALVE (BLOCKWORK CONSTRUCTION)**

**ON-LINE AIR VALVE DETAILS**

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Client: CORK COUNTY COUNCIL  
 Project: 16No. APARTMENTS AT DISTILLERY LANE, MIDDLETON CO. CORK

Title: WATERMAIN DETAILS SHEET 3 OF 3

Code	Originator	Zone	Level	Type	Role	Number	Status	Revision
C1058	OCSC	XX	XX	DR	C	0203	S3	P01

Date: 02/24 Scale @ A1:A5 Drn by: CW Chkd by: CM Aprvd by: JMCB