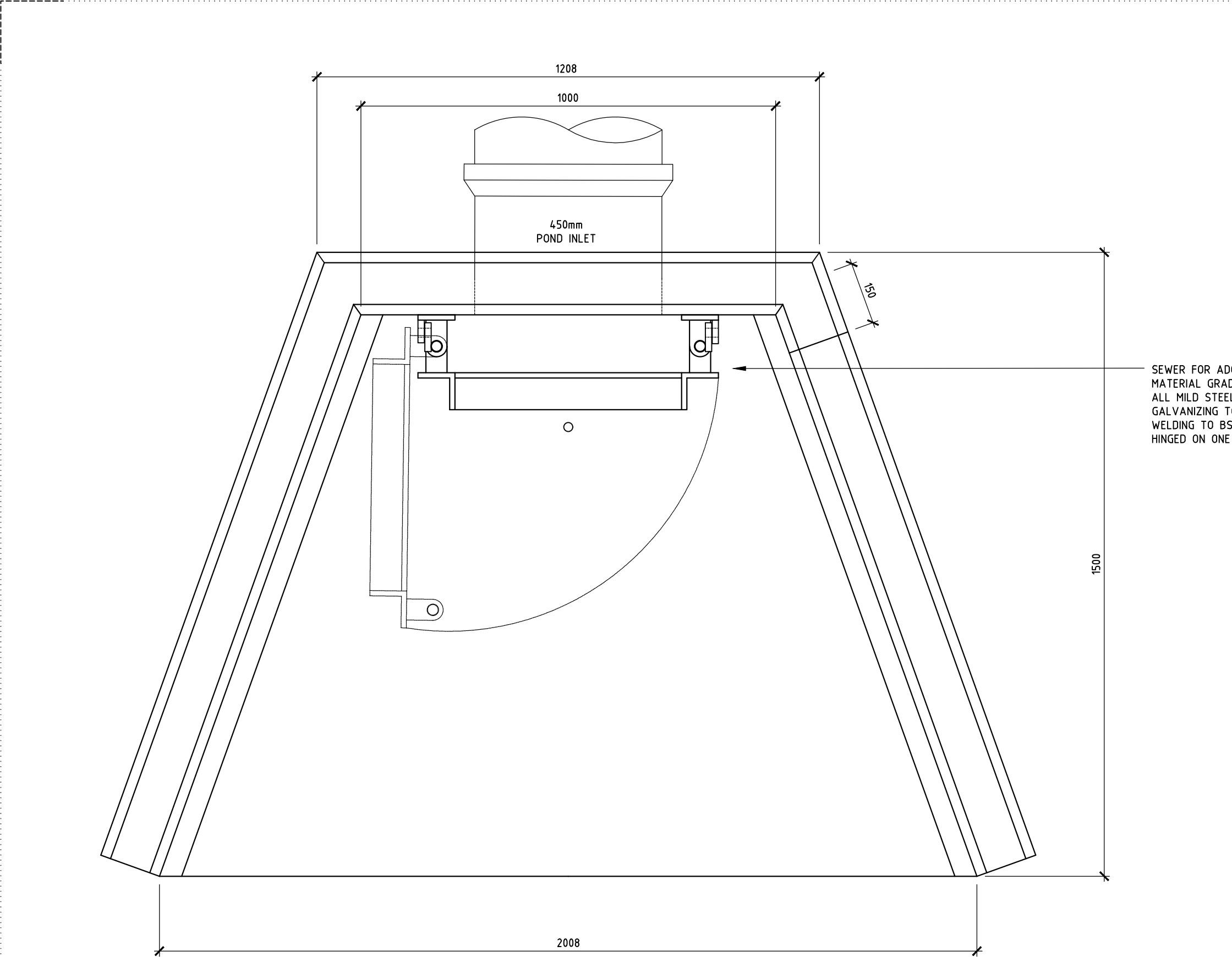
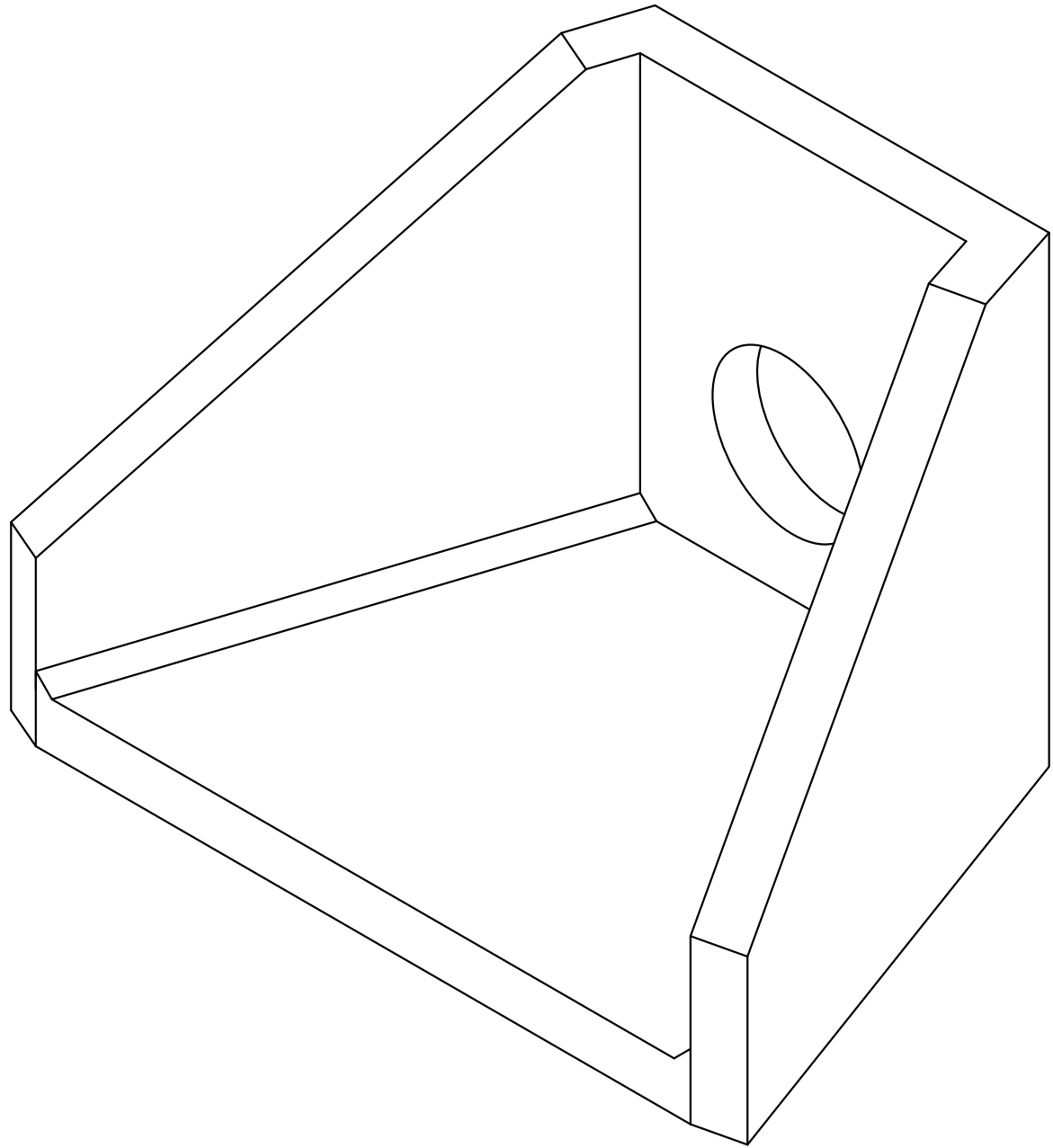




SEWER FOR ADOPTION OUTFALL SAFETY GRILLE Ø450MM  
MATERIAL GRADE IS TO BE BS EN 10025 S275  
ALL MILD STEEL TO BE HOT DIPPED GALVANIZED AFTER FABRICATION  
GALVANIZING TO BS EN 1461  
WELDING TO BS EN 1011-2:2001  
HINGED ON ONE SIDE WITH PADLOCK FACILITY



### ALTHON SFA10B HEADWALL AND SFA1 450 OUTFALL SAFETY GRILLE NOTES

- ALL DIMENSIONS IN MM
- ALL MEASUREMENTS ± 1MM

#### SPECIFICATION INFORMATION

- OPENING IN BACK WALL CAST TO SUIT OUTSIDE DIAMETER OF THE PIPEWORK
- INVERT LEVEL OF PIPE CAN BE SET TO YOUR SPECIFICATION

#### HEADWALL INSTALLATION

UNITS SHOULD BE BEDDED ON MINIMUM 200MM THICK WELL COMPACTED CLASS 6A+ SELECTED WELL GRADED GRANULAR MATERIAL.  
•MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS: VOLUME (MCHW1)  
SPECIFICATION FOR HIGHWAY WORKS, SERIES 600 (INV.09).  
SIT THE HEADWALL LEVEL OR WITH A SLIGHT FALL 150 FROM PIPE TO SPILL MOUTH.

#### HANDLING

- A. WEIGHT OF CONCRETE IS BASED ON 2.4 TONNE/M<sup>2</sup> 5% IS RECOMMENDED FOR SIZING LIFTING EQUIPMENT.
- B. ALL LIFTING POINTS SHALL BE USED AS SPECIFIED BELOW
- C. UNIT TO BE LIFTED AS PER LIFTING DIAGRAM

#### CONCRETE

- A. MIX REF. SELF-COMPACTING (C4/DS4 MIX
- B. LIFTING STRENGTH BASED ON 2 CUBES = 20N/MM<sup>2</sup>
- C. CHARACTERISTIC 28 DAY CUBE STRENGTH = 50N/MM<sup>2</sup>
- D. CONCRETE PROVIDES DESIGN CHEMICAL CLASS 4 (DCA) TO SPECIAL DIGEST 1, TABLE F2.

#### REINFORCEMENT

- A. REINFORCEMENT TO BS EN 13369
- B. SCHEDULING, DIMENSIONING, BENDING & CUTTING TO BS8666
- C. CAGE TO BE MACHINE TIED WITH STEEL WIRE

#### MANUFACTURE

- A. MANUFACTURE TO BS EN 15258:2008 PRECAST CONCRETE PRODUCTS - RETAINING WALL ELEMENTS, FACTORY PRODUCTION CONTROL CERTIFICATE NUMBER: 0086-CPR-650448 & BS EN 13369
- B. TOLERANCES TO BS EN 13369 CLAUSE 4.3.1.1
- C. FINISHING:

| Top     | Side    | Base    | Face of back wall |
|---------|---------|---------|-------------------|
| Exposed | Exposed | Exposed | Exposed           |

- D. MARKING: UNITS SHALL BE INDELIBLY MARKED TO SHOW:
  - MOULD REFERENCE CODE
  - DE-MOULD DATE
  - JOB REFERENCE NUMBER & UNIQUE PRODUCT NUMBER
  - UNIT WEIGHT (KG)

#### DESIGN

- A. CONCRETE DESIGN TO EC2
- B. ALTHON HAVE DESIGNED THE CONCRETE UNITS ONLY, THE SITE CONDITIONS SHOULD BE ASSESSED FOR SUITABILITY BY THE SCHEME DESIGNER
- C. UNITS ARE DESIGNED TO WITHSTAND A VERTICAL LIVE LOAD SURCHARGE OF 10KN/M<sup>2</sup>
- D. WEIGHT OF SOIL = 18KN/M<sup>2</sup>
- E. ANGLE OF INTERNAL FRICTION = 30 DEG.
- F. DESIGN LIFE: >100 YEARS

| Min Cover | Clear Width | Min Cover | Min Cover |
|-----------|-------------|-----------|-----------|
| 200mm     | 100mm       | 100mm     | 100mm     |

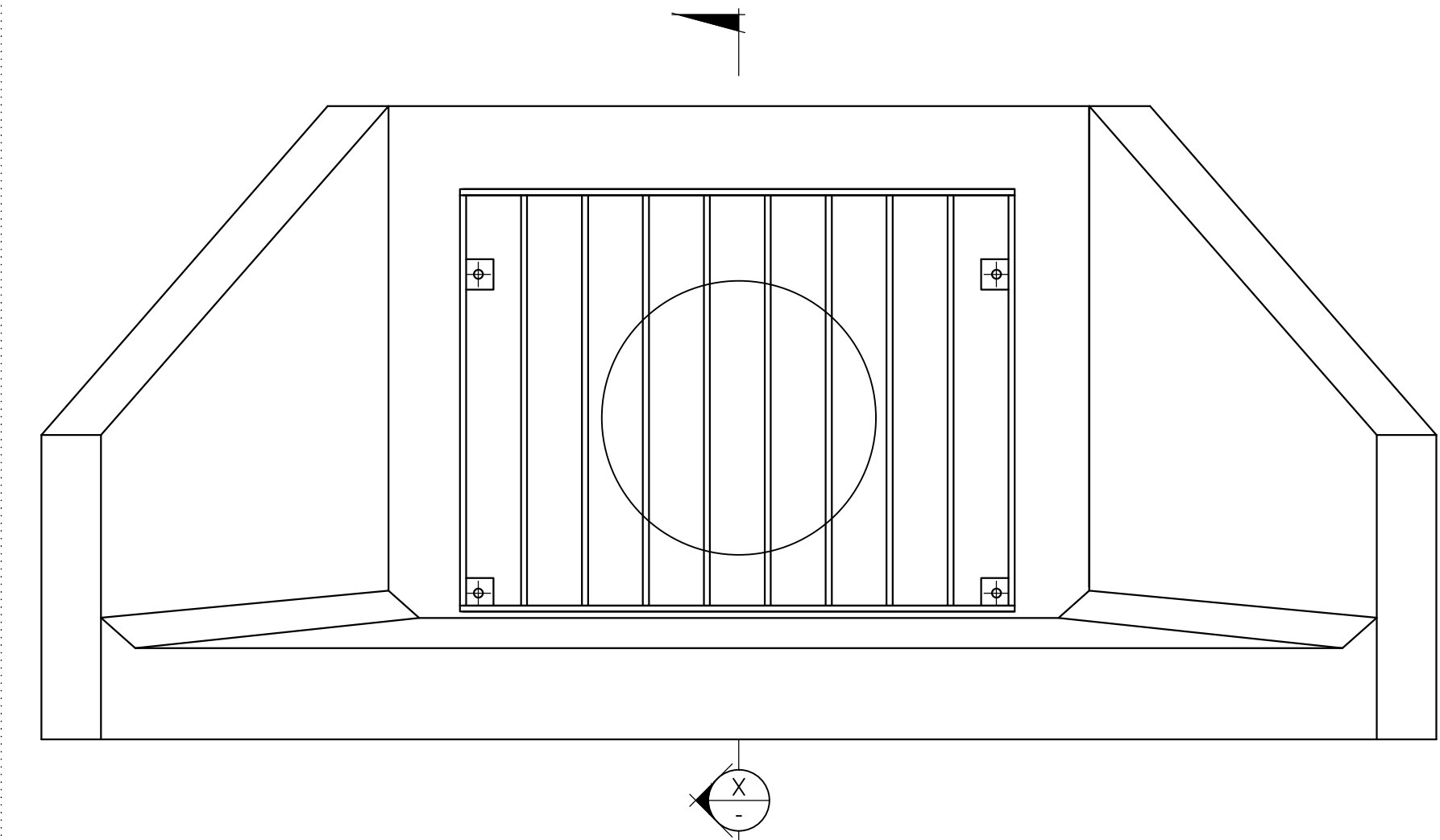
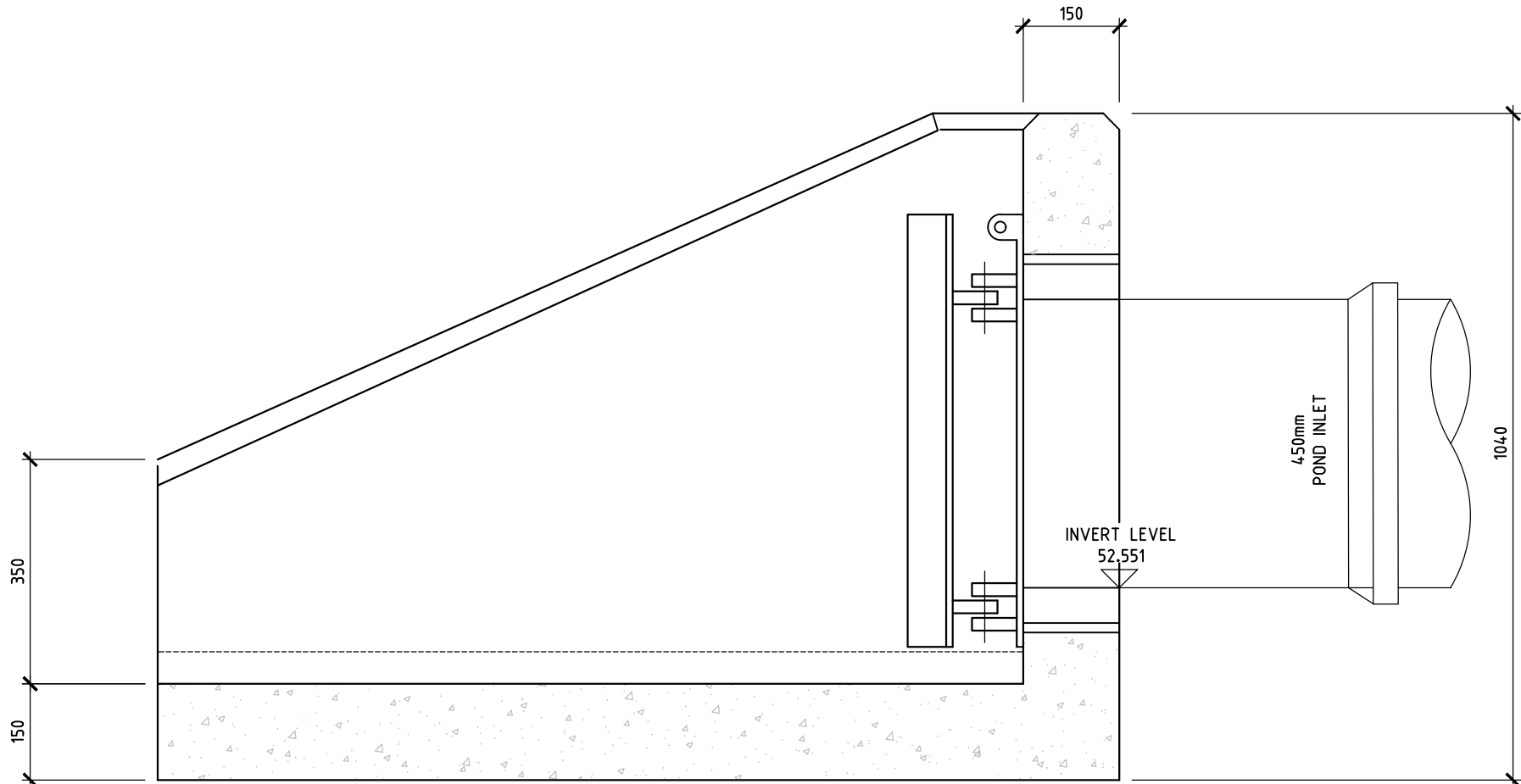
| Exposure | Exposure | Exposure | Exposure |
|----------|----------|----------|----------|
| Exposure | Exposure | Exposure | Exposure |

#### FABRICATION SPECIFICATION

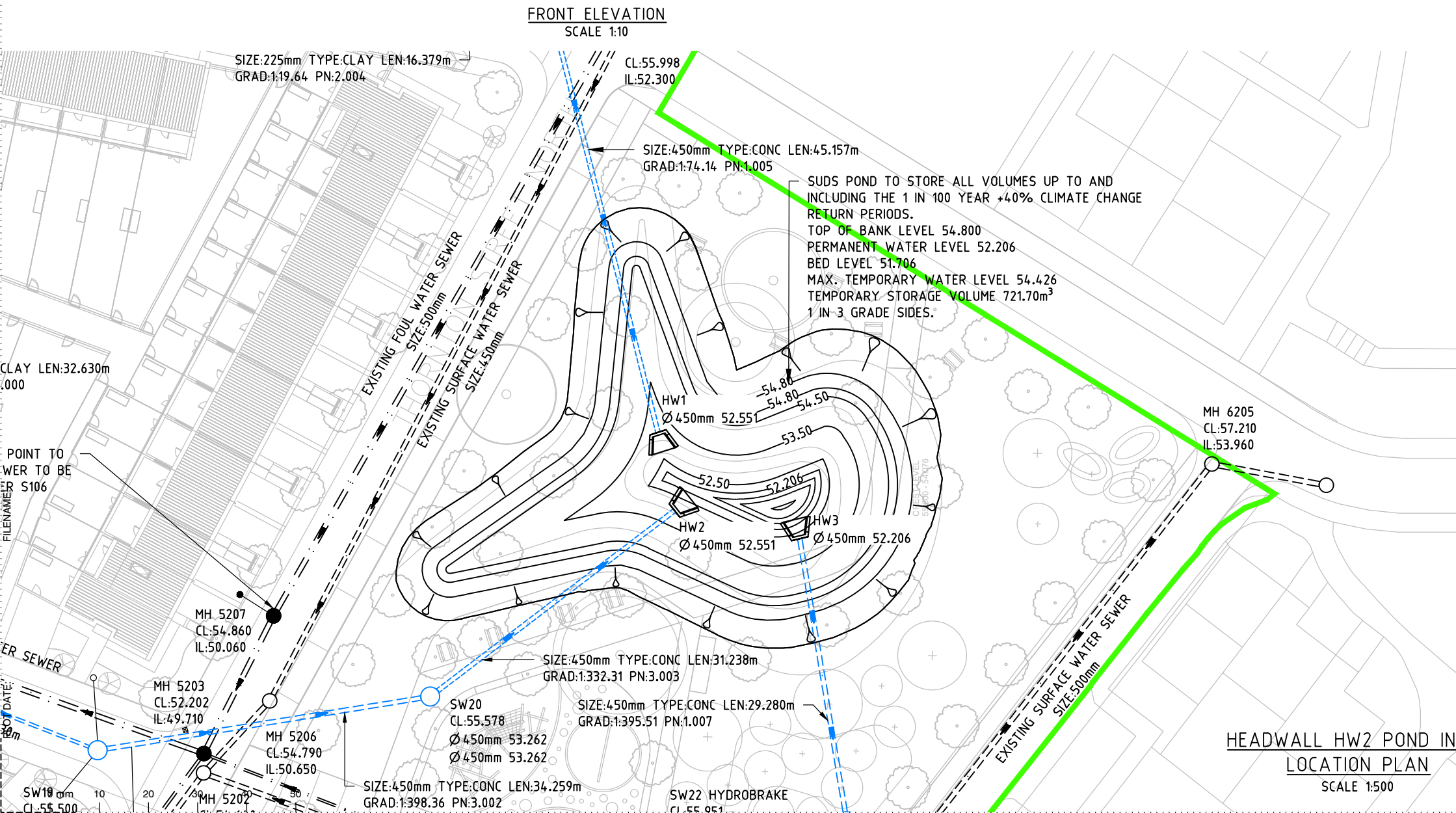
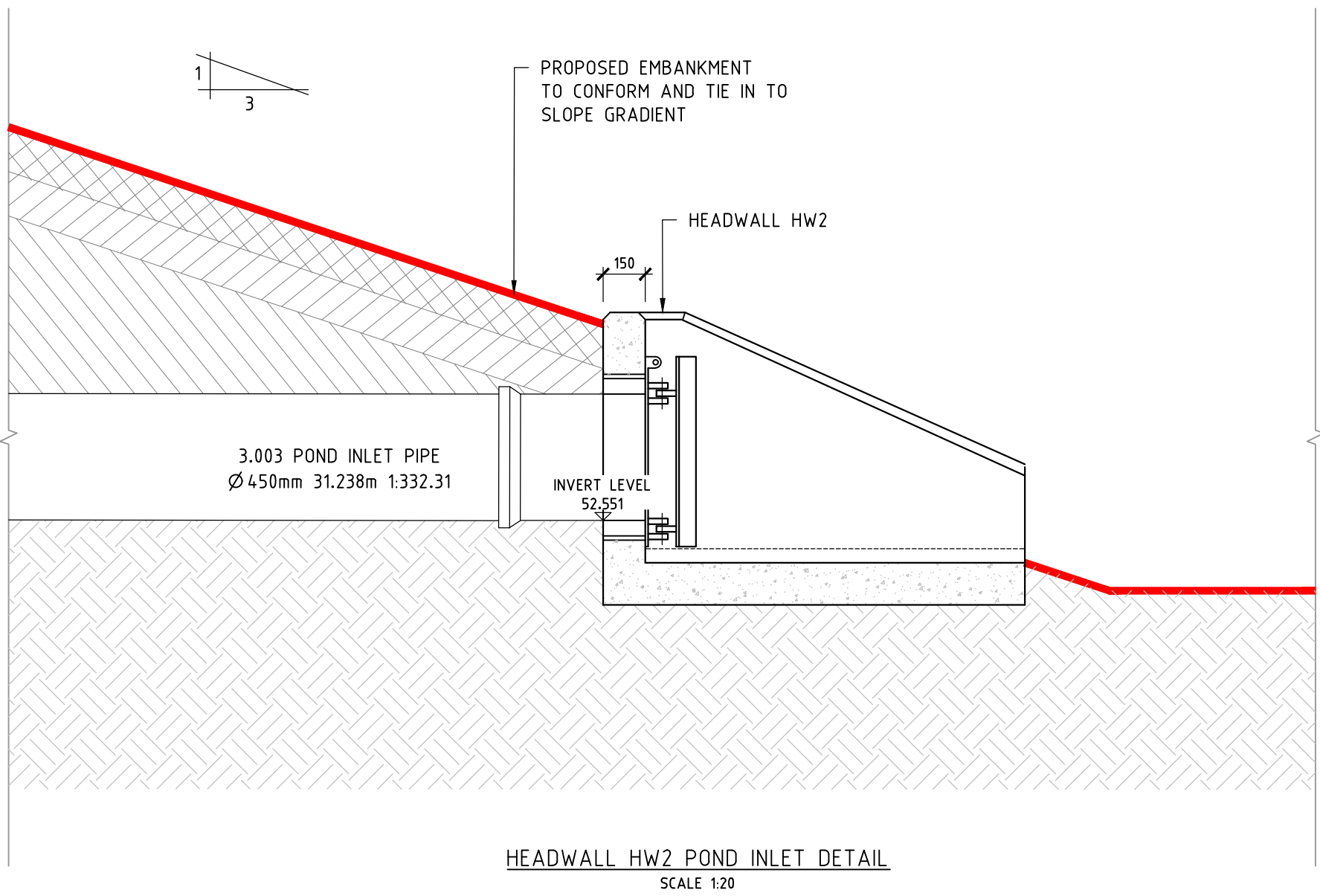
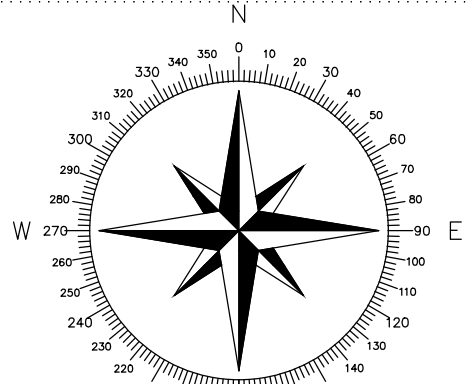
- A. MANUFACTURE IAW EN 1090-2 EXC CLASS 1
- B. MATERIAL GRADE IS TO BE BS EN 10025 S275
- C. WELDING CARRIED OUT IAW EN 1090-2 PARA 7.5.4 - 7.5.18
- D. ALL FILLET AND BUTT WELDS TO HAVE A MINIMUM THROAT THICKNESS OF 6MM & JOINTS TO BE FULLY WELDED WHERE POSSIBLE.
- E. ENSURE VERTICAL FLATS ARE FULLY WELDED BOTH SIDES WHERE POSSIBLE.
- F. ALL SHARP EDGES AND BURRS ARE TO BE REMOVED.
- G. REMOVE ALL WELD SPLATTER.
- H. HOLES BY PUNCHING ARE PERMITTED WITH BEAMING.
- I. GALVANISING IS CARRIED OUT AFTER FABRICATION TO BS EN150 1461

#### HANDRAIL SPECIFICATION

- A. KEE KLAMP® GALVANISED SIZE 8 FITTINGS
- B. SIZE 8 48.3MM OD 3.2MM WALL THICKNESS GALVANISED MEDIUM DUTY TUBE TO BS EN 10255
- C. 360N/M DESIGN LOAD AT STATED IN BS 8118, BS 6180, BS 6399 & BS 7818, CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (CESWI) 7TH EDITION CLAUSE 2.60 HANDRAILS & BALUSTERS & THE ENGINEERING EQUIPMENT AND MATERIALS USERS' ASSOCIATION (EEMUA) PUBLICATION 105 7TH EDITION FACTORY STAIRWAYS, LADDERS AND HANDRAILS
- D. OTHER DESIGN LOADS AVAILABLE ON REQUEST
- E. GRP/FRP HANDRAILS ALSO AVAILABLE



SECTION XX  
SCALE 1:10



#### NOTES:

- ALL SEWERS ARE DESIGNED IN ACCORDANCE WITH SEWER SECTOR GUIDANCE V.0.2 AND UNITED UTILITIES GUIDELINES AND STANDARD DETAILS.
- ALL CO-ORDINATES AND LEVELS SHOWN ARE RELATIVE TO THE TOPOGRAPHIC SURVEY.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE LINE AND LOCATION OF ANY EXISTING SEWERS, AS WELL AS ANY EXISTING GROUND AND INVERT LEVELS SHOWN ON THE DRAWING ARE CORRECT PRIOR TO THE COMMENCEMENT OF ANY WORKS. ANY DISCREPANCIES MUST BE MUST BE REPORTED IMMEDIATELY.
- PRIOR TO THE COMMENCEMENT OF ANY ON SITE WORKS THE CONTRACTOR MUST CONTACT THE STATUTORY UNDERTAKER AND BE IN POSSESSION OF THE LATEST DRAWINGS SHOWING THEIR APPARATUS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ALLOW FOR THE SUPERVISION OF THE CONSTRUCTION WORKS BY UNITED UTILITIES AND/OR THE HIGHWAYS AUTHORITY. THE CONTRACTOR WILL NOTIFY THE SUPERVISING OFFICER GIVING NOTICE WHICH WILL BE IN ACCORDANCE WITH THE AUTHORITIES REQUIREMENTS.
- THE PROPOSED SEWERS WILL BE CLAY PIPE WORK AND SHALL BE EXTRA STRENGTH TO BS EN 295:1991 PART 1.
- ANY PRE CAST CONCRETE PIPE WORK WILL BE IN ACCORDANCE WITH BS EN 1916:2002.
- IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THE CORRECT BEDDING, SURROUND AND BACKFILLING PROCEDURES ARE FOLLOWED FOR PVC PIPES. FOR DETAILS OF EMBEDMENT AND SURROUND FOR FLEXIBLE PIPES REFER TO UNITED UTILITIES STANDARD DETAIL STD/05/001.
- ALL MANHOLES AND CHAMBERS SHALL BE IN ACCORDANCE WITH BS EN 1917:2002
- SEWERS WITH COVER TO SOFFIT GREATER THAN 1.2m IN ROADS AND 0.9m IN FIELDS SHALL HAVE BED AND SURROUND AS FOLLOWS: RIGID PIPE EMBEDMENT SHALL BE CLASS S, SEMI RIGID PIPE EMBEDMENT SHALL BE CLASS S ALL IN ACCORDANCE WITH UNITED UTILITIES STANDARD DETAIL STD/05/001.
- ANY SEWER FOR ADOPTION WITH A COVER OF LESS THAN 1.2m TO PIPE SOFFIT IN ROADS OR 0.9m TO PIPE SOFFIT IN FIELDS WILL HAVE A MINIMUM 150mm GEN 3 CONCRETE BED AND SURROUND WITH FLEXIBILITY MAINTAINED WITH FLEXCELL EXPANSION JOINT FILLER OR SIMILAR APPROVED AT EACH PIPE JOINT.
- PRIVATE DRAINAGE CONNECTIONS TO THE SEWER WILL BE 150MM DIAMETER AND LAID TO THE SPECIFIED INVERT.
- THE INVERT LEVELS SPECIFIED AT THE DRAG OUT CHAMBER ARE INCOMING LEVELS.
- WHEREVER POSSIBLE PRIVATE DRAINAGE RUNS WILL REMAIN WITHIN THE CURTLAGE OF THE DWELLING FOR WHICH THEY SERVE.
- THE CONNECTION TO THE ADOPTABLE SEWER SHALL BE MANUFACTURED JUNCTION PIPES A SADDLE CONNECTION IS NOT PERMITTED UNLESS IT IS CLEARLY SPECIFIED.
- CONNECTIONS TO THE EXISTING SEWER WILL BE IN ACCORDANCE WITH SECTION 104 APPROVAL GRANTED BY UNITED UTILITIES.
- CONNECTIONS TO THE EXISTING WATERCOURSE WILL BE IN ACCORDANCE WITH APPROVAL GRANTED BY THE EA.

PO1 30.11.22 PRELIMINARY - Issued for Information

A.R. M.A.

| Rev | Date | Description | By | CHK |
|-----|------|-------------|----|-----|
|     |      |             |    |     |

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Project Name

COLLYHURST VILLAGE

Client

DEX CONSTRUCTION

Designed

Drawn

Checked

Scale @ A1

A.R.

A.R.

M.A.

AS SHOWN

Drawing Title

HW2 HEADWALL DETAILS

Project No.

221625

Drawing No.

221625-EDGE-XX-XX-DR-C-2105

P01

PRELIMINARY  
NOT FOR CONSTRUCTION

Revision