


Project Management Initials: Designer: KP Checked: ATZ Approved: RM
 Project: Llanmaes Village Flood Alleviation Scheme
 Drawing: F:\PROJECTS\HIGHWAYS - LLANMAES FLOOD ALLEVIATION SCHEMES\0 CADD\5.3 DRAWINGS\SERIES 2000 - MISCELLANEOUS\30 9000 STANDARD DETAILS\5050914B-ACM-SHT-30-9000-CT-9000.DWG
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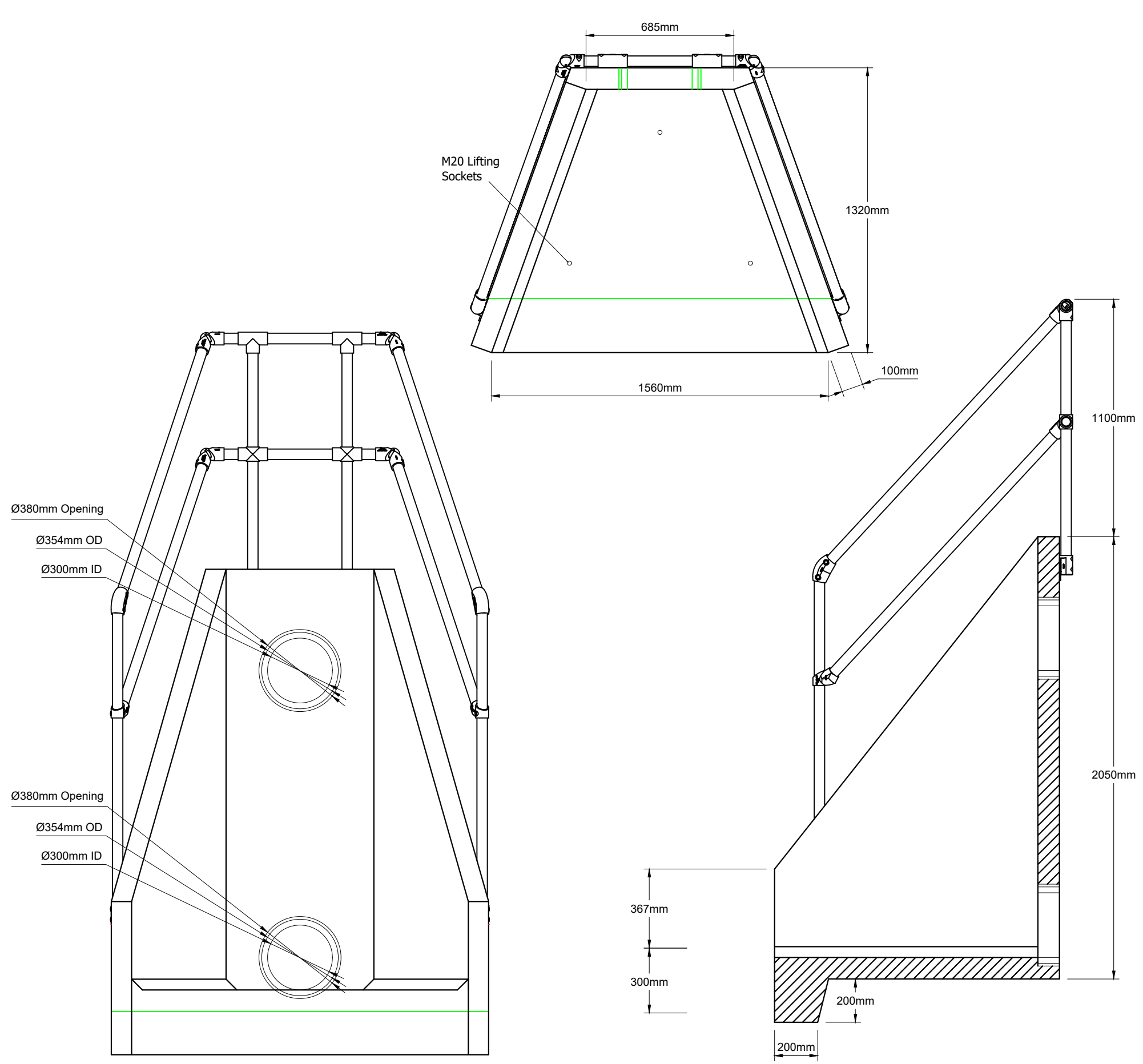
AECOM

PROJECT
**LLANMAES VILLAGE
 FLOOD ALLEVIATION
 SCHEME**

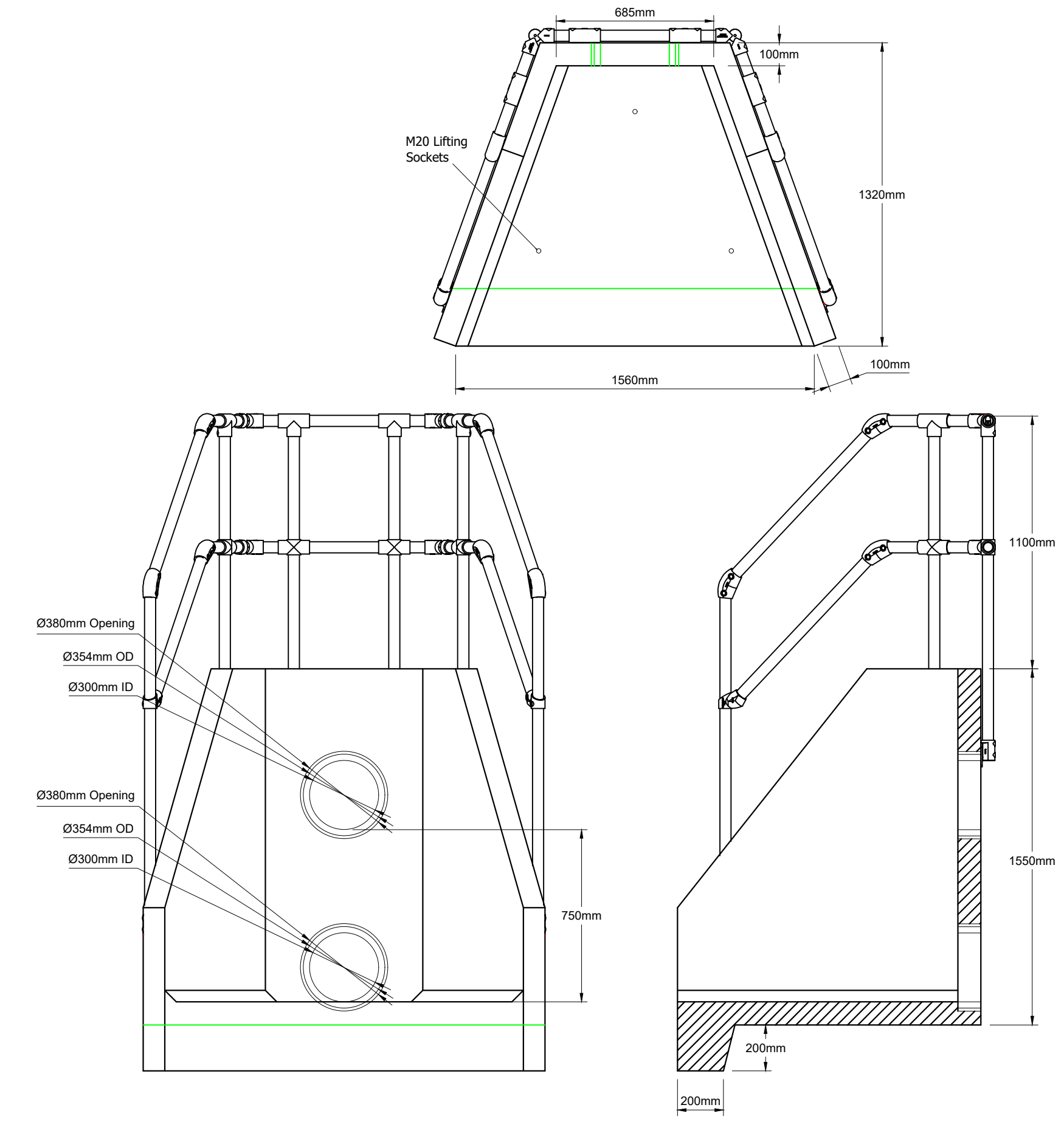
CLIENT
 VALE OF GLAMORGAN COUNCIL



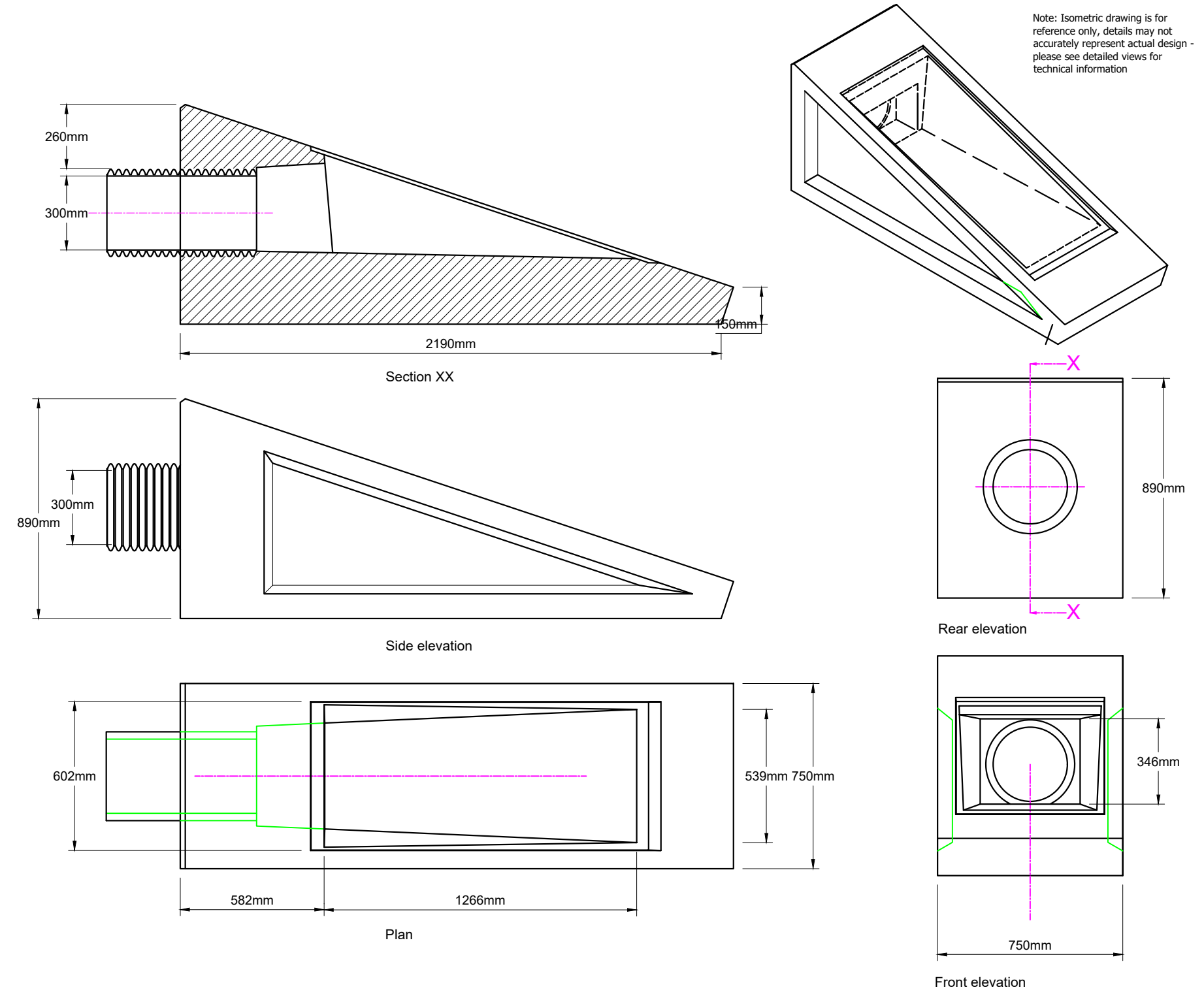
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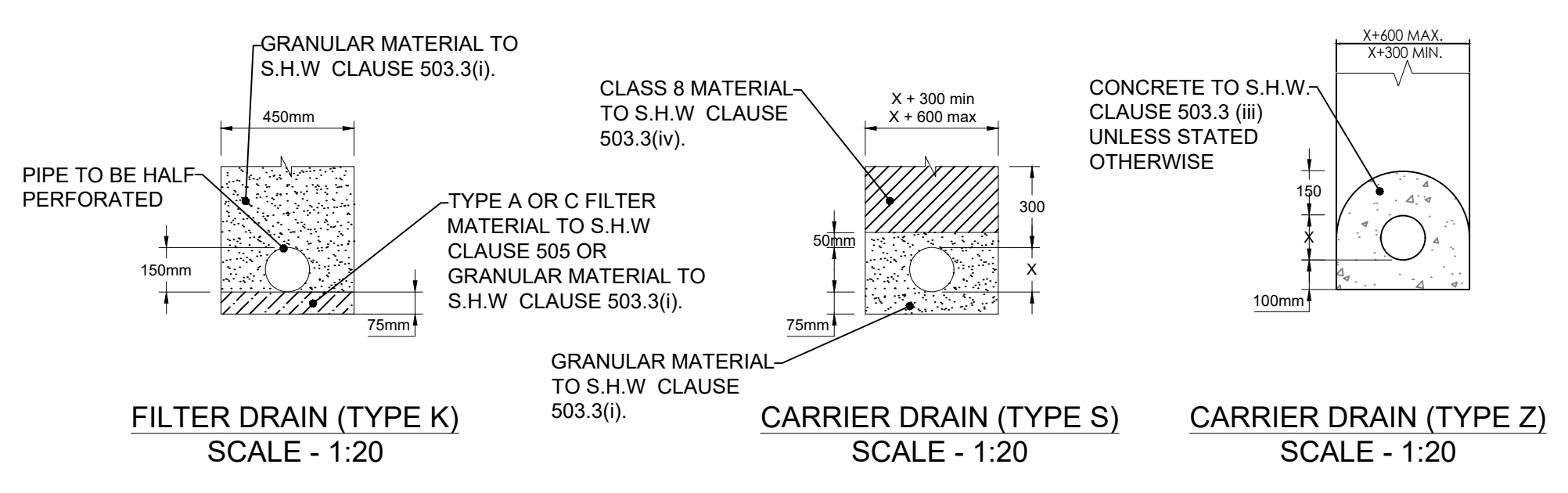
HEADWALL TYPE 1 - BUND INLET
 SCALE - 1:20



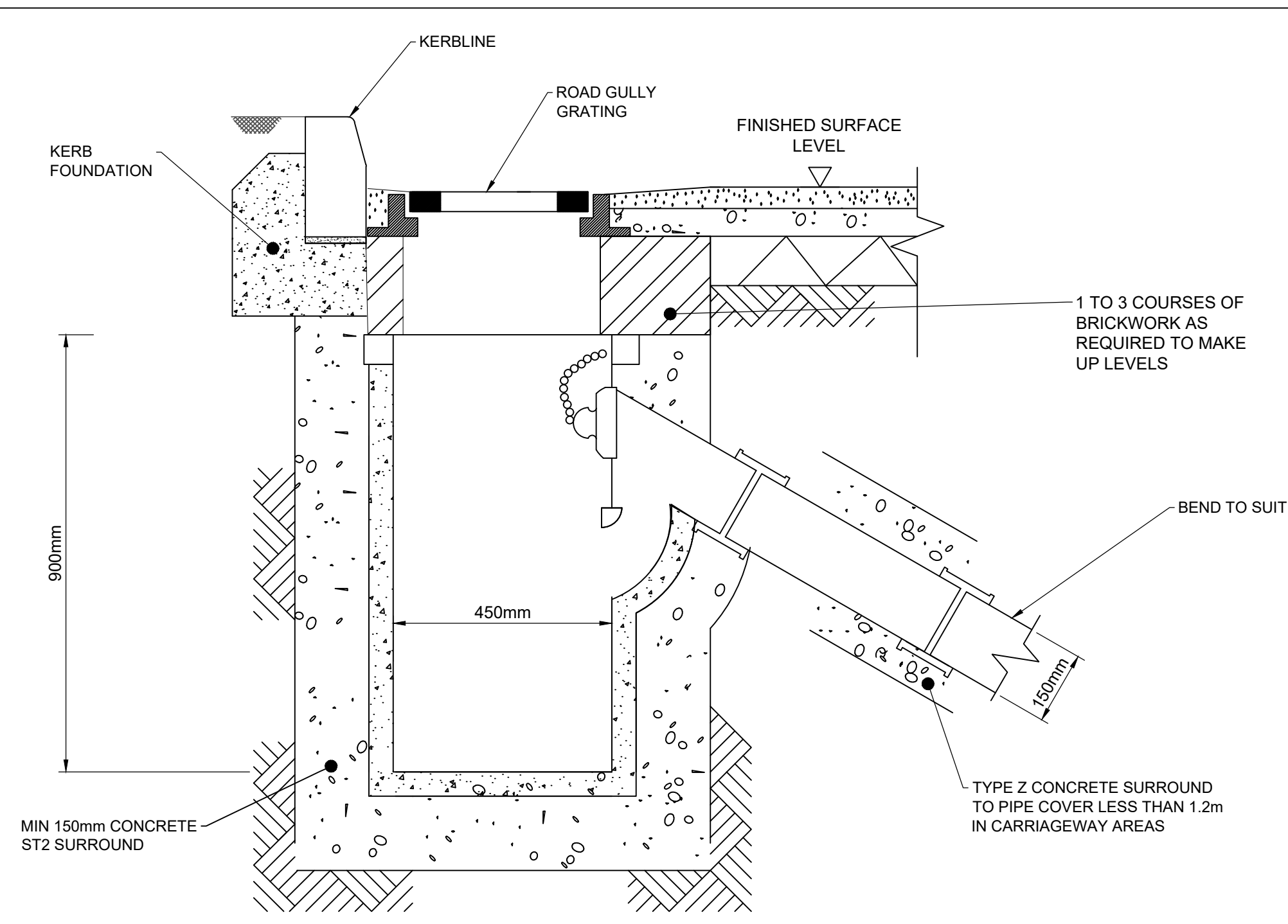
HEADWALL TYPE 2 - BUND OUTLET
 SCALE - 1:20



HEADWALL TYPE 3
 SCALE - 1:20



FILTER DRAIN (TYPE K) SCALE - 1:20
CARRIER DRAIN (TYPE S) SCALE - 1:20
CARRIER DRAIN (TYPE Z) SCALE - 1:20



TYPICAL ROAD GULLY DETAIL
 SCALE - 1:5

HEADWALL NOTES

- ALL DIMENSIONS IN mm
- ALL MEASUREMENTS ± 1mm

SPECIFICATION INFORMATION

- OPENING IN BACK WALL CAST TO SUIT OUTSIDE DIAMETER OF THE PIPEWORK

HEADWALL INSTALLATION

UNITS SHOULD BE BEDDED ON A MINIMUM 150mm THICK WELL COMPACTED CLASS 6N* OR 6K* WELL GRADED GRANULAR MATERIAL WITH A 50mm TOPPING OF FINE MATERIAL (CLASS 6L*) TO ENSURE UNITS ARE LEVEL AND STABLE.
 *MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS: VOLUME (MCHW1) SPECIFICATION FOR HIGHWAY WORKS, SERIES 600 (NOV 09).

HANDLING

- WEIGHT OF CONCRETE IS BASED ON 2.4 TONNE/M³+5% IS RECOMMENDED FOR SIZING LIFTING EQUIPMENT.
- ALL LIFTING POINTS SHALL BE USED AS SPECIFIED BELOW - ANCHOR POINTS & LOOPS - TOTAL QTY: 3
- UNIT TO BE LIFTED AS PER LIFTING DIAGRAM

CONCRETE

- MIX REF: SELF-COMPACTING DC4/DS4 MIX
- LIFTING STRENGTH BASED ON 2 CUBES = 20N/MM²
- CHARACTERISTIC 28 DAY CUBE STRENGTH = 50N/MM²
- CONCRETE PROVIDES DESIGN CHEMICAL CLASS 4 (DC4) TO SPECIAL DIGEST 1, TABLE F2.

REINFORCEMENT

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

MANUFACTURE

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

Class	Top	Sides	Base	Rear of back wall
All Faces	A	A	A	Self-Levelling

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

DESIGN

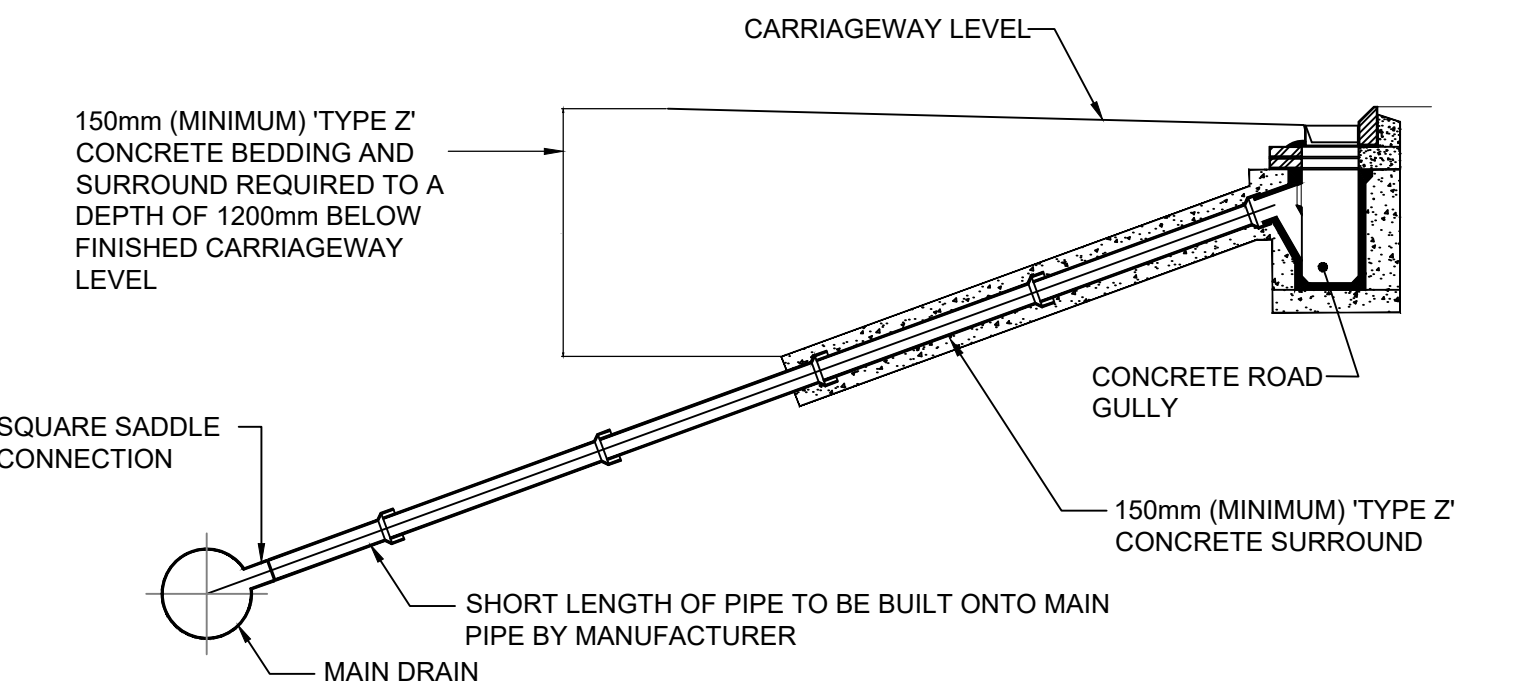
- CONCRETE DESIGN TO EC2
- ALTHOUGH HAVE DESIGNED THE CONCRETE UNITS ONLY, THE SITE CONDITIONS SHOULD BE ASSESSED FOR SUITABILITY BY THE SCHEME DESIGNER
- UNITS ARE DESIGNED TO WITHSTAND A VERTICAL LIVE LOAD SURCHARGE OF 10KN/M²
- WEIGHT OF SOIL = 18KN/M³
- ANGLE OF INTERNAL FRICTION = 30 DEG.
- DESIGN LIFE: >50 YEARS

Min Cover	Cover Block	Min Cover	Max Cover
Size (mm)	Size (mm)	Size (mm)	Size (mm)
All Faces	33	28	38

Exposure Classification	Exposure induced by Carbonation	Corrosion induced by Chloride	Freeze/thaw attack	Chemical attack
All Faces	XC3/4	XD2	XF3	XA2

PIPE BEDDING NOTES

- THE DETAILS ARE TO BE READ IN CONJUNCTION WITH APPENDIX 4 OF THE SPECIFICATION FOR HIGHWAY WORKS 1998 AS AMENDED
- DIMENSION X IS THE EXTERNAL DIAMETER OF THE PIPE
- THE MINIMUM OR MAXIMUM WIDTH OF THE TRENCH APPLIES ON AND BELOW A LINE 300mm ABOVE THE OUTSIDE TOP OF THE PIPE. ABOVE THE 300mm LINE, FOR CARRIER DRAIN TRENCHES, BACKFILL SHALL BE AS DESCRIBED IN CL.505 OF S.H.W.
- THE CONCRETE SURROUND MAY BE EXTENDED TO THE SIDES OF THE TRENCH. CLASS 8 MATERIAL IS TO BE USED TO FILL ANY VOIDS FORMED
- FOR TYPE Z TRENCH THE CONCRETE COVER MAY BE FORMED TO A RADIUS BATTER OR HORIZONTAL SURFACE. MIN. COVER OF CONCRETE SHALL BE 150mm.
- PERFORATED PIPES ARE TO LAID WITH PERFORATIONS FACING UPWARDS.



TYPICAL GULLY CONNECTION / SADDLE JOINT TO EXISTING SEWER DETAIL
 SCALE - 1:5

STATUS

DETAILED DESIGN

ISSUE/REVISION

NO	DATE	DESCRIPTION
C	07/07/2021	FOR PRICING
B	26/02/2021	DETAILED DESIGN
A	16/12/2020	DRAFT DETAILED DESIGN
IR	DATE	DESCRIPTION

PROJECT NUMBER

60160078

SHEET TITLE

LLANMAES VILLAGE
 FLOOD ALLEVIATION SCHEME
 STANDARD DETAILS
 SHEET 4 OF 7

SHEET NUMBER

60160078-ACM-SHT-30-9000-CT-9003

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