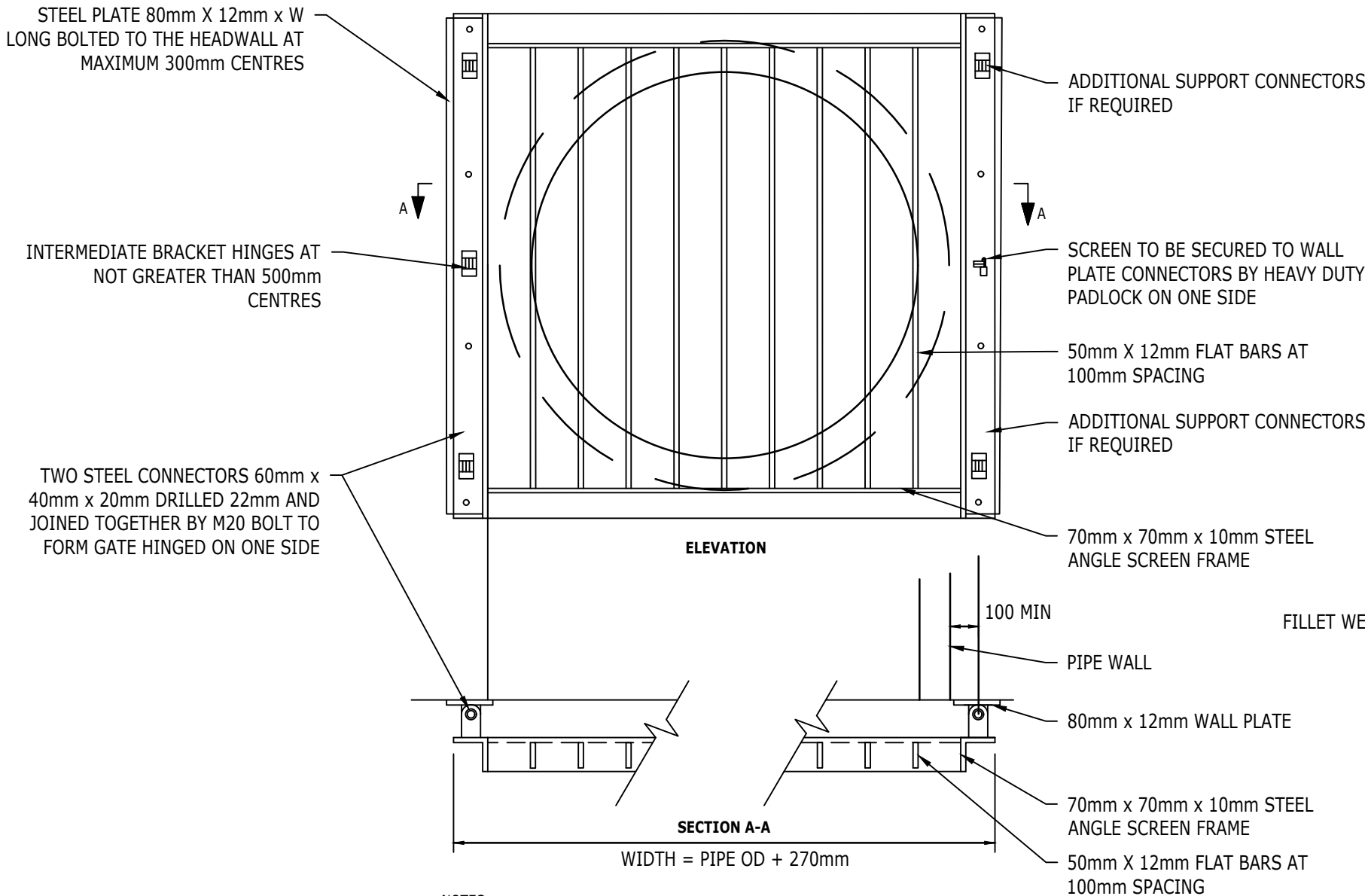
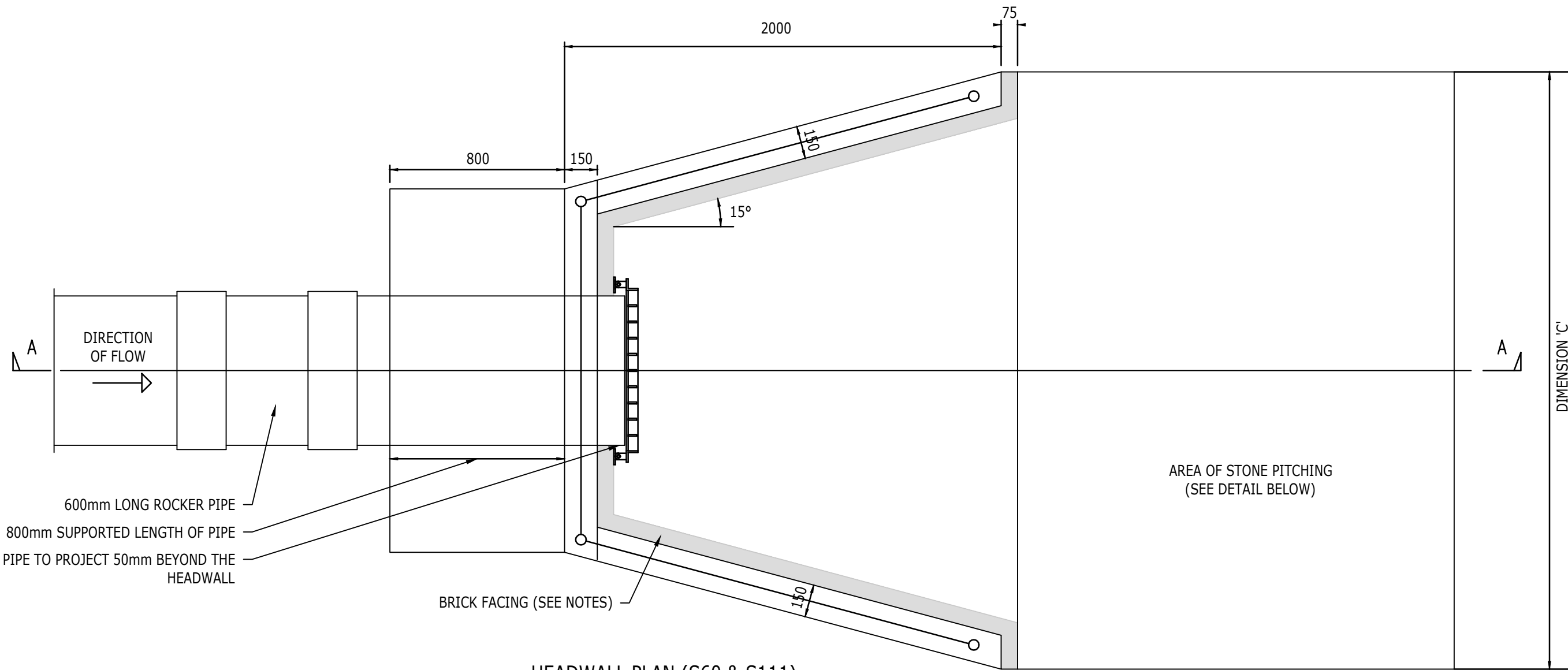


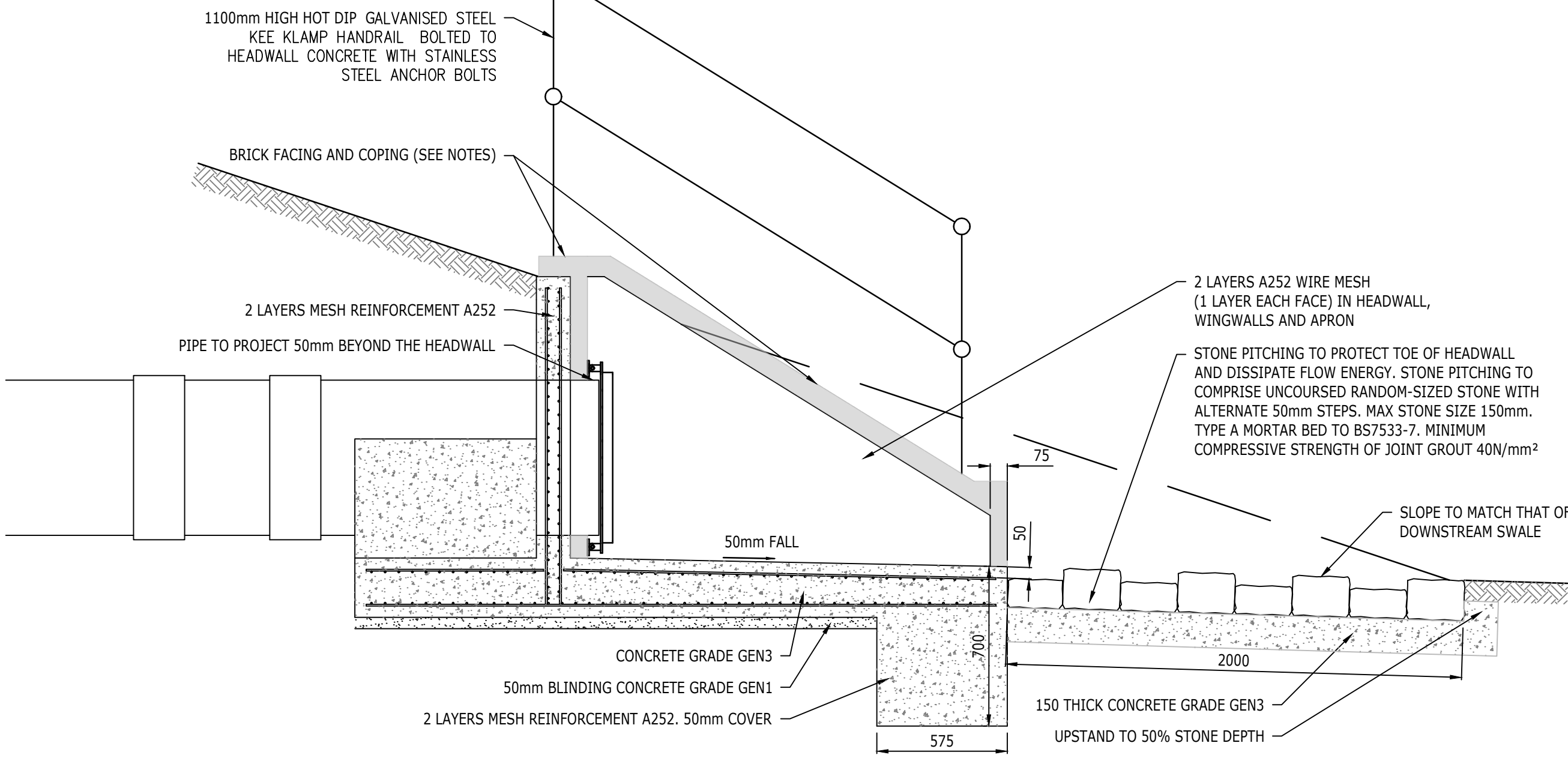


- NOTES:
- * WIDTH (W) TO SUIT PIPE OUTSIDE DIAMETER.
 - MILD STEEL FABRICATION TO BE HOT DIP GALVANISED TO BS EN 1461.

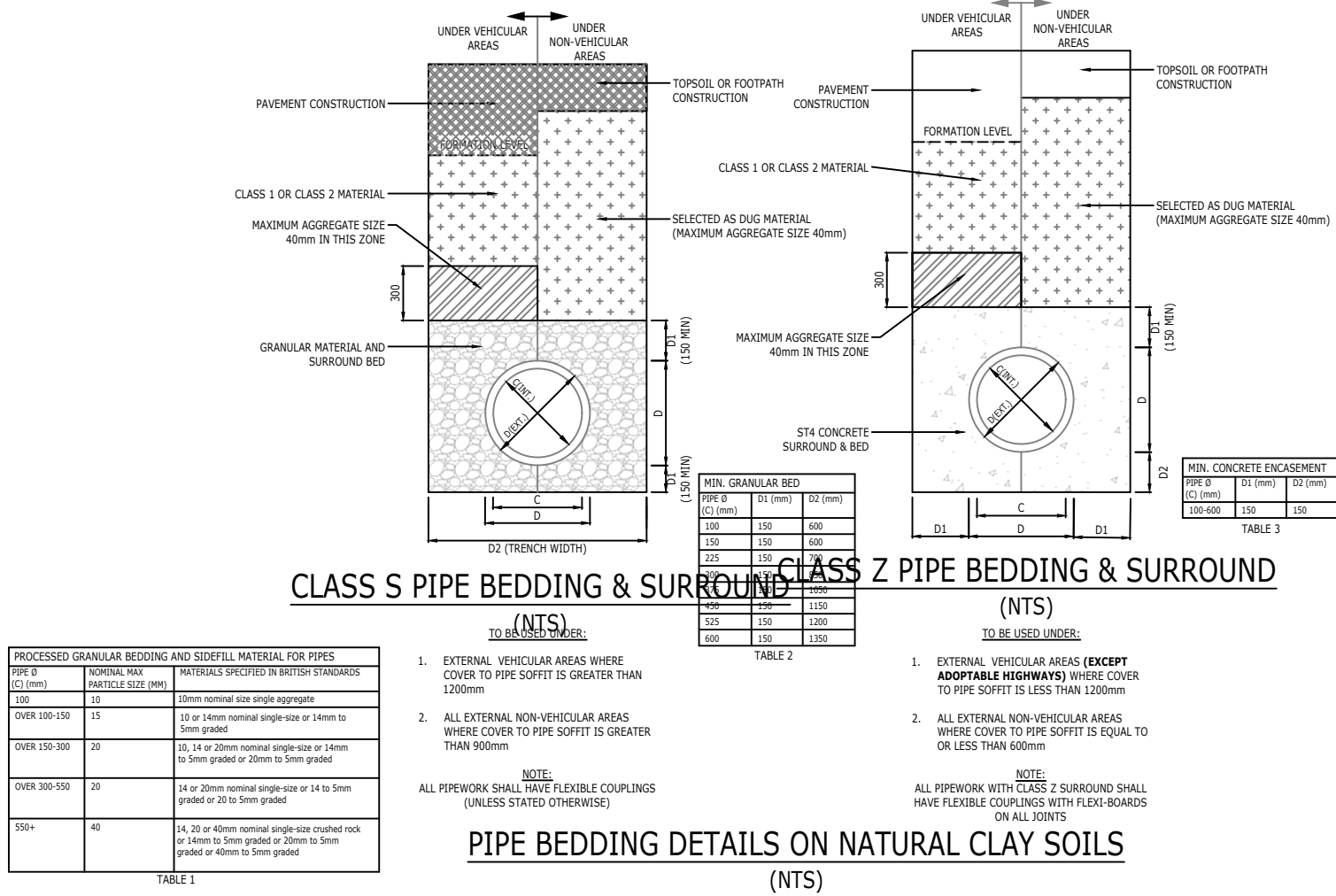
TYPICAL HEADWALL SAFETY GRILL



HEADWALL PLAN (S60 & S111)
(1:20)



HEADWALL SECTION A-A
(1:20)



CLASS S PIPE BEDDING & SURROUND (NTS)
CLASS Z PIPE BEDDING & SURROUND (NTS)

PIPE BEDDING DETAILS ON NATURAL CLAY SOILS
(NTS)

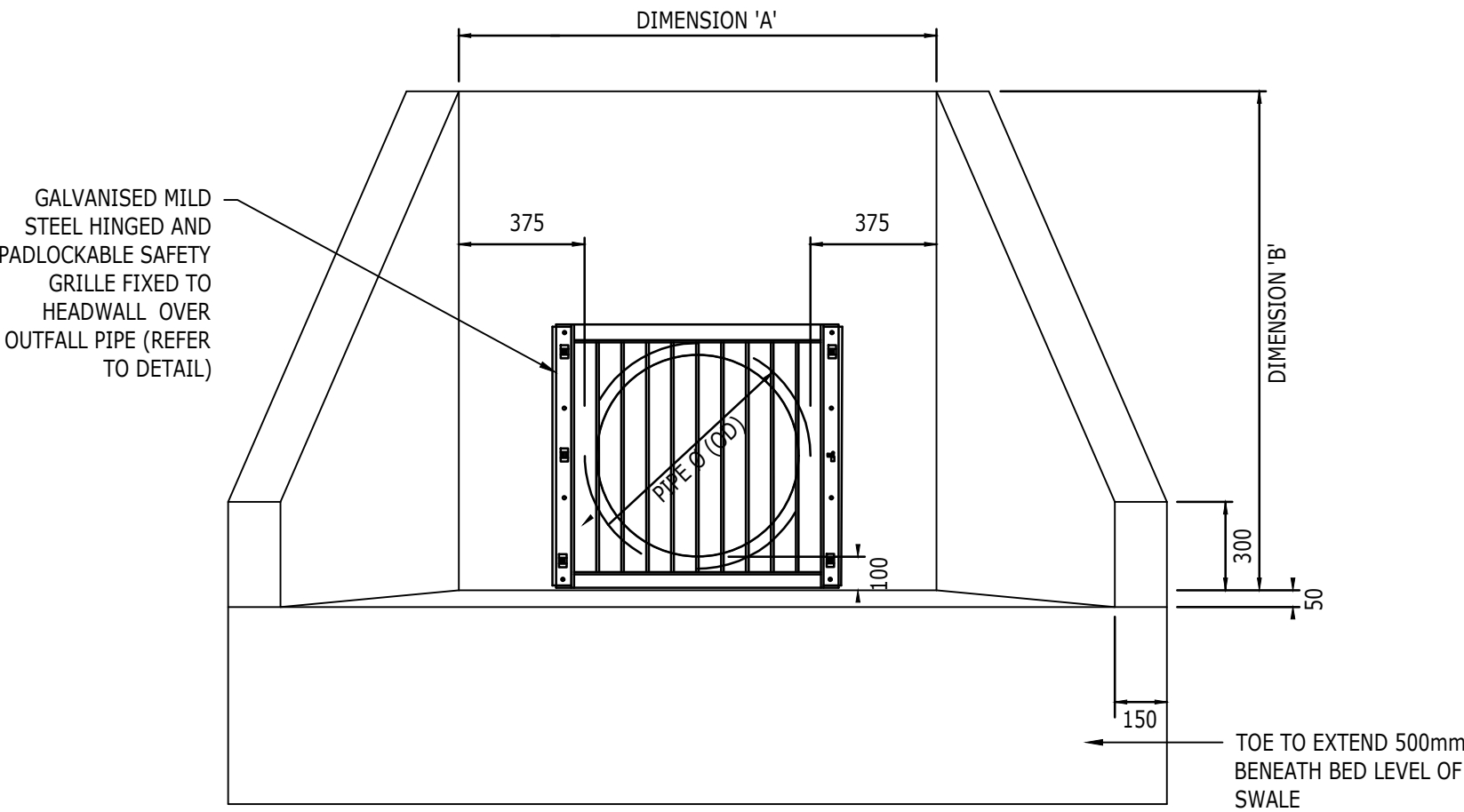
PIPE Ø (mm)	MINIMUM BED MATERIAL SIZE (mm)	MATERIALS SPECIFIED IN BRITISH STANDARDS
100	40	20 or 40mm nominal single size or 14mm to 20mm graded
OVER 100-150	25	10 or 20mm nominal single size or 14mm to 20mm graded or 10mm to 20mm graded
OVER 150-300	20	10 or 14mm nominal single size or 14mm to 20mm graded or 10mm to 20mm graded
OVER 300-500	20	10 or 14mm nominal single size or 14mm to 20mm graded or 10mm to 20mm graded
500+	40	10 or 20mm nominal single size or 14mm to 20mm graded or 10mm to 20mm graded

- EXTERNAL VEHICULAR AREAS WHERE COVER TO PIPE SLOTT IS GREATER THAN 1200mm
- ALL EXTERNAL NON-VEHICULAR AREAS WHERE COVER TO PIPE SLOTT IS GREATER THAN 900mm

NOTE:
ALL PIPEWORK SHALL HAVE FLEXIBLE COUPLINGS (UNLESS STATED OTHERWISE)

- EXTERNAL VEHICULAR AREAS WHERE COVER TO PIPE SLOTT IS LESS THAN 1200mm
- ALL EXTERNAL NON-VEHICULAR AREAS WHERE COVER TO PIPE SLOTT IS EQUAL TO OR LESS THAN 600mm

NOTE:
ALL PIPEWORK WITH CLASS Z SURROUND SHALL HAVE FLEXIBLE COUPLINGS WITH FLEXIBLE JOINTS ON ALL JOINTS



HEADWALL ELEVATION (S67 OUT)
(1:20)

HEADWALL DIMENSION TABLE - (ALL DIMENSIONS IN mm)				
HEADWALL	PIPE INVERT	PIPE DIAMETER ¹	DIMENSION 'A' ²	DIMENSION 'B' ²
1.1	4.411	600	1350	1000
1.2	4.248	525	1275	925
1.3	4.374	375	1125	775
1.4	4.201	450	1200	850
2.1	4.83	450	1200	850
2.2	4.81	375	1125	775
2.3	4.795	450	1200	850
3.1	4.377	450	1200	850
3.2	4.164	450	1200	850
4.1	3.255	525	1275	925
4.2	3.249	525	1275	925
5.1	3.221	525	1275	925
5.2	2.948	525	1275	925

¹ INTERNAL DIAMETER
² FIGURES STATED ASSUME USE OF POLYPIPE RIDGISEWER

NOTES

- This drawing is to be read in conjunction with all other Bright Plan Civils drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.
- Bright Plan Civils accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.
- Do not scale, work to figured dimensions only. All dimensions are in millimeters unless noted otherwise and all levels are in metres from the topographic survey datum.
- Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.
- All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.
- The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. Bright Plan Civils logos and company information must be removed from copies if information is re-used.

RESIDUAL HAZARDS

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following:

- Uncharted buried services. Contractor to use CAT prior to excavating.
- Working in live carriageway. Contractor to implement traffic management to ensure safety of the workforce and public.
- Working in live sewers. Contractor to ensure operatives are familiar with the dangers of working in live sewers.
- Excavations close to existing structures. Contractor to prepare method statement to ensure stability of existing structures.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement

HEADWALL CONSTRUCTION NOTES:

- CONCRETE TO HEADWALL SHALL BE CLASS GEN3
- WIRE MESH REINFORCEMENT A252 TO CLAUSE 1008 AND BS 4483:1998. MINIMUM COVER 50mm, MAXIMUM LAP 250
- WINGWALLS SHALL NOT PROJECT INTO SWALE
- ALL ST CONCRETE SHALL BE TO S.H.W. CLAUSE 2802
- CLASS F2 FINISH ON EXPOSED FACES TO SHW CL 1708. CLASS F1 FINISH ON OTHER FACES TO SHW CL 1708. CLASS F2 FINISH ON UPPER FACES TO SHW CL 1708
- HEADWALL TO BE FACED WITH A 2 BRICK SKIN OF CLASS B ENGINEERING BRICKS LAID WITH 1:3 CEMENT:SAND MORTAR IN STRETCHER BOND WITH A BRICK-ON-EDGE COPING TO THE TOP OF THE WING AND REAR WALLS AND THE CIRCULAR OPENING FOR THE PIPE TO BE FORMED WITH ROWLOCK ORIENTATED BRICK BATS. SHOT-FIRED GALVANISED MILD-STEEL FRAME TIES TO FIX BRICK SKIN TO CONCRETE HEADWALL STRUCTURE AT 300mm CENTRES EVERY OTHER COURSE.

All adoptable drainage works to be constructed as detailed in Sewers for Adoption, 7th edition

Rev.	Amendments	Date
-	-	-



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Drawing Status	FOR APPROVAL		
Client	THAKEHAM		
Project	BILSHAM ROAD YAPTON		
Drawing Title	S104-CONSTRUCTION DETAILS SHEET 1 OF 2		
Scale	NTS	Date	FEB 22
Drawn By		Checked By	
Drawing No.	D1956-15-100		
Rev.	-		