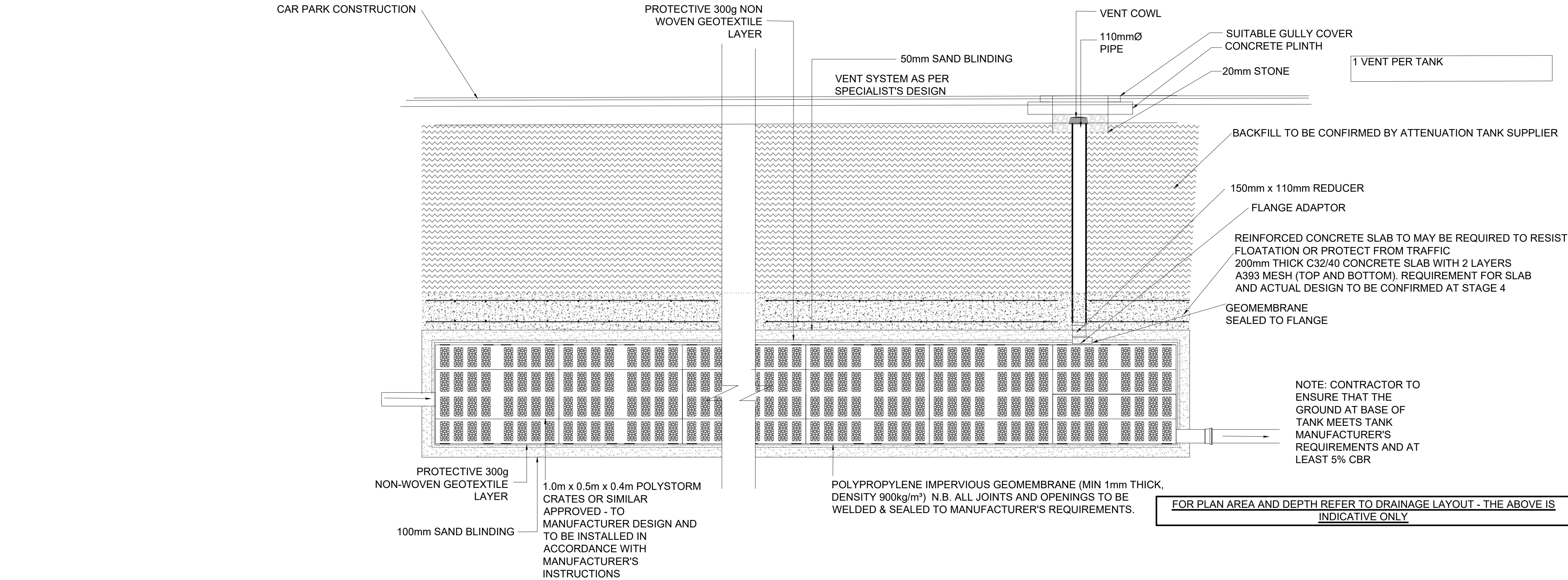
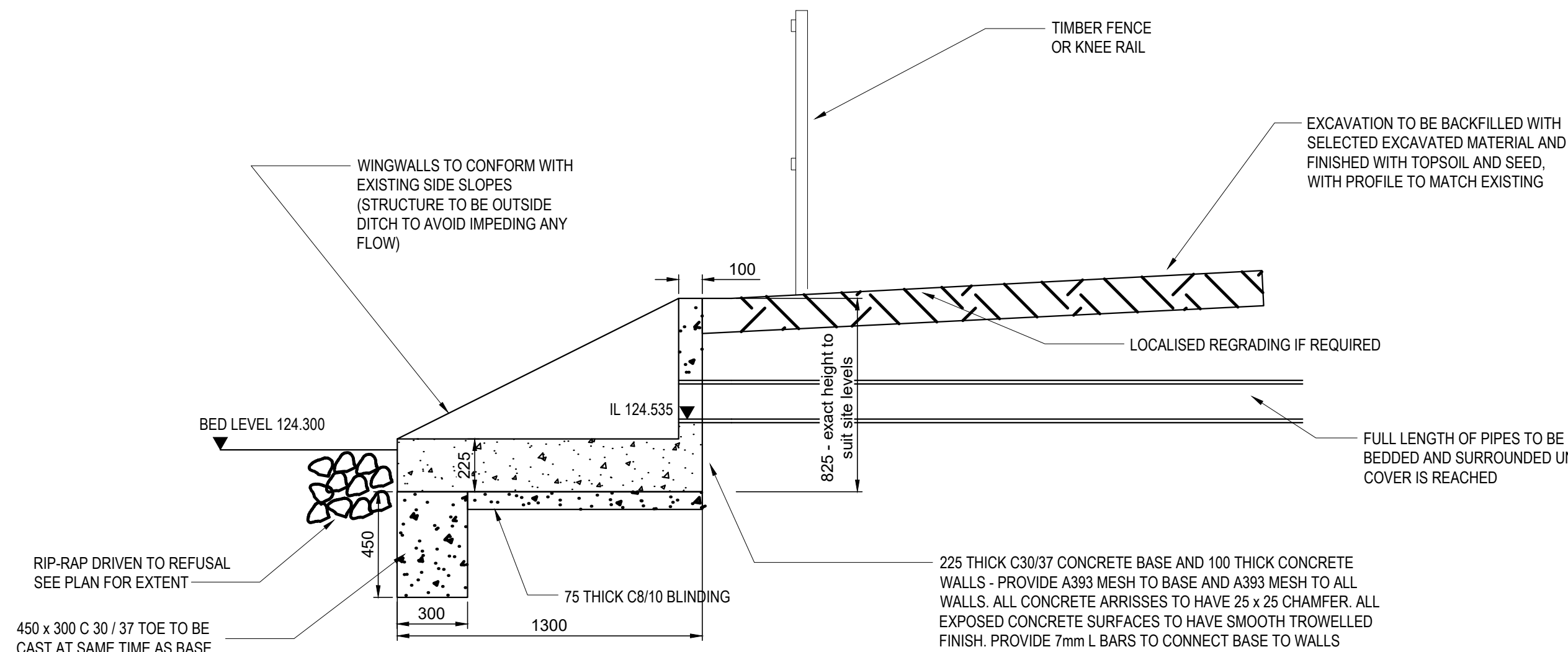




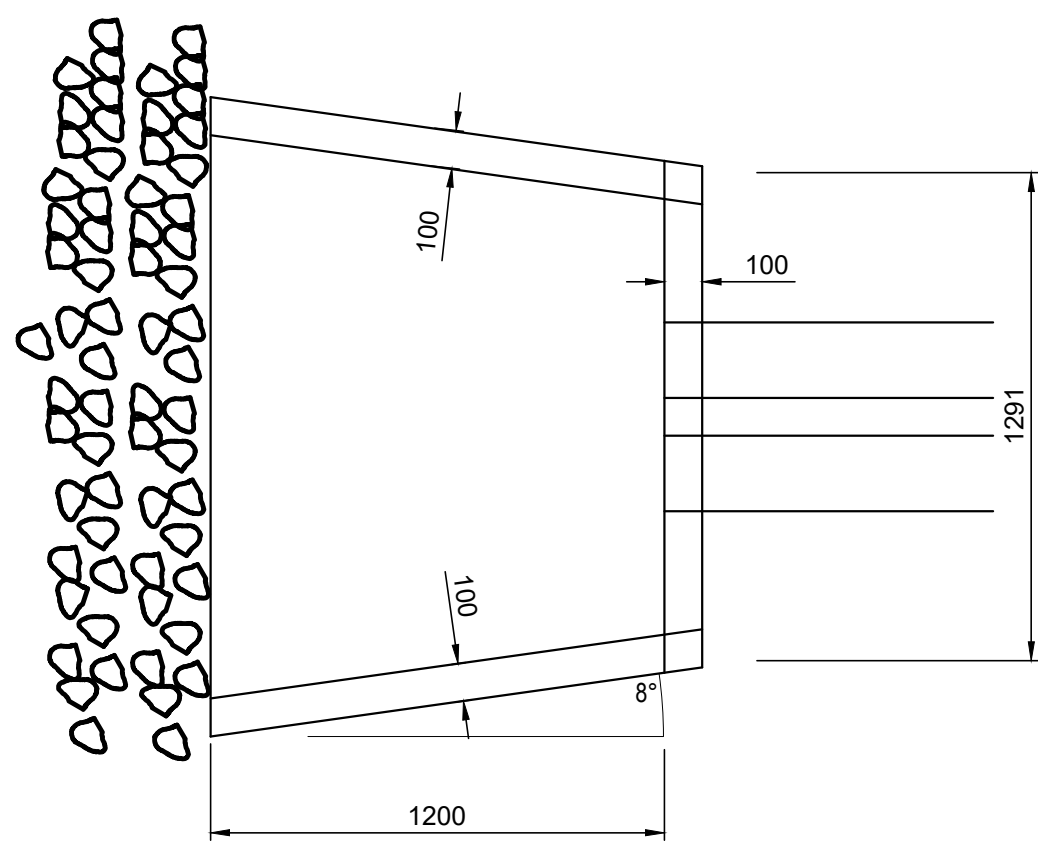
CELLULAR STORAGE TANK

SCALE 1:20



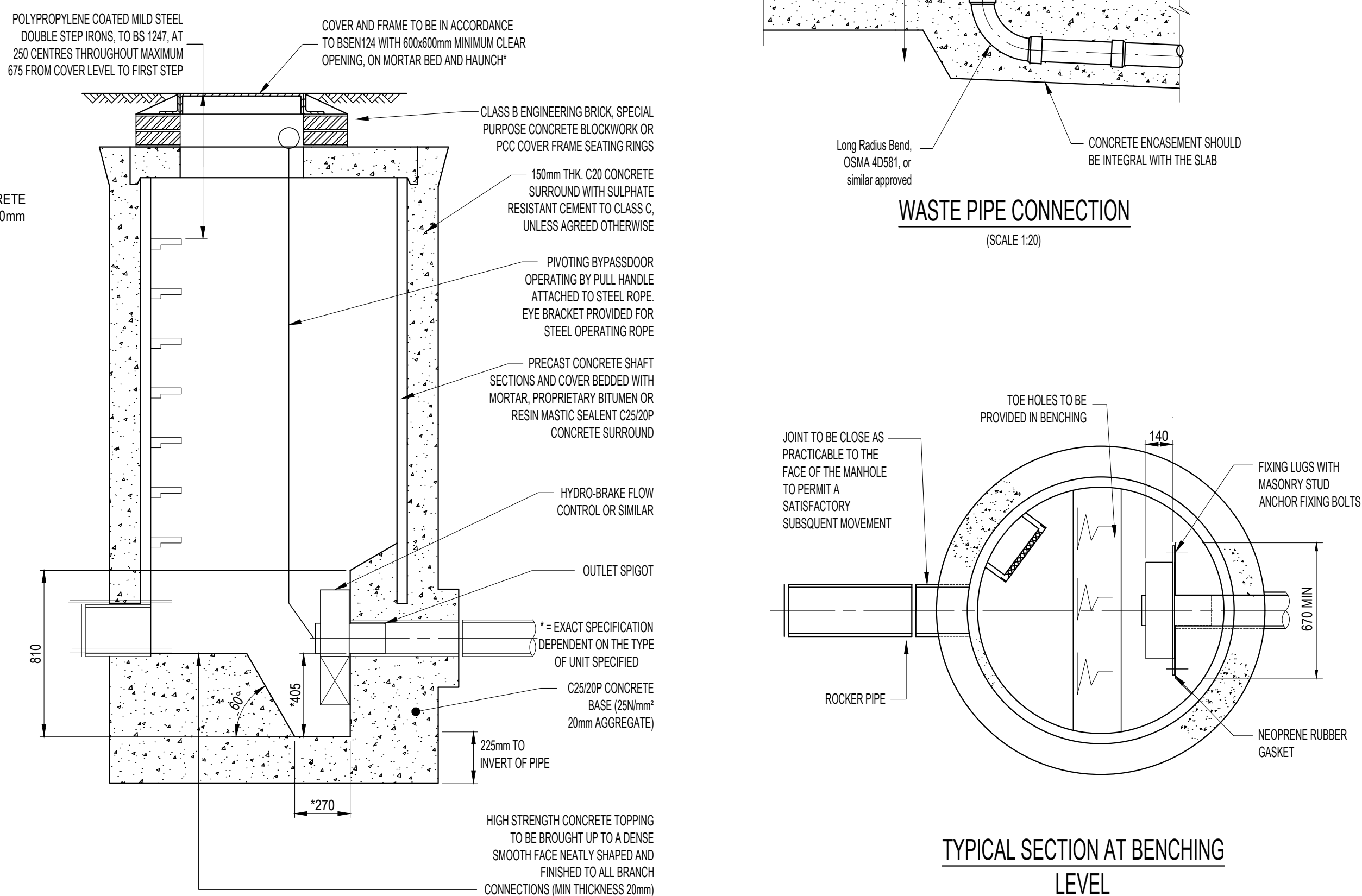
Site Outfall - Concrete Cast In Situ Headwall for 2 x 150mm pipes (Exact detail to be agreed with Structural Engineer) -

Section
(Scale 1:20)



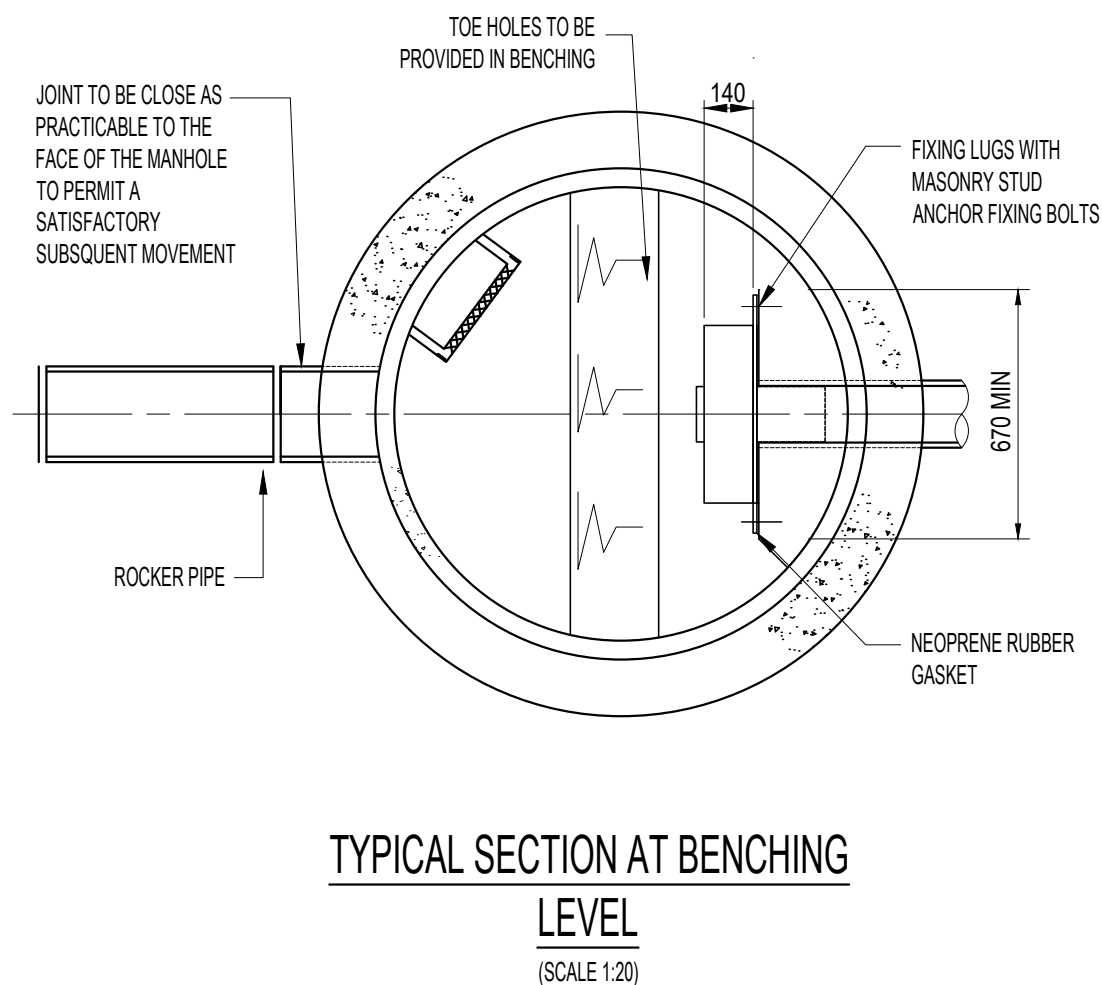
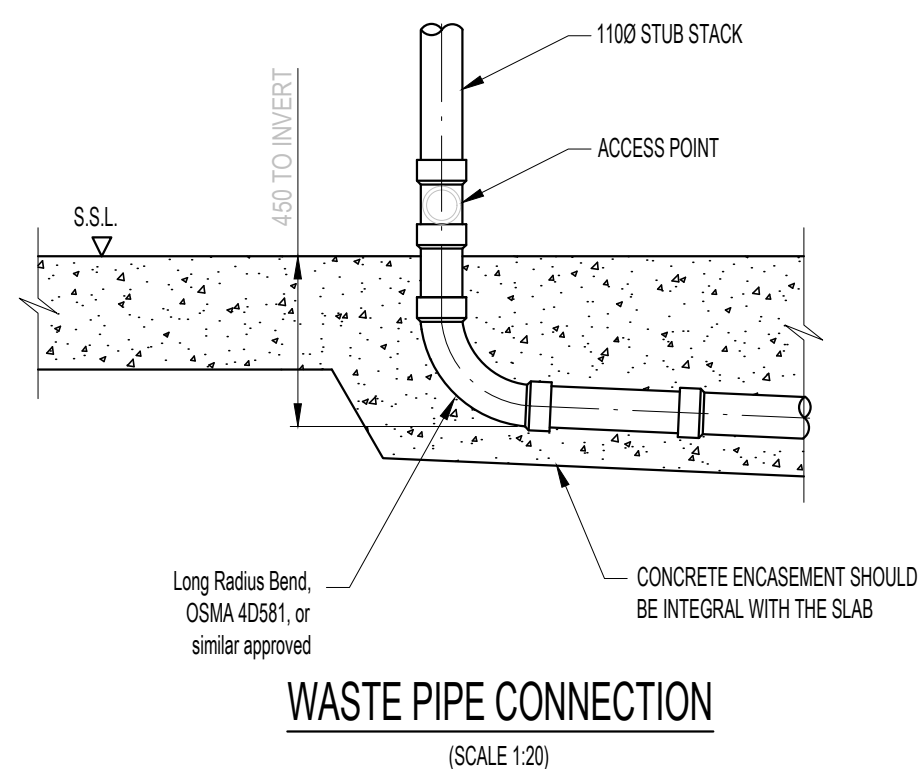
Site Outfall - Concrete Cast In Situ Headwall for 2 x 150mm pipes (Exact detail to be agreed with Structural Engineer) -

Plan
(Scale 1:20)



FLOW CONTROL MANHOLE

(SCALE 1:20)



TYPICAL SECTION AT BENCHING LEVEL

(SCALE 1:20)

Notes

- Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
- This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
- All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
- Any discrepancies noted on site are to be reported to the engineer immediately.
- This drawing should be printed and read in colour.

Design Notes

- Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
- This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
- All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
- Any discrepancies noted on site are to be reported to the engineer immediately.
- *Pipes* refers to gravity sewers, drains and rising mains
- For concrete information, refer to specificationConcrete surrounds to be: Concrete conforming to BS 8500 -1: 2015 + A2 : 2019 and BS EN 206 : 2013 + A1 : 2016 Compressive strength C16/20 Design chemical class = DS-1 / AC-1s Cement type or combination group or types to be in accordance with BRE special digest 1: Part 2 (Concrete in aggressive ground) Maximum aggregate size = 20mm Chloride class = CLO.40 Consistency class - S1 Nominal cover to be 40mm U.N.O. The contractor may offer an alternative mix, in accordance with BS 8500 to the contract administrator for approval
- Drainage pipe class 'Z' works to be: Concrete conforming to BS 8500: Part 2: 2015 & A2: 2019 and BS EN 206: Part 1: 2013 & A1 : 2016 Concrete designation = As per concrete specification in note 6
- All external gully gratings and frames to be manufactured to meet the load requirements of BS EN 124-1 to -4. The gully and frame should be chosen from the following grades to suit the particular location and anticipated loading condition
 - Class A15/A - Pedestrian loading only
 - Class C250/C - Car parks and within 0.5m of kerbline
 - Class D400/D - All carriageways and trolley loading/parking bays
- Where proprietary products are specified the contractor may offer an equal or superior quality alternative to the contract administrator for approval
- Frame to gully grating to be free of gussets
- The pipes are to be selected by the contractor to have a suitable strength for the service conditions. The beddings shown are the minimum requirements. The contractor must ensure that the bedding provided is suitable for the selected pipes and loading conditions. Details of proposals for the pipes and beddings are to be submitted to the contract administrator for approval before the work commences
- All pipes are to be suitable for main road traffic unless specified otherwise.
- If the trenches are to be trafficked before the completion of the hardstandings the contractor should provide any necessary protection as recommended by the pipe manufacturer's
- Class Z concrete bed and surround to be provided to pipes where depth of cover is less than 900mm below finished levels. Flexcell to be included at all joints as recommended by the manufacturer. Elsewhere, unless specified otherwise, all pipes to Class B bed and Class S surround. This may also be acceptable for rigid pipes subject to agreement of the contract administrator before work commences
- Backfill to trench above specified pipe surround as follows:-
 - Below roads & paving: Type 1 material to Specification for Highway Works Clause 803 compacted in 150mm layers.
 - Below structures & floor slabs where the depth of cover from underside of slab to crown of pipe is 300mm or more: Type 1 material to Specification for Highway Works Clause 803 compacted in 150mm layers;
 - Below structures & floor slabs where the depth of cover from underside of slab to crown of pipe is less than 300mm: Encase in concrete to same mix as slab & cast integrally with slab - Adjacent to structures: Backfill with concrete as required by Building Regulations & described in the accompanying specification
- If required generally by the contract or dictated by site conditions concrete shall be sulphate resisting



C01	15/10/25	Drainage bend detail added	ST	JC
P02	29/08/25	Outfall headwall detail added	TC	AB
P01	25/02/25	Issued to LLFA for planning	TC	AB

Issues & Revisions

Consultant

HEXA

Client

HENRY BROTHERS

Project Title

TWYCROSS ZOO

Drawing Title

DRAINAGE DETAILS SHEET - 3

Drawn By	TC	Reviewed By	AB
Hexa Ref	600902	Scale at A1	1:10

Purpose of Issue	Status
CONSTRUCTION	S3

Project - Originator - Zone - Level - Type - Role - Number	Revision
TWZ-HEX-XX-XX-DR-C-9212	C01