

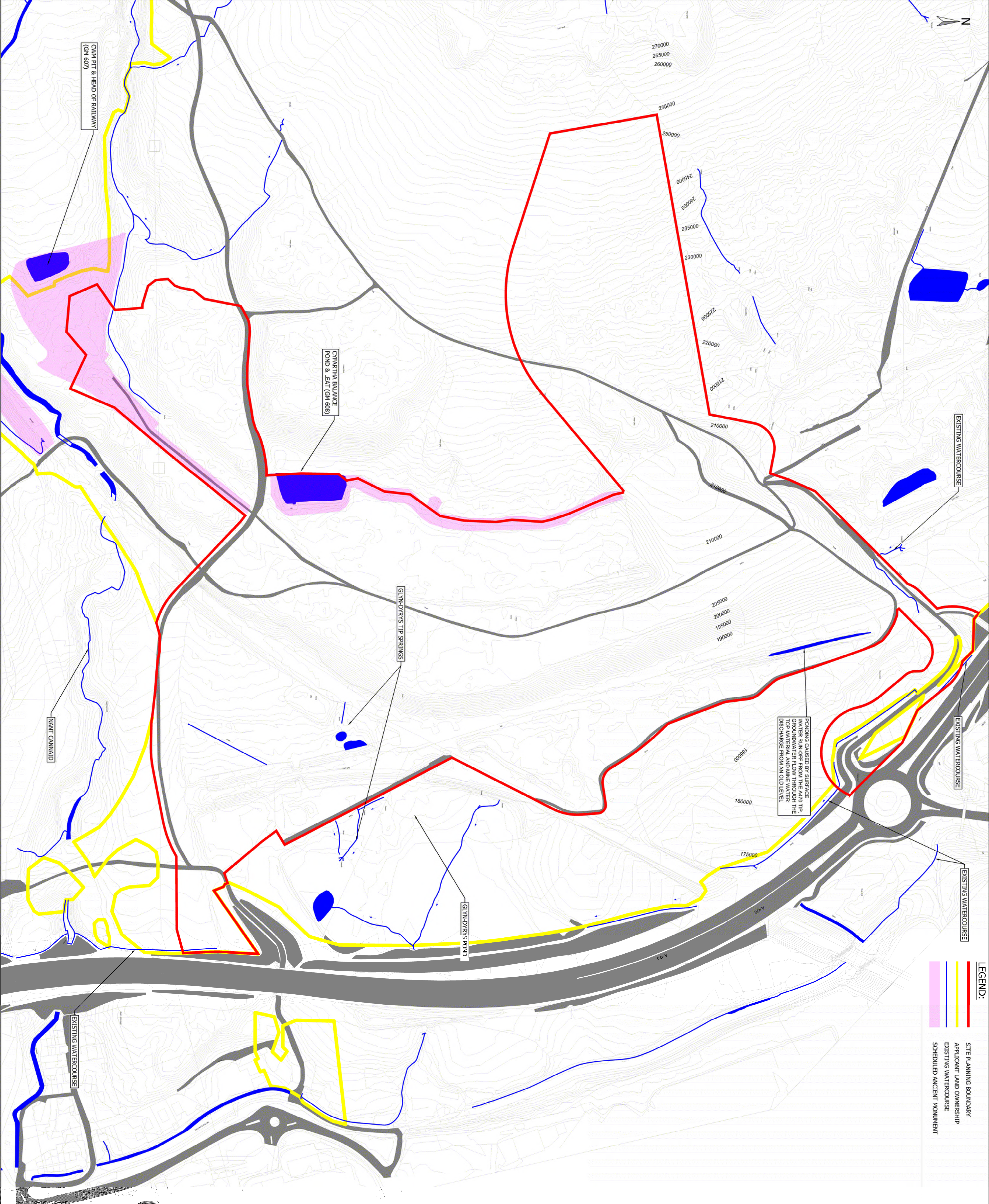
GENERAL NOTES

1. All drainage works and materials to comply with Civil Engineering Specification for Waste and Sewerage Schemes, 7th Edition
2. All details to be read in conjunction with BS 753-3, Drain & Sewer Systems Outside Buildings - 1997.
3. All SUDS to be in accordance with CIRIA C67/3 and constructed in accordance with CIRIA C7/68
4. uPVC non-pressure pipes are to be push fit rubber ring sealed joints 160mm nominal bore to BS4660:2000, BS EN 13598-1:2001 and 200mm, 250mm, 315mm and 400mm nominal bores to BS EN1401-1:1998. Concrete pipes are to be spigot and socket manufactured to BS 5911 - 1:2003 with gaskets. Pipes diameters 375mm and above to be Class H.
5. HDPE pipework to be Polytype Ridgdrain or similar approved.
6. Concrete to BS EN 1992
7. The minimum cover to sewer pipes must be 1.2m from existing road surface in roads and 0.75m from surface level in fields, where these cannot be achieved the contractor must provide adequate protection to the pipes in the form of a reinforced concrete protection slab on receipt of the engineer's instruction.
8. The sewer shall be cleaned and flushed with clean water while being rodded from manhole to manhole with a rubber tipped plunger the same size as the pipe diameter.
9. Testing of the sewer shall be carried out between manholes using the air test as specified in CESWI 7th edition.
10. The sewers shall be tested after joining and before placement of a reinforced concrete protection slab or backfilling is commenced other than such as may be necessary for structural stability whilst under test, once backfilling has been completed the sewers shall be tested again.
11. The Contractor shall produce a CCTV internal inspection of the completed sewer. This shall be carried out prior to final reinstatement and with the site supervisor / project manager in attendance.
12. The Contractor shall contact utility services and request on site identification and location of services prior to commencement of the works. Services indicated on this drawing are indicative only and should be confirmed on site by the contractor.
13. The Contractor is to check the layout, type and level of all services prior to commencing excavation works. Any errors shall be reported to the project manager immediately construction.
14. All new drainage trenches shall be excavated down to firm bearing strata, extra over depth of excavation shall be made up in compacted type 1 granular material to the underside of the pipe bedding
15. All new drainage laid to falls of less than 1:100 to be installed by laser alignment method to ensure required accuracy
16. Backfill, road base and sub base to be compacted in accordance with Appendix A3, compaction requirements, of the NIRAUC Specification.
17. The Contractor may be required to undertake the excavation of Test Holes prior to commencing the contract to ascertain the location of any services.

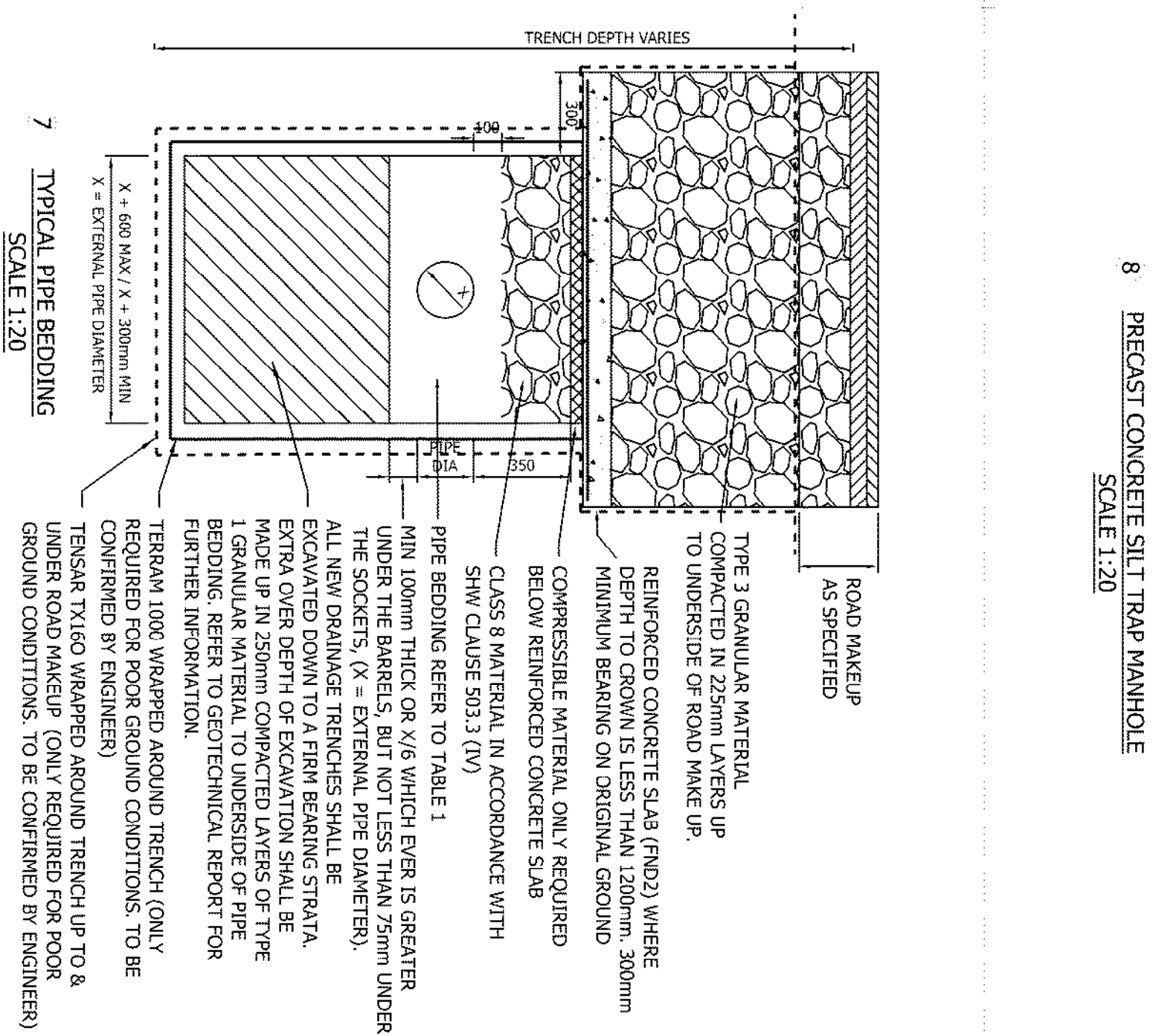
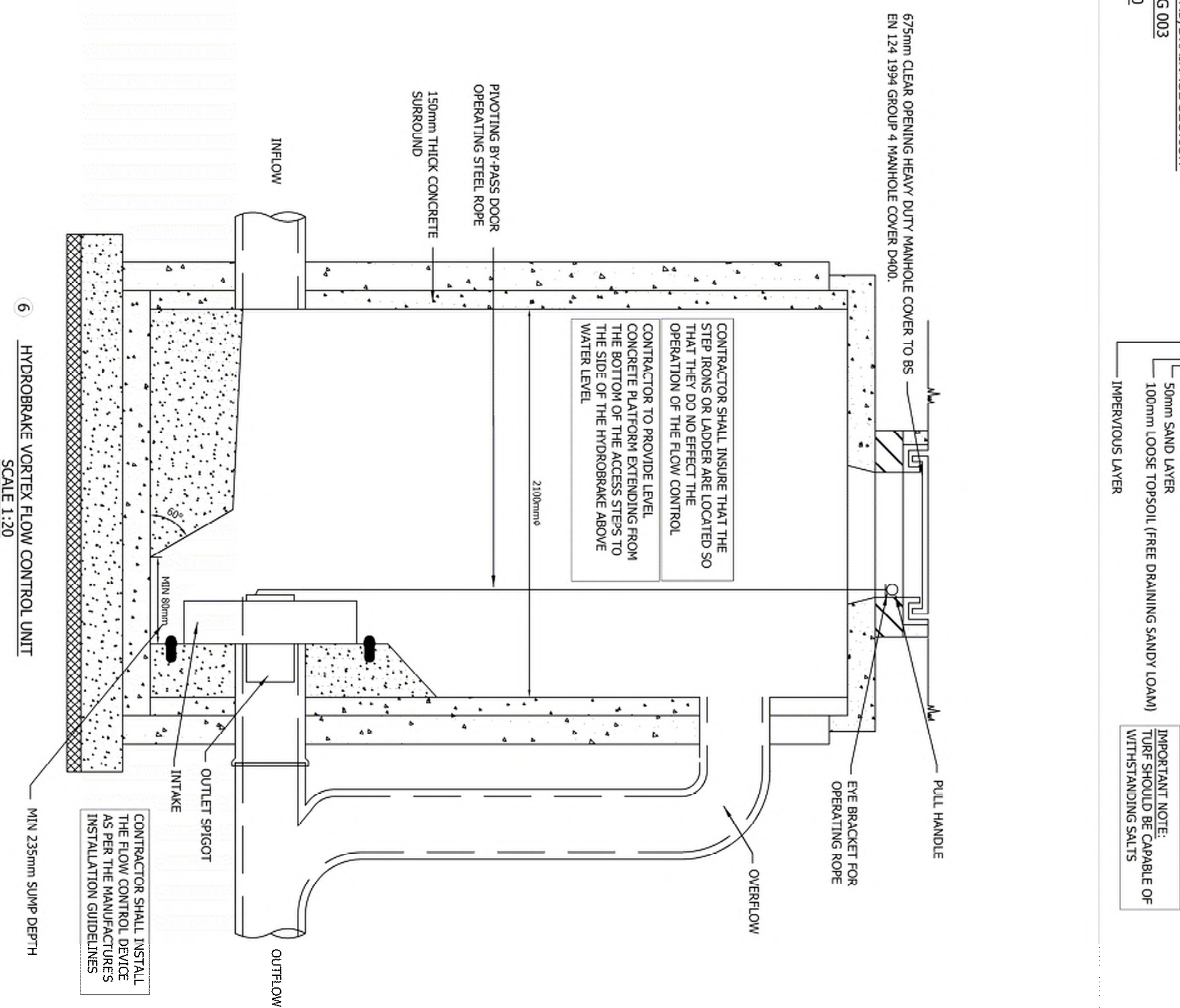
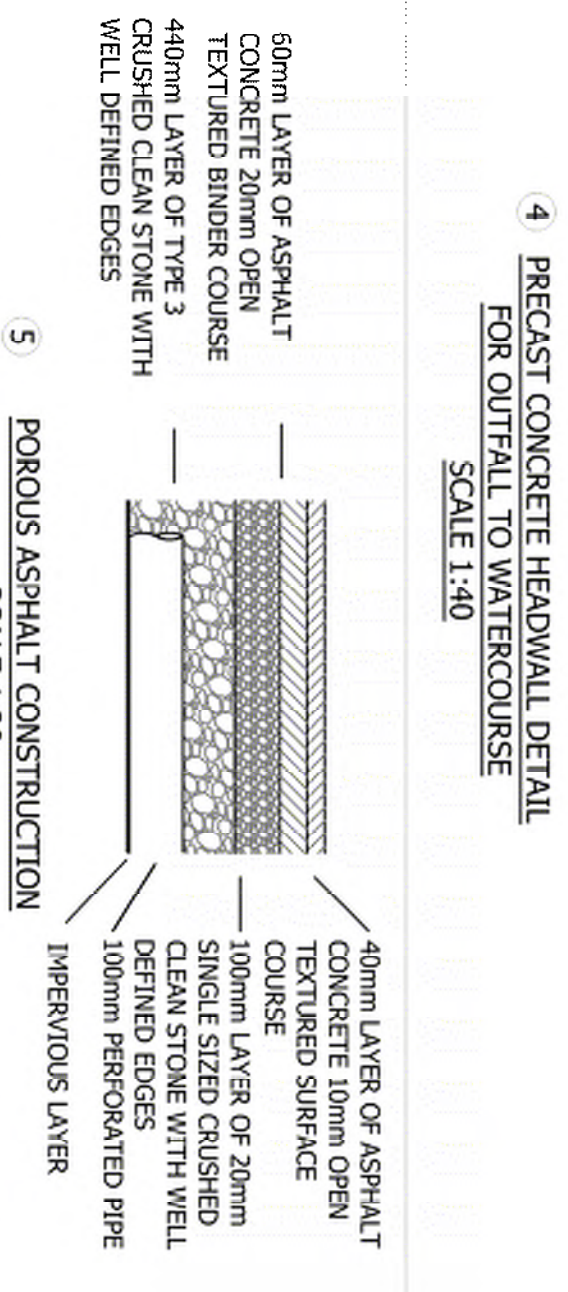
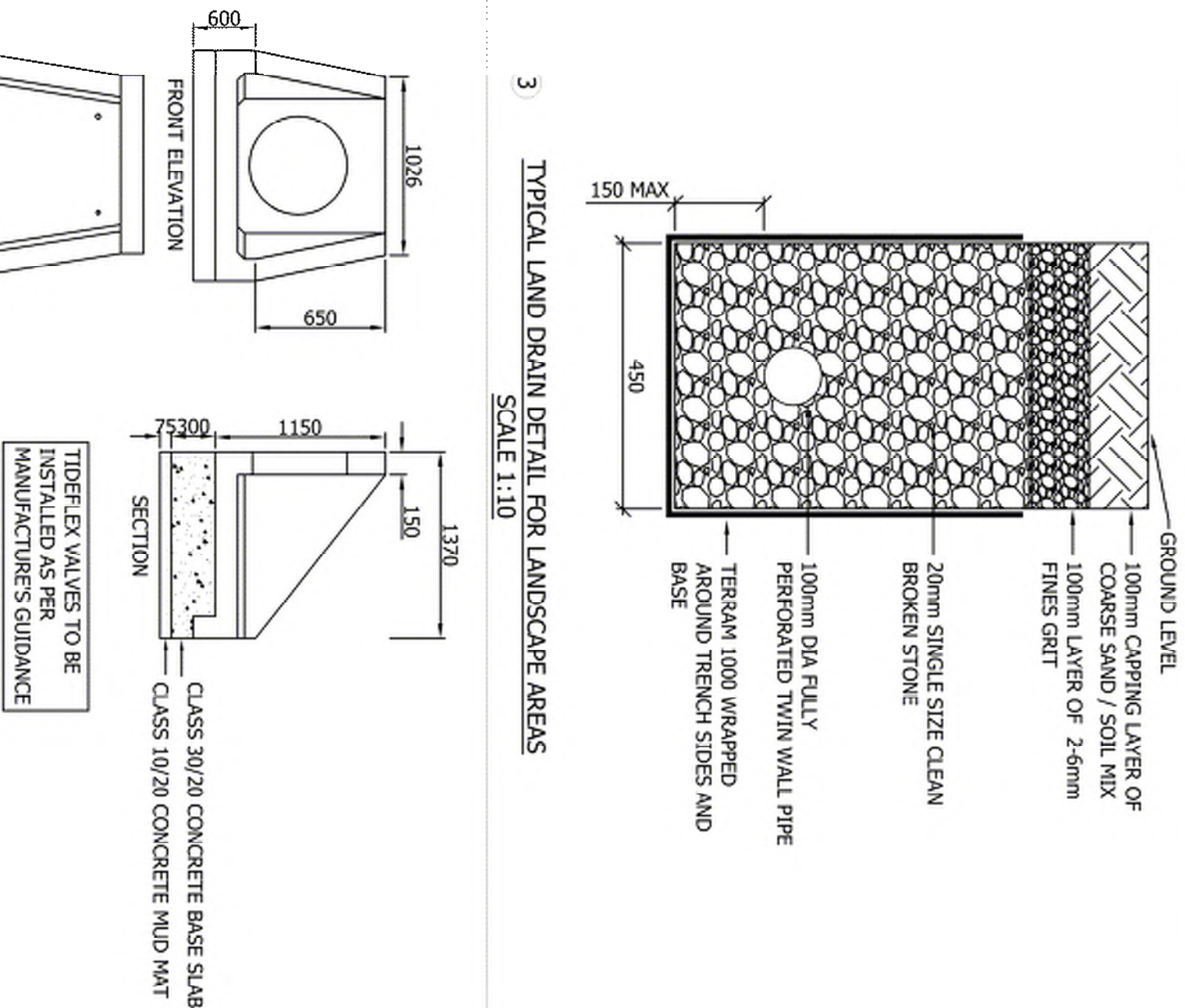
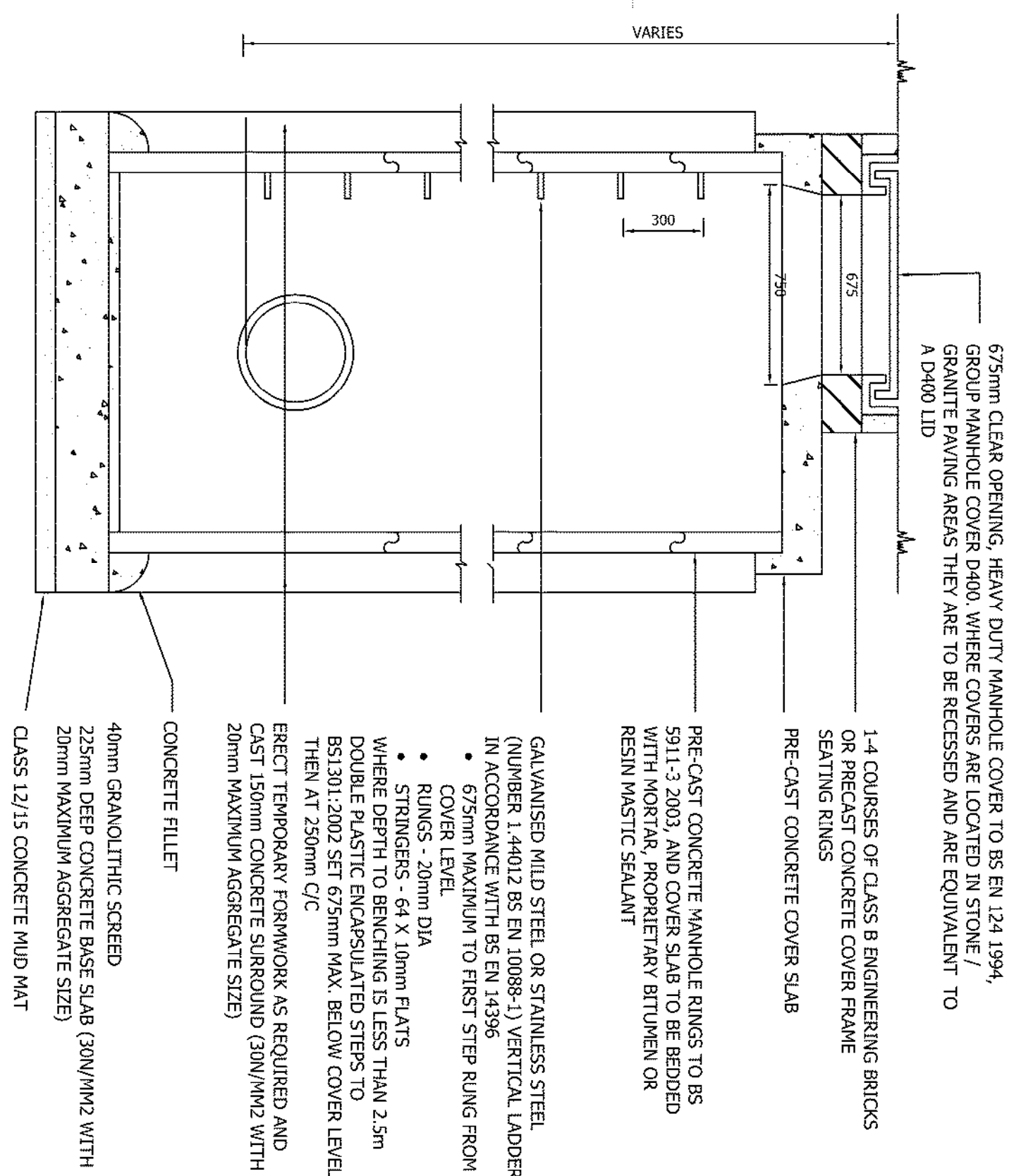
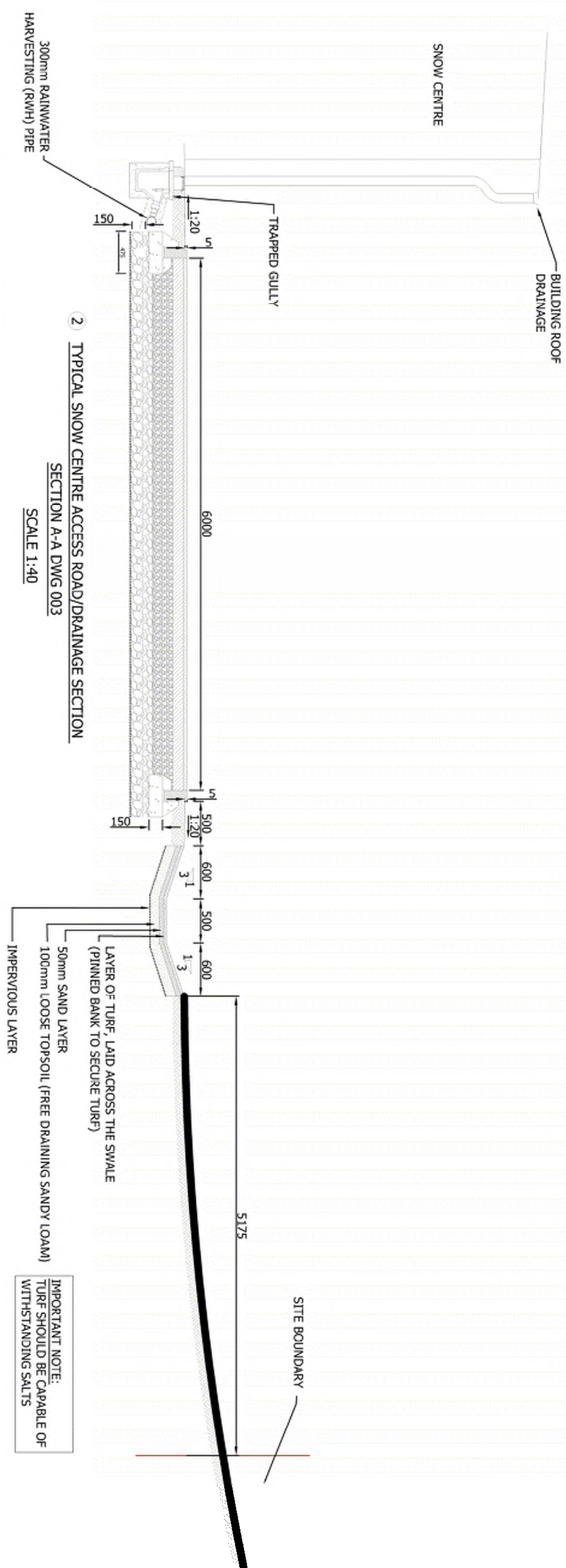
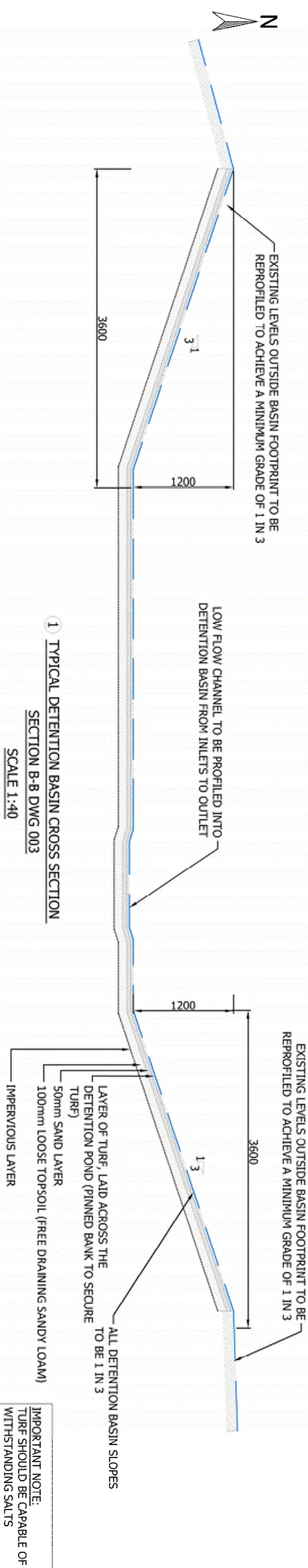
FOR PLANNING

LEGEND:

- SITE PLANNING BOUNDARY
- APPLICANT LAND OWNERSHIP
- EXISTING WATERCOURSE
- SCHEDULED ANCIENT MONUMENT



Tetra Tech before									
1. Localities: Business Park, Montgomery Road, Bletford, United Kingdom, BT36 9LP									
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www.tetratech.co.uk									
Client									
MARVEL LTD									
Project Name									
RHODYCAR WEST									
MERTHYR TYDFIL									
Sheet Title									
EXISTING SITE LAYOUT - WATER FEATURES									
TTC Project Number									
B027142									
Client Project Number									
TBC									
Revision									
P02									



GRAVULAR BEDDING MATERIALS (TABLE 1)		
PIPE Ø	BEDDING CLASS	IMPORTED GRAVULAR MATERIAL TO BS 882
100-300	S	10mm NOM SINGLE SIZE OR 14 TO 5mm GRADED
300-600	S	10, 14, 20mm NOM SINGLE SIZE OR 14 TO 5mm GRADED OR 20 to 5mm GRADED
>600	S	10, 14, 20mm NOM SINGLE SIZE OR 20 to 5mm GRADED

1. **TRENCH BEDDING NOTES:**
TRENCH WIDTH AT THE LEVEL OF THE TOP OF THE PIPE SHOULD GENERALLY BE AS NARROW AS SAFE WORKING CONDITIONS WOULD ALLOW, WITH A MINIMUM WIDTH OF 300mm PLUS THE EXTERNAL DIAMETER OF THE PIPE BARREL
2. **WHEN THE TRENCH WIDTH EXCEEDS FOUR TIMES THE OUTSIDE DIAMETER OF THE PIPE BARREL, IN THE CASE OF RIGIDS, OR FIFTEEN TIMES THE INSIDE DIAMETER OF THE PIPE BARREL IN THE CASE OF FLEXIBLE PIPES, THE GRANULAR MATERIAL BE SLOPED DOWN FROM THAT WIDTH TO THE TRENCH FORMATION**
3. **SIDFILL OF GRANULAR MATERIAL SHOULD BE PLACED INCHARGE ON EITHER SIDE OF THE PIPE. IN LAYERS NOT EXCEEDING 100mm, EACH LAYER BEING COMPACTED BY HAND TAMPING UNTIL THE PIPE HAS A MINIMUM OF 150mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTION DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE AND LEVEL.**
4. **BACKFILL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 300mm, EACH LAYER THEN BEING WELL COMPACTED. MECHANICAL COMPACTION EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm OF COMPACTED MATERIAL ABOVE THE CROWN OF THE PIPE.**

GENERAL NOTES

1. All drainage works and materials to comply with Civil Engineering Specification for Water and Sewerage Systems, 7th Edition
2. All ductile to be used in conjunction with BS 729, 3, Drain & Sewer Systems Outside Buildings - 1997.
3. All SUDS to be in accordance with CIRIA C763 and constructed in accordance with CIRIA C768
4. uPVC non-pressure pipes are to be plain rib rubber ring socketed joints 160mm diameter and minimum nominal length to BS EN414-1:1988. Concrete pipes are to be socket and socket manufactured to BS 5911-1:2000 with gaskets. Pipes diameters 375mm and above to be Class III.
5. HDPE Pipework to be Polypipe Ridgidran or similar approved.

7. The minimum cover to sewer pipes shall be 1.2m from existing solid surface in roads and 0.75m from surface level in fields, where these cannot be achieved the Contractor must provide adequate protection to the pipes in the form of a trench box or trench shields. The Contractor shall provide adequate reinforced concrete protection (also on receipt of the engineer's instruction).
8. The sewer shall be cleaned and flushed with clean water while being rodded from manhole to manhole with a rubber tipped plunger the same size as the pipe diameter.
9. Testing of the sewer shall be carried out between manholes using the air test as specified in CSEWI 7th edition.
10. The sewers shall be tested after joining and before placement of a reinforced concrete protection slab or backfilling is commenced where this is required. The Contractor shall ensure that the test is carried out before backfilling has been completed the sewers shall be tested again.
11. The Contractor shall produce a CCTV internal inspection of the completed sewer. This shall be carried out prior to final reinstatement and with the site supervisor / project manager in attendance.
12. The Contractor shall protect utility services and request on site identification and location of services prior to commencement of the works, services indicated on this drawing are indicative only and should be confirmed on site by the contractor.
13. The Contractor is to check the layout, type and level of all services prior to commencing excavation works. Any errors shall be reported to the project manager immediately construction.
14. All new drainage trenches shall be excavated down to firm bearing strata, extra over depth or excavation shall be made up in compacted type 1 granular material to the underside of the pipe bedding
15. All new drainage laid to falls of less than 1:100 to be installed by laser adjusted method to ensure required accuracy
16. Backfill, joint manholes and sub bases to be completed in accordance with Appendix A3, comparison repair elements, of the NIBAC Specification.
17. The Contractor may be required to undertake the excavation of Test Holes prior to commencing the contract to ascertain the location of any services.

FOR PLANNING

P02	REVISED AS REQUESTED				S4	PIC
P03	PRIEMARK FIRST ISSUE	01-03-22			S4	PIC
P09		24-09-21	DONE		S4	PIC
Key	Description	Date	Status	Item	Cust.	App.

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MARVEL LTD

Project Name
**RHYDYCAR WEST
MERTHYR TYDFIL**

TYPICAL DRAINAGE DETAILS

TE Project Number	Drawn By	Date	Checked By	Date	Approved By	Date	Score at All	Suitability
B02742	SM	Sept 21	PJC	Sept 21	PJC	Sept 21	AS SHOWN	50
Client Project Number	Organizer	Volume/Sheet	Level/Condition	Type/Code	Rate	Number	Revision	
TBC	- TTE	- 00	- ZZ	- DR	- S	- 004	P02	