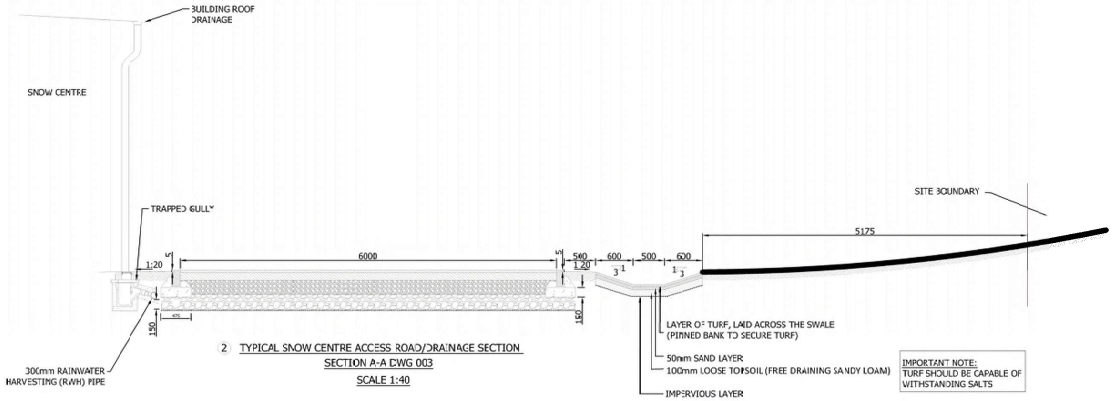
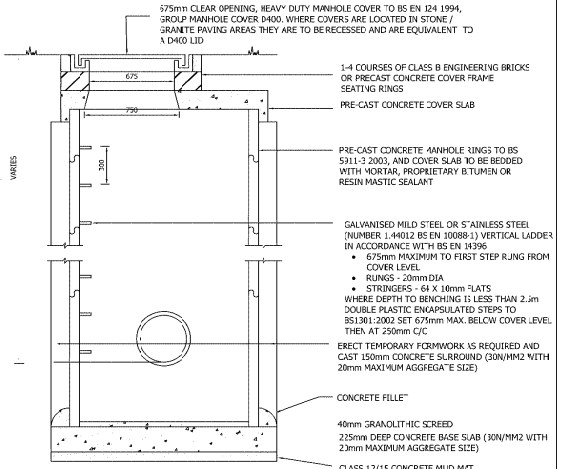


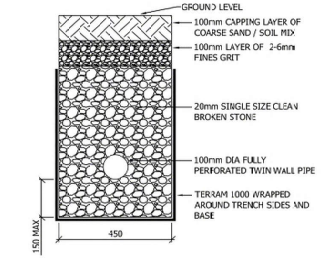
1 TYPICAL DETENTION BASIN CROSS SECTION
SECTION B-B DWG 003
SCALE 1:40



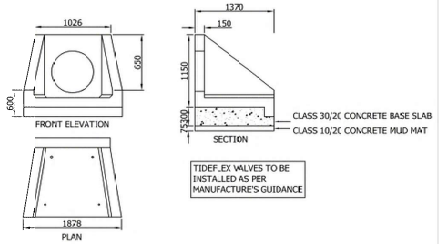
2 TYPICAL SNOW CENTRE ACCESS ROAD/DRAINAGE SECTION
SECTION A-A DWG 003
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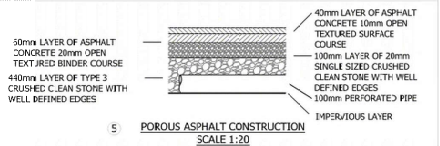
8 PRECAST CONCRETE SILT TRAP MANHOLE
SCALE 1:20



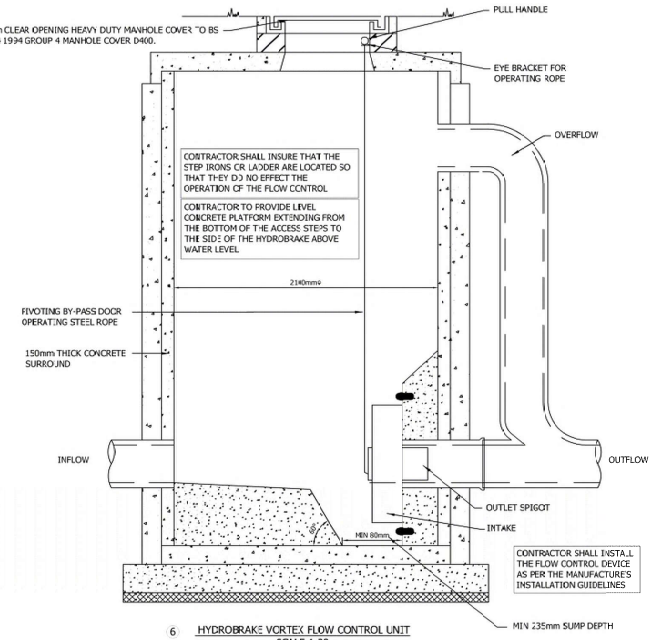
3 TYPICAL LAND DRAIN DETAIL FOR LANDSCAPE AREAS
SCALE 1:10



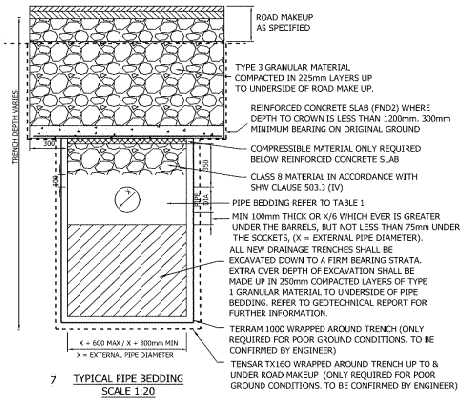
4 PRECAST CONCRETE HEADWALL DETAIL FOR OUTFALL TO WATERCOURSE
SCALE 1:40



5 POROUS ASPHALT CONSTRUCTION
SCALE 1:20



6 HYDROBRAKE VORTEX FLOW CONTROL UNIT
SCALE 1:20



7 TYPICAL PIPE BEDDING
SCALE 1:20

GRANULAR BEDDING MATERIALS (TABLE 1)

PIPE ø	BEDDING CLASS	IMPORTED GRANULAR 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 or 20 to 5mm GRADED

PIPE BEDDING NOTES

1. 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 RIGID PIPES, OR 6 TIMES THE OUTSIDE DIAMETER OF THE PIPE BARREL IN THE CASE OF FLEXIBLE PIPES, THE GRANULAR MATERIAL MAY BE SLOPED DOWN FROM THAT WIDTH TO THE TRENCH FORMATION
3. SIDEFILL OF GRANULAR MATERIAL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 10mm, 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 Schemes, 7th Edition
2. All details to be read in conjunction with BS 752-3, Drain & Sewer Systems Outside Buildings - 1997.
3. All SUDS to be in accordance with CIRIA C753 and constructed in accordance with CIRIA C768
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 Polypipe Ridgidrain 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 1.75m 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 instructions.
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 jointing 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 contruction.
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 NRAUC 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	01.03.22	SM	PJC	PJC
P01	PRELIMINARY FIRST ISSUE	24.09.21	SM	PJC	PJC
Rev	Description	Date	Drn	Chkd	App

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Issuing Office
Tetra Tech Belfast
1 Lockside Business Park, Montgomery Road, Belfast, United Kingdom, BT6 9UP
Tel: +44 (0)28 9070 6300
www.tetratecheurope.com

TETRA TECH

Client
MARVEL LTD

Project Name
RHYDYCAR WEST
MERTHYR TYDFIL

Sheet Title
TYPICAL DRAINAGE DETAILS

TTE Project Number	Drawn By	Date	Checked By	Date	approved By	Date	Scale @ A1	Suitability
B027142	SM	Sept '21	PJC	Sept '21	PJC	Sept '21	AS SHOWN	S0

Client Project Number	Originator	Volume/System	Level/Location	Type/Code	Role	Number	Revision
TBC	- TTE	- 00	- ZZ	- DR	- S	- 004	P02

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