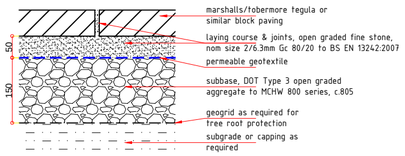
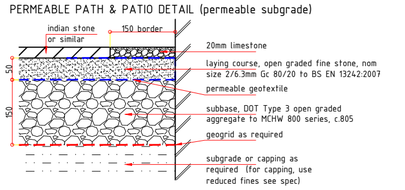
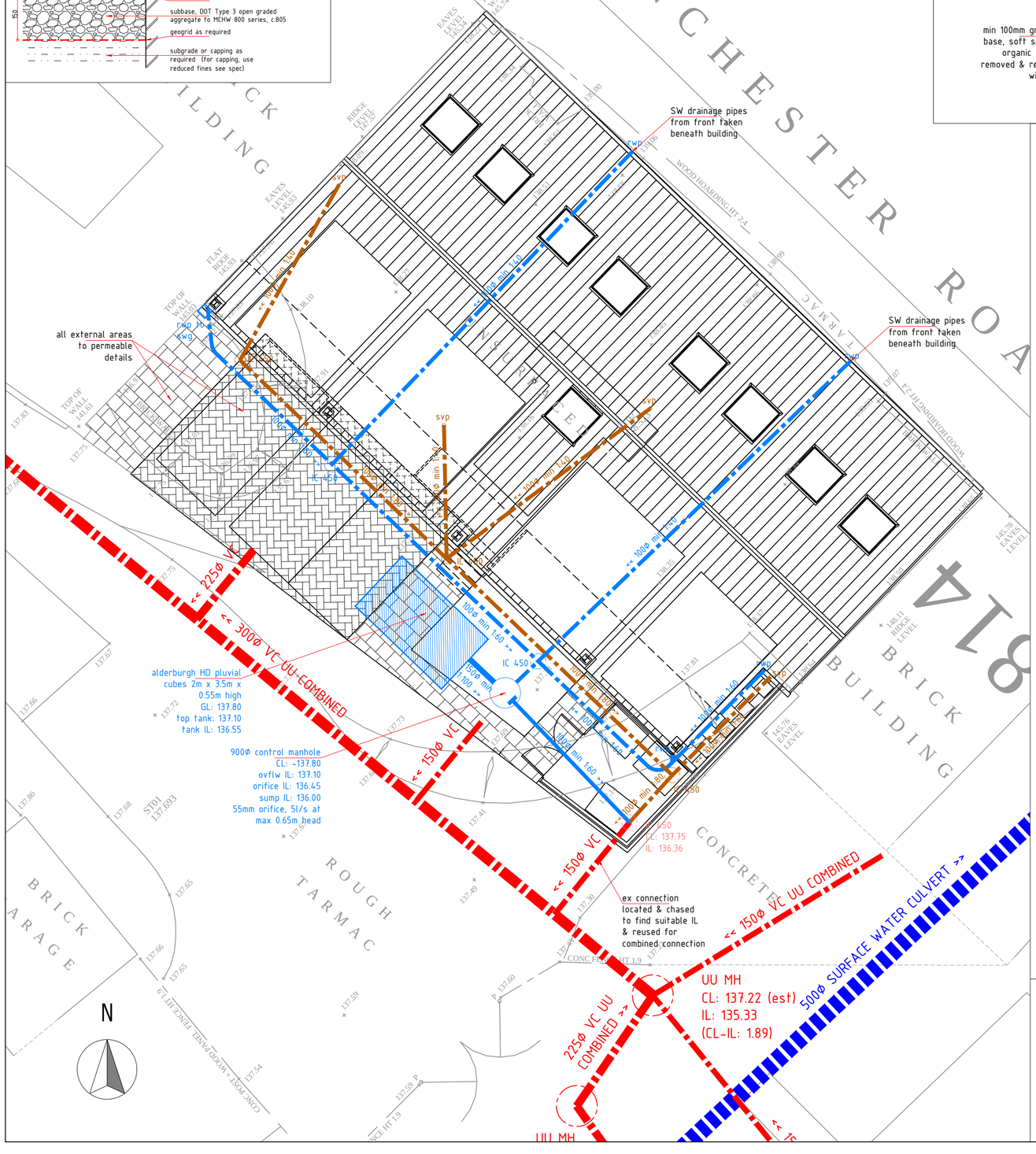
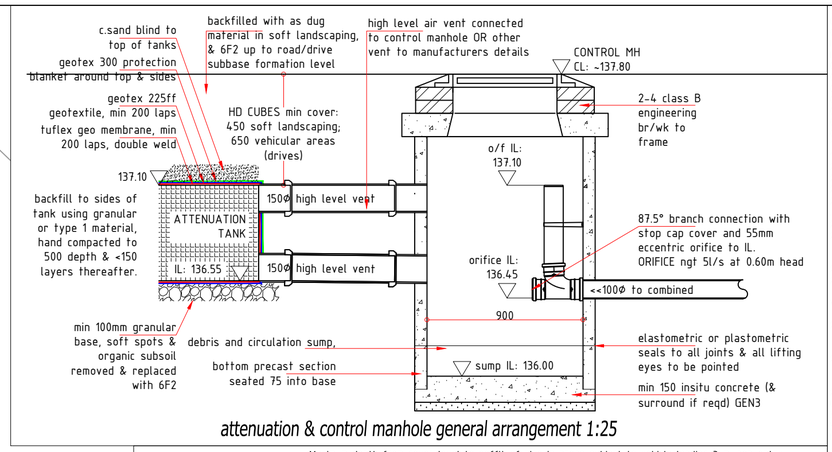
PERMEABLE BLOCK PAVED DRIVEWAY DETAIL



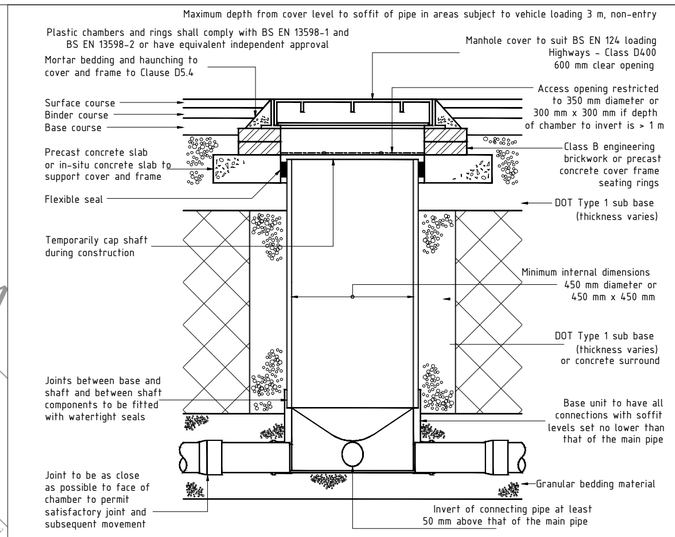
PERMEABLE PATH & PATIO DETAIL (permeable subgrade)



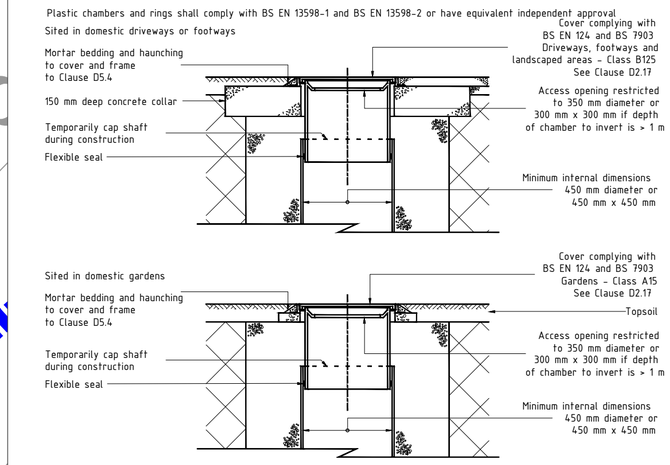




attenuation & control manhole general arrangement 1:25



ALTERNATIVE TOP DETAILS FOR LIGHT VEHICLE LOADING AND LANDSCAPED AREAS - TYPE 3



typical inspection chamber details 1:25

DRAINAGE KEY

- EXISTING PRIVATE COMBINED SEWER
- EXISTING SW CULVERT
- PROPOSED PRIVATE FW
- PROPOSED PRIVATE COMBINED SEWER
- PROPOSED PRIVATE SW SEWER

GENERAL NOTES

0.0 THIS DRAWING IS COPYRIGHT & IS SENT TO YOU IN CONFIDENCE IT MUST NOT BE COPIED, USED OR DISCLOSED, IN WHOLE OR IN PART, TO THIRD PARTIES WITHOUT WRITTEN PERMISSION. IT REMAINS THE PROPERTY OF TJBA AND MUST BE RETURNED ON REQUEST.

0.1 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTUAL DOCUMENTS.
0.2 All dims in mm unless o/w stated.
0.3 All levels to SITE DATUM.
0.4 Refer to architects details for SBM.
0.5 Contractor to confirm SOP/SOL's prior to ordering material/ construction.
0.6 Do not scale, the contractor must verify all dims prior to commencing shop drawings or work on site.
0.7 All work to be carried out in accordance with CDM 2015.
1.0 HIGHWAYS/ACCESS ROADS & PRIVATE DRIVES.
1.1 N/A.
2.0 DRAINAGE.
2.1 To be read in conjunction with T J Booth Associates drainage calculations.
2.2 Manhole cover levels indicative only, to be adjusted to suit final finish site levels.
2.3 Sewers/manholes to be constructed in accordance with the water authorities sewers for adoption (edition as applicable), B. Regs. Approved Doc. H, and BS EN 752-4.
2.4 Class S granular bed and surround to all new sewers.
2.5 Sewers must have min 150th concrete surround if:
- -adoptable assets with less than 1.2m of cover under highways or driveways;
- -private assets with less than 900mm of cover under private riveways.

2.6 All conc including pipes and manholes to be sulphate resisting unless otherwise agreed in writing by eng.
2.7 Foul water must be to the following gradients in accordance with b.regs and Sewers For Adoption:
- -100ø at gradients not less than 1:80 where at least 1 WC is connected and not less than 1:40 where no WC is connected.
- -150ø foul gradients to be not less than 1:150 with at least 5 WCs connected.

2.8 Surface water must be to the following gradients in accordance with b.regs:
- -100ø at gradients not less than 1:100.
- -150ø foul gradients to be not less than 1:150.

2.8 Adoptable surface water must be to the following gradients in accordance with Sewers for Adoption:
- -100ø at gradients not less than 1:60.
- -150ø foul gradients to be not less than 1:100.

2.9 Work on United Utilities sewer network or to be part of S104/S106 to be in strict accordance with UNITED UTILITIES DEVELOPER CONSTRUCTION & STANDARD CONNECTION DETAILS.
3.0 MANHOLES
3.1 Manhole diameters to be in accordance with SFA clause 2.9.3, and according to largest manhole pipe diameter:

Pipe dia	MH dia
<375	1200;
375-700	1500;
750-900	1800.

3.2 Rocker pipes (clause 5.6.6.2) to be the following lengths:

150-600ø:	0.6m;
>600-700ø:	1.0m;
>750ø:	1.25m.

3.2 Inspection chambers/manholes to have min 150granular surround in soft landscaping areas and not less than 150 conc surround to driveways/car parks.
3.3 Manhole covers and frames shall comply with the relevant provisions of bs. en 124 and shall be of non-rocking design which does not rely on the use of cushion inserts.
3.4 Cover sizes to be in strict accordance with adoptive undertakers standard requirements.
3.5 Cover strength (clause 5.7.1.1) comprising minimum strength for location as follows:

Roads/Highways	D400 Vehicle Impact;
Car Parks	C250 Light Vehicle loading;
Footway/Driveway	B125 Occasional vehicle loading;
Gardens	A15 Pedestrian & cyclist ONLY.

3.6 All manhole covers shall be the non-venting type (unless indicated otherwise) and shall have closed keyways.
3.7 Manhole frames (clause 5.6.7) to be set to level, bedded and haunched externally over the base and sides of the frame in mortar, in accordance with the manufacturers instructions. The frame shall be seated on not less than 2 courses of class B engineering brick, on precast concrete masonry units or on precast concrete cover frame seating rings to regulate the distance between the top of the cover and the top rung to no greater than 675mm. A mortar fillet shall be provided where the corners to an opening in a slab are chamfered and the brickwork is not flush with the edges of the opening.

NPPF HIERARCHY OF SURFACE WATER DISCHARGE OPTIONS		
DISCHARGE TYPE	METHOD ADOPTED	REASONING
1. into the ground (infiltration)	NO	All external areas of Site are within 5m of the property foundations and soakaways would be in contravention of building regulations.
2. to a surface water body	NO	No access, local culvert is within 3rd party land.
3. to a SW sewer, highway drain, or another drainage system	NO	None noted locally.
4. to a combined sewer	NO	Combined sewers available on site for connection.

IMPLEMENTATION SCHEDULE FOR DRAINAGE & ATTENUATION STORAGE TANKS		
DRAINAGE SYSTEM	IMPLEMENTATION/ COMPLETION	REASON
General SITE drainage pipes & manholes installed but gullies either covered or connections capped to isolate from construction SW flows.	Construction phase	To ensure connections are available for plot drainage when finished & to ensure construction debris does not enter the system.
General PLOT drainage pipes, manholes & gullies to completed parts of the site only & not subject to further construction flows & debris.	Pre-habitation Phase	To ensure adequate drainage of finished parts of the Site.
Site attenuation tank, control chamber & Hydrobrake.	Post Construction Phase ONLY	To ensure protection of the attenuation tank & hydrobrake, and to ensure they are not subject to SW flow overloaded with silt/debris which could damage or reduce long term storage capacity.

CIRIA C753 TABLE 21.3 OPERATION & MAINTENANCE REQUIREMENTS FOR ATTENUATION STORAGE TANKS		
MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment from pre-treatment structures and/or internal forebays	Annually, or as required
Remedial actions	Repair/rehabilitate inlets, outlet, overflows and vents	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

PLANNING ONLY NOT FOR CONSTRUCTIOTN

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CONSULTING CIVIL & GEOTECHNICAL ENGINEERS
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Rochdale
Lancashire
OL16 1DH
Tel:01706 868288

AMENDMENTS/ ISSUES

REVISION	REASON/ CHANGE	DATE	BY
0	original for planning	jul 2023	ds

Jamil / 806-810 Manchester Road, Castleton

DRAINAGE PLAN & DETAILS

FILE NAME: dwg-tjba-jamil-806-810 manchester rd-130623

SCALE: 1 : 100 & as indicated @ A2