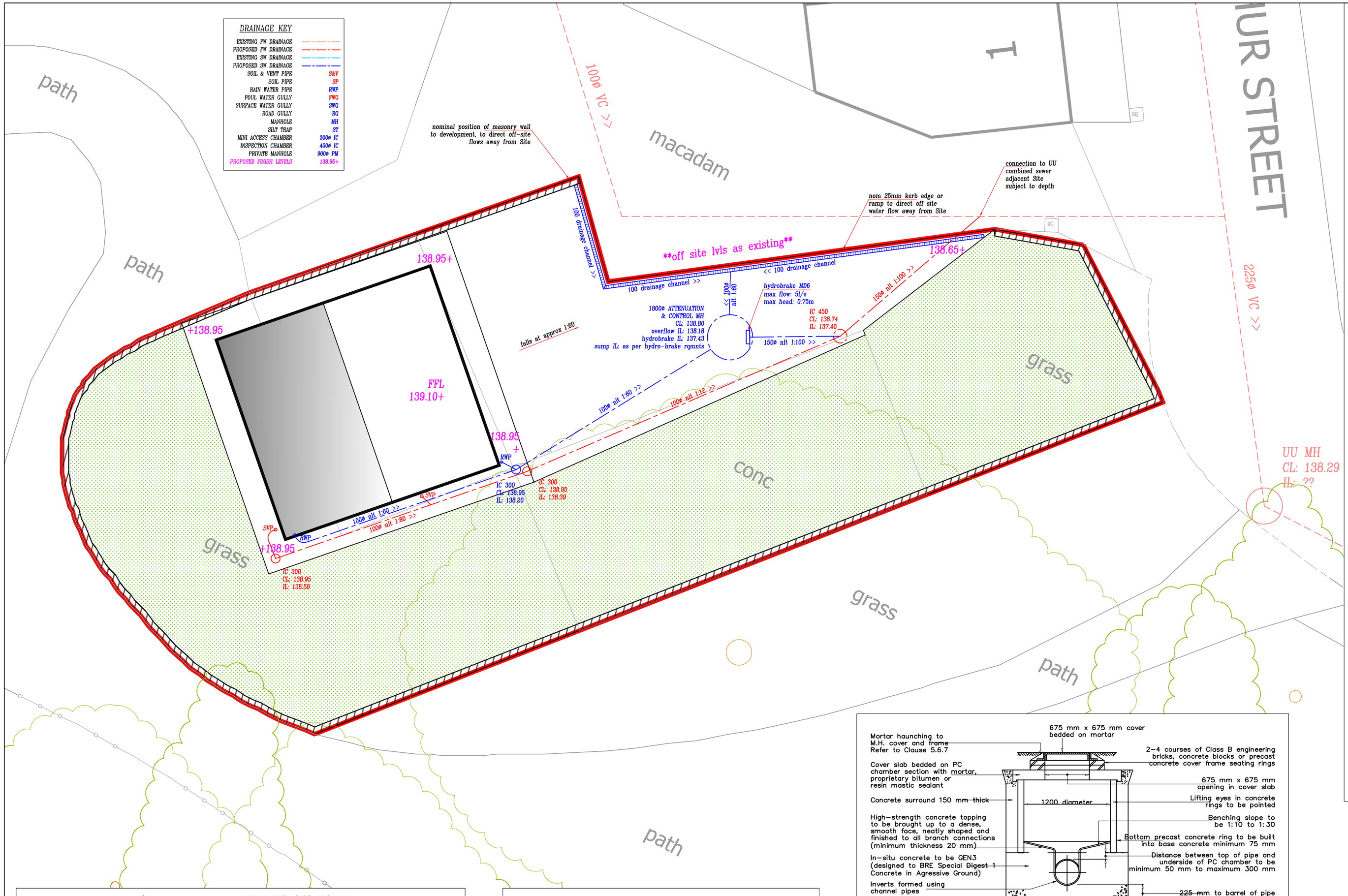
DRAINAGE KEY

EXISTING FW DRAINAGE	
PROPOSED FW DRAINAGE	
EXISTING SW DRAINAGE	
PROPOSED SW DRAINAGE	
SOIL & VENT PIPE	S&V
SOIL PIPE	SP
RAIN WATER PIPE	RWP
FOUL WATER GULLY	FWG
SURFACE WATER GULLY	SWG
ROAD GULLY	RG
MANHOLE	MH
SILT TRAP	ST
MINI ACCESS CHAMBER	300ø IC
INSPECTION CHAMBER	450ø IC
PRIVATE MANHOLE	900ø PM
PROPOSED FINISH LEVELS	138.95+



GENERAL NOTES

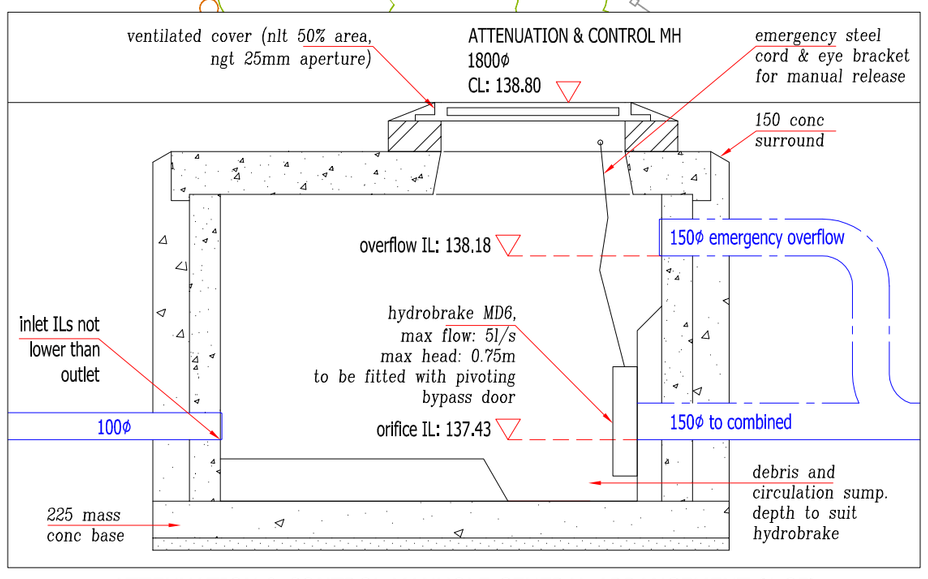
0.0 THIS DRAWING IS COPYRIGHT & IS SENT TO YOU IN CONFIDENCE IT MUST NOT BE COPIED, USED OR DISCLOSED, IN WHOLE OR IN PART, TO THIRD PARTIES WITHOUT WRITTEN PERMISSION. IT REMAINS THE PROPERTY OF TJBA AND MUST BE RETURNED ON REQUEST.
0.1 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTUAL DOCUMENTS.
0.2 All dims in mm unless o/w stated.
0.3 All levels in m aOD unless o/w stated.
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
1.1 N/A.
2.0 DRAINAGE.
2.1 Manhole cover levels indicative only, to be adjusted to suit final finish site levels.
2.2 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.
2.3 Class b granular bed and surround to all new sewers.
2.4 Any sewers or drains with less than 1.2m of cover under adoptable highways (either during or after construction); Or with less than 900mm of cover under private access/driveways; to be protected with min 150mm thick. conc surround unless otherwise specified.
2.5 All conc including pipes and manholes to be sulphate resisting unless otherwise agreed in writing by eng.
3.0 FOUL WATER DRAINAGE
3.1 Foul water system laid as indicated and in line with the following: 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 drain gradients to be not less than 1:150 with at least 5 WCs connected. Guidance in line with current b regs and SFA 6.
3.2 Foul system to combine with surface water system at NE end of Site and ultimately connect in to the existing UU sewer network via existing combined manhole to SW side of Chestnut Way.
4.0 SURFACE WATER DRAINAGE
4.1 To be read in conjunction with T J Booth Associates drainage calculations ref: calc-tjba-iqbal-1 arthur st-source cont attenuation design-rev1.
4.2 The topography of the Site is relatively level and although it comprises hard standing, much of the area appears to run off to soft landscaping. Due to this and the size of the Site being relatively small, a minimum proposed flow rate of 5l/s has been adopted.
4.3 SW drainage to attenuate up to 100yr + 30%.
4.4 Attenuation chamber to 1800ø oversized manhole and Hydro-brake flow control.
4.5 Hydro-brake flow control designed as MD6 unit capable of 5l/s max flow at not greater than 0.75m head.
4.6 Hydrobrake MD6 must have pivoting bypass door and steel rope control fitted for emergency release.
5.0 ATTENUATION MAINTENANCE
5.1 Maintenance to be undertaken by as follows & a copy of this plan should be included in the deed pack.
5.2 Construction Stage: Attenuation tank and manhole to be isolated from flows during the construction phase of the development. Attenuation should only be brought in to use after the drainage system has been flushed.
5.3 Habitation Phase: Sediment to be removed from pre treatment sump in control manhole annually.
All attenuation inlets, outlets, and vents to be checked annually.
Hydro-brake flow control unit & pivoting bypass door/steel rope control to be checked annually to ensure safe and continued working order in both normal and extreme rainfall events.
6.0 MANHOLES
6.1 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.

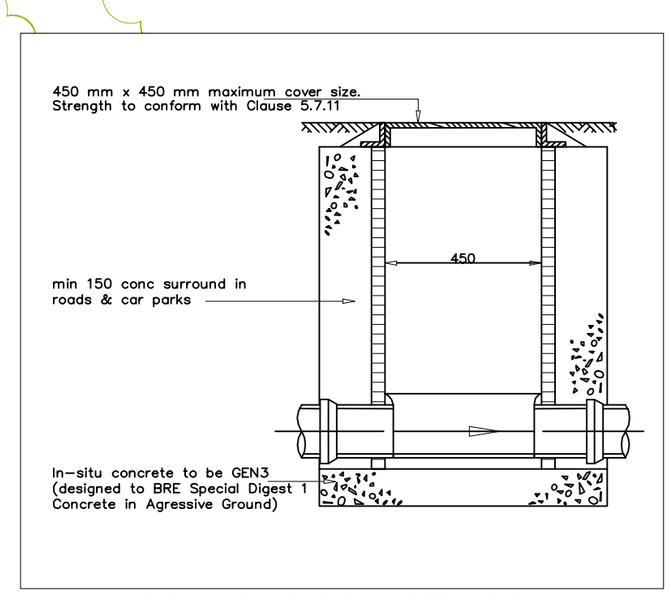
6.2 Rocker pipes (clause 5.6.6.2) to be the following lengths:
150-600ø:0.6m;
>600-700ø:1.0m;
>750ø:1.25m.
6.3 Inspection chambers/manholes to have min 150granular surround in soft landscaping areas and not less than 150 conc surround to driveways/car parks.
6.4 Manhole covers and frames shall comply 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.
6.5 Cover sizes and access in accord with SFA Table 2.3 & to be 600x600 in United Utilities & Yorkshire Water areas.
6.6 Cover strength (clause 5.7.1.1) comprising minimum strength for location as follows:

Road	D400	Vehicle Impact;
Footway/Driveway	B125	Occasional vehicle loading;
Gardens	A15	Pedestrian & cyclist ONLY.

6.7 All manhole covers shall be the non-venting type (unless indicated otherwise) and shall have closed keyways.
6.8 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.
7.0 GENERAL FINISHES
7.1 As per Architect details.

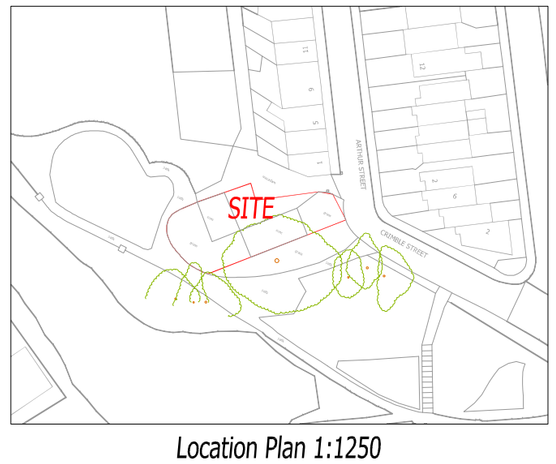


ATTENUATION & CONTROL MANHOLE GENERAL ARRANGEMENT (1:25)



300ø & 450ø IC TYPICAL DETAIL (NTS)

ATTENUATION & CONTROL MH TYPICAL CONSTRUCTION DETAIL (NTS)



Location Plan 1:1250

PLANNING

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AMENDMENTS/ ISSUES			
p1	updated after topo, LR & UU plans obtained	nov 2018	ds
p0	original	oct 2018	ds
REVISION	REASON/ CHANGE	DATE	BY

Iqbal / 1 Arthur Street, Rochdale

PROPOSED DRAINAGE PLAN & DETAILS

FILE NAME: dwg-tjba-iqbal-1 arthur st-051018.dwg

SCALE: 1 : 100 & as indicated @ A2