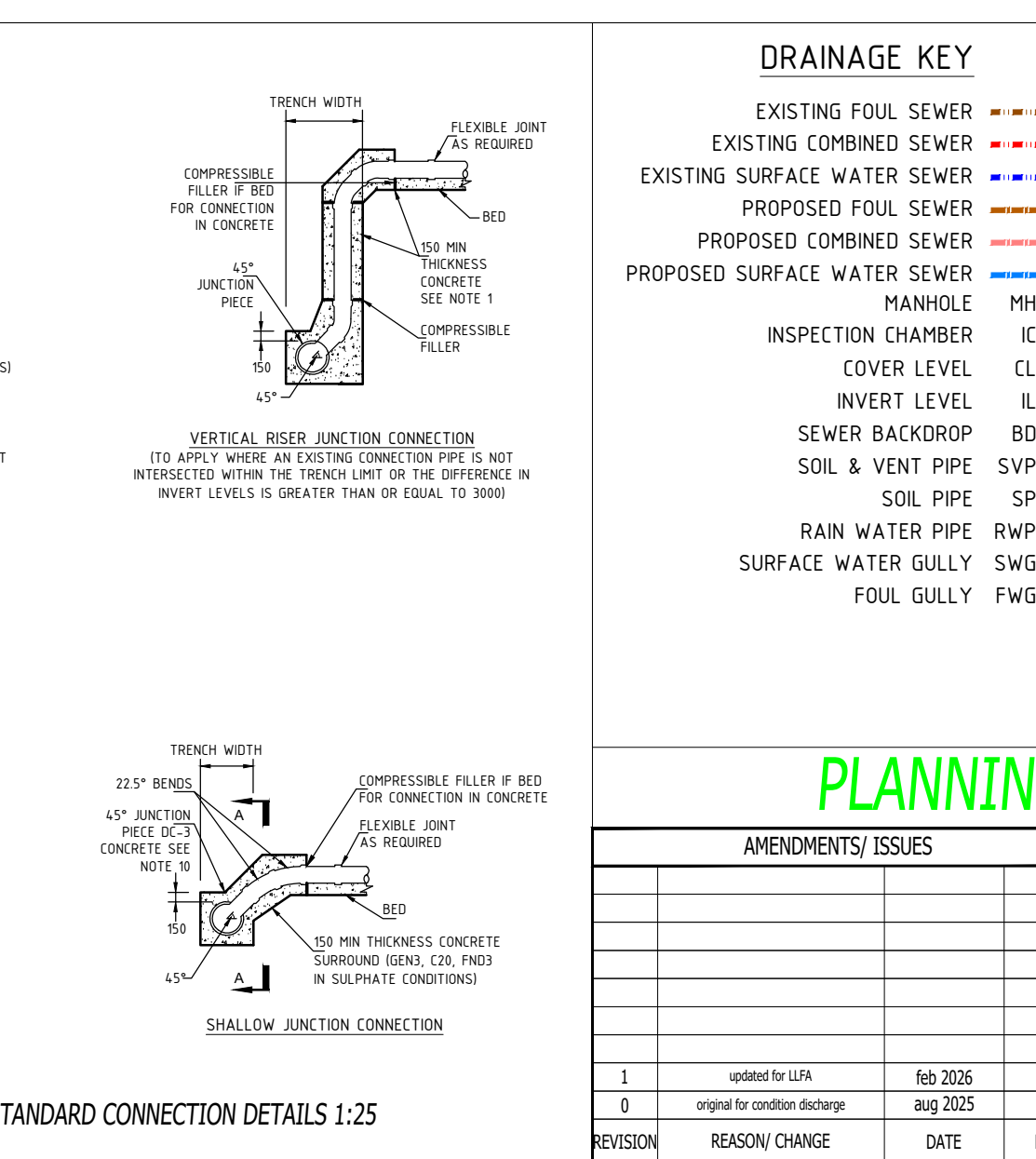




GENERAL NOTES

- 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 T&A AND MUST BE RETURNED ON REQUEST.
- 0.1 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTUAL DOCUMENTS.
- 0.2 All class in mm unless o/w stated.
- 0.3 All levels to SITE DATUM.
- 0.4 Refer to architects details for all SPM.
- 0.5 Contractor to confirm SOP/SOI's prior to ordering material / construction.
- 0.6 Do not scale, the contractor must verify all dimensions prior to commencing shop drawings or work on site.
- 0.7 All work to be carried out in accordance with CDM 2015.
- 10 HIGHWAYS/ACCESS ROADS & PRIVATE DRIVES.
11 as per architects details.
- 20 DRAINAGE
21 To be read in conjunction with T J Booth Associates drainage calculations.
22 All sewer gradients indicative only to be adjusted to suit final finish site levels.
- 23 Sewers/manholes to be constructed in accordance with the water authorities sewers for adoption (edition as applicable). Brgs. Approved Doc. H, and BS EN 752-4.
- 24 Class 5 granular bed and surround to all new sewers.
- 25 Sewers must have min 150kN concrete suround if:
- adoptable assets with less than 12m of cover under highways or driveways;
- private assets with less than 100mm of cover under private thoroughways.
- 26 All cast including pipes and manholes to be sulphate resisting unless otherwise agreed in writing by eng.
- 27 Foul water must be to the following gradients in accordance with bregs and Sewers for Adoption.
-100g at gradients not less than 180 where at least 1 WC is connected and not less than 140 where no WC is connected.
-150g foul gradients to be not less than 150 with at least 5 WCs connected.
- 28 Surface water must be to the following gradients in accordance with bregs:
-100g at gradients not less than 150.
-150g foul gradients to be not less than 150.
- 28.2 Surface water must be to the following gradients in accordance with Sewers for Adoption.
-100g at gradients not less than 160.
-150g foul gradients to be not less than 100.
- 29 No construction work to be undertaken on the United Utilities network unless approved granted under either S106 or S104 as appropriate.
- 30 MANHOLES
31 Manhole diameters must be in accordance with SFA clause 29.3, and according to largest manhole pipe diameter:
Pipe dia HW dia
 375-1000 1200
 375-750 1500
 750-900 1600
52 Rocker pipes (clause 5.6.2) to be the following lengths:
-150-600 0.6m,
-600-700g 1.0m,
-750g- 1.25m
- 32 Inspection chambers/manholes to have min 150granular surround in soft landscaping areas and not less than 50 conc surround to driveway/car parks.
- 33 Manhole covers and frames shall comply with the relevant provisions of bs. en 124 and shall be of non-sinking design which does not rely on the use of cushion inserts.
- 34 Cover sizes to be in strict accordance with adoptive undertakers standard requirements.
- 35 Cover strength (clause 5.7.11) comprising minimum strength for location as follows:
Roads/highways D400 Vehicle Impact;
Car Parks C250 Light Vehicle loading;
Footway/Driveway B125 Occasional vehicle loading;
AS Pedestrian & cyclist ONLY.
- 36 All manhole covers shall be the non-sinking type (unless indicated otherwise) and shall have closed keyways.
- 37 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 sealing rings to regulate the distance between the top of the cover and the top rung to be no greater than 65mm. A mortar fill 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.

PPWP HIERARCHY OF SURFACE WATER DISCHARGE OPTIONS		
DISCHARGE TYPE	METHOD ADOPTED	REASONING
1 to the ground (infiltration)	NO	No infiltration trials undertaken and slow infiltration rates obtained as well as varied ground. Best case infiltration rate was 10%-K infiltration not suitable.
2 to a surface water body	NO	Not identified locally.
3 to a SW sewer, highway drain, or another drainage system	NO	Not identified locally.
4 to a combined sewer	YES	Combined sewers available on site is only suitable method.

IMPLEMENTATION SCHEDULE FOR DRAINAGE SYSTEMS, ATTENUATION TANKS & SOAKAWAYS		
IMPLEMENTATION PHASE	ACTION	REASON
Construction Phase	All drainage pipes, gullies & manholes installed must be checked, plugged or connections capped to isolate from construction SW flows.	To ensure construction debris does not enter the system while allowing general construction of the drainage system ready for plot completion.
Pre-naturation Phase	Only finished pipes & associated drainage pipes, manholes & gullies may be brought online so long as they will not be subject to further construction flows & debris from upstream works.	To ensure adequate protection of completed parts of the Site, while protecting the wider drainage systems to parts of the Site still under construction from potential blockages.
Post Construction Phase	Site attenuation tank, controls chamber/hydrabrate or soakaways may only be brought online after construction of the Site has finished, and construction debris and all entering the system is mitigated. All soil traps, control chambers and accessible soakaways to be tested for silt/debris, and cleaned accordingly.	To ensure protection of the attenuation tanks & silt/debris which could flow overloaded with silt/debris which SW flow overloaded with silt/debris which could flow or reduce long term storage capacity. To ensure the system is free from silt/debris accumulation prior to sign off.

CIRIA CP5 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. Remove debris from the catchment surface (where it may cause risks to performance) 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 media as necessary.	Monthly for 3 months then annually Annually Annually
Remedial actions	Repair/rehabilitate inlets, outlet, overflows and vents, as required.	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed Survey inside of tank for sediment build-up and remove if necessary	Annually Every 3 years or as required

LOCATION PLAN 1:1250

The plan shows the site boundary in red, surrounded by Hillbank St to the north and Church Ave to the east. A railway line runs along the south side of the site, with a bus stop located near the intersection of Church Ave. The plan also shows the location of the site relative to the surrounding area, including the railway station and bus stop.

T J BOOTH ASSOCIATES 20A Eastgate Street Rochdale Lancashire OL16 1DH Tel:01706 868288

HARRISON / HILLBANK ST & CHURCH AVE

DRAINAGE PLAN & DETAILS

CHURCH AVE SITE

FILE NAME: dwg-tjbs-HCL-hillbank & church st-170725 SCALE: 1 : 100 @ A1