

NB
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION
PURPOSES.
DETAILS ON THIS DRAWING ARE INDICATIVE AND USED FOR
DRAINAGE STRATEGY PURPOSES ONLY.
FULL DESIGN DETAILS WILL BE REQUIRED FOR TECHNICAL
SUBMISSIONS TO THE RELEVANT AUTHORITIES



1. Drainage design and construction is in accordance with Sewerage Guidance and any additional requirements of United Utilities.
2. All SWP, RWP and BSC connections are indicative and must be cross referenced with architect's drawings.
3. Pipe gradients out to drainage to connecting manholes to align to 1:40 in accordance with Part H of the 2015 Building Regulations. All risers to SWP within 3 storey buildings must be 750mm in accordance with Building Regulations.
4. Tolerances to be in accordance with BS5936 clause 5.9.9.
5. All riser pipes to be in accordance with SSG Clause 64.2 and Table A11.
6. Engineering bricks shall not contain holes or nugs.
7. Brickwork to conform to be English bond.
8. Where joints surrounded in concrete, flexibility to be maintained on pipe when the use of suitable compressible material eg. 'Flexcoat' or 'Bentocut'.
9. All manhole covers and frames must comply with BS EN12418. Covers in roads to be Grade D40 and be 150mm deep. Manhole covers in car parking areas shall be to Grade B125, where the specified areas are not Grade A15, A19 to be in accordance with Part H of the Building Regulations 2015.
10. All incoming pipes shall be surrounded with 150mm of concrete to the outer edge of the pipe and the outer edge pipe and concrete shall also be surrounded to within 50mm of the free surface and a concrete to compressible filler used or as confirmed by the contractor surround and downstream pipe color.
11. All underground services to be confirmed by contractor prior to commencement on site. Any discrepancies to be reported to engineer.
12. Private sewers not located in roads to be Class 1 granular bed and surround (more than 1.2m cover).
13. Sewers located under adopted roads to be Class 3 granular bed and surround (more than 1.2m cover).
14. Sewers located under private roads and car parking bays to be Class 3 granular bed and surround and as per standard details unless specified, then provide class 3 (if more than 1.2m cover).
15. Private sewers with less than 0.6m of cover to be concrete surrounded with class 3 on standard details.
16. Adopted sewers with less than 1.2m cover: provide Class 2 concrete and surround. Concrete and surround to be suitable for large diameter storage sewers. guidance must be sought from adopting authority prior to use.
17. No deep or wide road trees to be planted within close proximity of the proposed and existing public sewer system.

Proposed Cellular Storage
Storage volume - 57m³.
3no. layers of 400mm deep units.
Overflow 375Ø IL: 36.650mAO
Cells
CL: 38.539 mAO
IL: 36.020 mAO
Length x Width x Depth = 5m x 10m x 1.2m
Unit Cell Size = 1.0m x 0.5m x 0.4m

ADOPTABLE SEWER PIPE MATERIALS

- 150mm, 225mm and 300mm to be PVC-U OSMA ULTRARIB pipework to WIS Standard 4-35-01
- 375mm and above to be concrete pipework

- KEM

KEY

==○== PROPOSED SURFACE WATER SEWERS
PHASE 1

---●--- PROPOSED FOUL WATER SEWERS
PHASE 1

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PHASE I

PROPOSED FOUL WATER SEWERS UNITED UTILITIES

==○== PROPOSED HIGHWAY DRAINAGE
PHASE I

— — — — — PROPOSED FOUL WATER RISING MAIN
PHASE 1

— (S) — (S) — EXISTING SURFACE WATER SEWERS

— FWS — — FWS — EXISTING FOUL WATER SEWERS

==○== EXISTING POND DRAINAGE
(LINKS BETWEEN PONDS TO BE
RETAINED OR RE-LAID)

==○== PROPOSED POND DRAINAGE

MANHOLE REFERENCES:-

TYPE A	DCG TYPE A (SSG Appendix C Figure B7)
TYPE B	DCG TYPE B (SSG Appendix C Figure B10)

RH	UU 5W SHALLOW MANHOLE (STND/19/004 A)
AMPS	ALTERNATIVE MANHOLE PLATFORM SYSTEM

SPEC SPECIAL MANHOLE WITH MID SECTION LANDING
(FOR MANHOLES +6.0m COVER TO SOFFIT - SEE
SPECIFIC DETAILS)

HB	HYDROBRAKE MANOLE (SEE SPECIFIC MANHOLE DETAILS)
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HW HEAD WALL
(SEE SPECIFIC DETAILS)

NOTE
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TECHNICAL APPROVALS

29.03.22	Issued to LU as a variation to the approved S/O4	GW
15.03.23	Road 3 drainage amended and collar (disage) added	NR
22.11.22	Added 500mm bund and added barriers to the effluent basin. Catchpits removed	NR
04.03.21	S/O 16 for effluent approved. M6/11 is no Road 7 reinstated	NR

06.09.22	Confirms needed	NR
19.06.22	Rising main joining method added, without chamber chainage amended	NR
13.05.22	Aqueduct pipeline replaced with concrete	NR
21.04.22	Network from pond inlet will no longer be offered for adoption	NR
22.02.22	Amended as per J3 comments	NR
28.01.22	Amended to suit new planning layout rev H	NR
17.12.21	Amended to suit L3 comments	NR
13.07.21	Amended to suit L3/L4/L5/L6 comments	YC

Date	Details	By
04.03.21	Highway Rules and Indicative Fuel Water Emergency Storage added	JC
22.01.21	Issued for initial comments	JC

Revision history



 BETT'S HYDRO
 CONSULTING ENGINEERS

Taylor
Wimpey

title:

Halsnead Garden Centre
Whiston

g title: Main Drainage Layout

Attenuation Ponds Area

1:500	for the original size of A0		
JC	Checked by:	Passed by:	Date: 22.01.21
g status:			

Preliminary								Revisior:
Drawing No:	Project	Origin.	Volume	Level	Type	Discip.	Number	
90	XXXX	BET	77	XX	DR	C	1002	N

Do not scale this drawing