HYDROBRAKE DETAILS	
MANHOLE REFERENCE	S9
HYDROBRAKE TYPE	OPTIMUM
HYDROBRAKE REFERENCE	SHE-0099-6000-2100-6000
DISCHARGE RATE	6.0 l/sec
DESIGN HEAD	2.1m
ORIFICE SIZE (mm)	99mm

OFF-SITE SEWER CONNECTION

DO NOT SCALE OFF THIS DRAWING

GENERAL NOTES

1. THIS DRAWING TO READ IN CONJUNCTION WITH ALL RELEVANT STRUCTURAL AND ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.
2. ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR / FABRICATOR PRIOR TO COMMENCEMENT OF WORKS.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.
4. ALL WORKS TO BE CARRIED OUT IN STRICT ACCORDANCE WITH THE ENGINEER'S SPECIFICATIONS, RELEVANT BRITISH STANDARDS AND WHERE APPLICABLE LOCAL AUTHORITIES REQUIREMENTS.

SEWERS FOR ADOPTION

5. ALL MAIN SEWERS TO BE CONSTRUCTED IN ACCORDANCE WITH 'SEWERS FOR ADOPTION' 7TH EDITION AND UNITED UTILITIES STANDARD DETAILS.
6. ALL MATERIALS TO BE MARKED WITH BSI KITE MARK WHERE APPLICABLE.
7. ALL DRAINAGE UNDER VERGES WITH LESS THAN 900MM OF COVER AND DRAINAGE UNDER THE HIGHWAY WITH LESS THAN 1200MM OF COVER WILL REQUIRE 150MM THICK CONCRETE BED AND SURROUND.
8. ALL 150MM & 225MM DIA PIPES TO BE CLAY TO COMPLY WITH THE RELEVANT REQUIREMENTS OF BS EN 295-1: 1991.
9. ALL PIPES 300MM DIA AND ABOVE TO BE CONCRETE PIPES TO COMPLY WITH THE RELEVANT PROVISIONS OF BS 5911. STRENGTH CLASS AS INDICATED ON LONGITUDINAL SECTIONS.
10. MINIMUM PIPE CRUSHING STRENGTH TO BE: 150MM Ø = 40KN/M, 225 Ø = 45KN/M, 300 Ø = 72KN/M.
11. ALL PIPES TO HAVE CLASS 'S' GRANULAR SURROUND WITH BEDDING FACTOR OF 2.2 UNLESS STATED OTHERWISE ON THE LONGITUDINAL SECTIONS AND TO BE CLASS 2 SULPHATE RESISTANT. GRANULAR MATERIAL FOR SURROUND TO BE EITHER 10, 14 OR 20MM NOMINAL SINGLE SIZED.
12. STONE BACKFILL IS REQUIRED TO ALL SEWER TRENCHES UNDER VEHICULAR AREAS. AS DUG MATERIAL MAY BE USED ON OTHER AREAS SUBJECT TO THE WRITTEN APPROVAL OF THE DRAINAGE AUTHORITY.
13. ALL CONCRETE PRODUCTS MANUFACTURED OR CAST INSITU TO BE SULPHATE RESISTANT UNLESS PROVED OTHERWISE BY SITE INVESTIGATION OR SUBSEQUENT TESTING.
14. SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES, WHERE IT IS NOT POSSIBLE TO ACHIEVE THIS CLEARANCE CONCRETE BED AND SURROUND IS REQUIRED.
15. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
16. MANHOLE COVERS MUST HAVE A MINIMUM CLEAR OPENING OF 600MM AND SHALL BE CLASS D400 TO BS EN 124 WITH 150MM DEEP FRAMES IN HIGHWAYS. SOME MANHOLES MAY REQUIRE DOUBLE COVER ACCESS, REFER TO MANHOLE SCHEDULES TO CONFIRM SIZES.
17. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF UNITED UTILITIES BEFORE ANY SEWER WORKS ARE CARRIED OUT.
18. ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1M AND MANHOLES 0.5M FROM KERB FACES AND SERVICE MARGINS
19. ANY LAND DRAIN OR WATERCOURSE ON SITE TO BE DIVERTED SO AS NOT TO PASS UNDER PROPOSED BUILDING.
20. DIVERSION TO BE INSPECTED ON SITE BY LOCAL AUTHORITY.
21. ALL GULLIES TO BE PROTECTED FROM SILT DURING THE CONSTRUCTION PROCESS WITH A LAYER OF HESSIAN SHEETING PLACED UNDER THE GULLY GRATING. THE HESSIAN SHALL BE CLEANED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD
22. ALL LIVE CONNECTIONS IDENTIFIED IDENTIFIED IN THE CCTV SURVEY, MUST BE RE-PIPED TO THE DIVERTED SEWER.
23. ALL SEWER ABANDONMENTS MUST BE WITNESSED BY A UNITED UTILITIES REPRESENTATIVE.
24. METHOD OF SEWER ABANDONMENT SHALL BE BY GRUBBING UP AND REPLACING PIPE TRENCHES WITH APPROVED SUITABLY COMPACTED BACKFILL.
25. CONNECTIONS OF SEWERS TO BE ABANDONED TO THE LIVE SEWERS SHALL BE CAPPED TO THE APPROVAL OF THE UNITED UTILITIES REPRESENTATIVE.

DRAINAGE KEY

- SITE BOUNDARY
- EXTG SURFACE WATER DRAINAGE
- EXTG FOUL WATER DRAINAGE
- EXTG COMBINED DRAINAGE
- PRIVATE FOUL WATER DRAINAGE
- PRIVATE SURFACE WATER DRAINAGE
- PRIVATE COMBINED DRAINAGE
- FOUL WATER SEWER DIVERSION
- SURFACE WATER SEWER DIVERSION
- COMBINED SEWER DIVERSION
- NEW FOUL WATER SEWER (NOT PART OF S104 AGREEMENT)
- NEW SURFACE WATER SEWER (NOT PART OF S104 AGREEMENT)
- NEW COMBINED SEWER (NOT PART OF S104 AGREEMENT)
- SEWER EASEMENT (AS DIMENSIONED)

PRIOR TO CONSTRUCTION THE CONTRACTOR IS TO ENSURE THAT THE PROPOSED DRAINAGE DOES NOT CLASH WITH THE EXISTING SERVICES. THE CONTRACTOR IS TO ALLOW FOR THIS PROVISION WITHIN THE TENDER SUM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ATTAINING ALL NECESSARY APPROVALS FOR ANY SERVICE DIVERSIONS REQUIRED TO FACILITATE THE PROPOSED WORKS

ALL FLOWS FROM PRIVATE CELLULAR SW STORARGE TO BE DISCHARGED THROUGH A SILT TRAP MANHOLE PRIOR TO BEING DISCHARGED INTO ANY PUBLIC SEWERS.

Rev	Date	Checked	Description	By
PC1	21.06.18	SB	ISSUE FOR PLANNING CONDITION	JG

PLANNING CONDITION DISCHARGE

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Client: RIVERSIDE

Project: ROCHDALE EXTRA CARE
BOWNESS ROAD
LANGLEY

Drawing title: ADOPTABLE DRAINAGE LAYOUT

Scale at A1	1:250
Drawn by	JG
Date	APR. 2018

Drawing number: 29550-655
Revision suffix: PC1