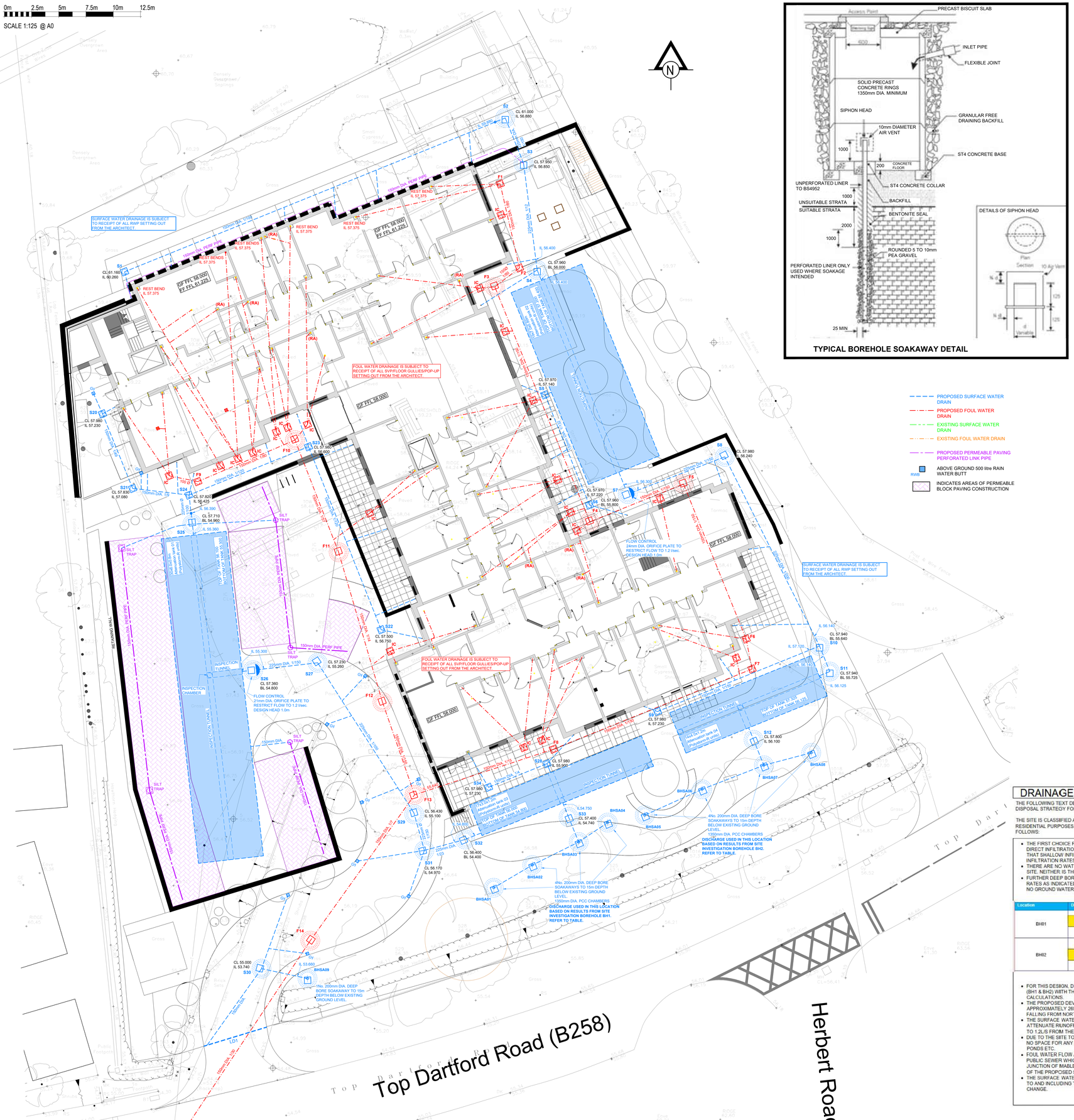
DO NOT SCALE FROM THIS DRAWING

0m 2.5m 5m 7.5m 10m 12.5m

SCALE 1:125 @ A0



TYPICAL BOREHOLE SOAKAWAY DETAIL

PROPOSED SURFACE WATER DRAIN

PROPOSED FOUL WATER DRAIN

EXISTING SURFACE WATER DRAIN

EXISTING FOUL WATER DRAIN

PROPOSED PERMEABLE PAVING PERFORATED LINK PIPE

RWB ABOVE GROUND 500 litre RAIN WATER BUTT

INDICATES AREAS OF PERMEABLE BLOCK PAVING CONSTRUCTION

SURFACE WATER DRAINAGE MANHOLE SCHEDULE

MANHOLE REF.	BASE / INVERT LEVEL	C.L.	DEPTH	DIA (MIN SIZE)	MIN. COVER SIZE & GRADE
S1^	60.260	61.160	0.900	450mm DIA. POLYPROPELENE	C250 (600x600)
S2^	56.880	61.000	4.120	1200mm DIA. PCC RINGS	C250 (600x600)
S3^	56.850	57.950	1.100	1200mm DIA. PCC RINGS	C250 (600x600)
S4^	56.000	57.960	1.960	1200mm DIA. PCC RINGS	C250 (600x600)
S5^	57.140	57.970	0.830	450mm DIA. POLYPROPELENE	C250 (600x600)
S6^	57.220	57.970	0.750	450mm DIA. POLYPROPELENE	C250 (600x600)
S7^	55.800	57.960	2.160	1200mm DIA. PCC RINGS	C250 (600x600)
S8^	56.240	57.980	1.740	1200mm DIA. PCC RINGS	C250 (600x600)
S9^	57.230	57.980	0.750	450mm DIA. POLYPROPELENE	C250 (600x600)
S10	55.640	57.940	2.300	1200mm DIA. PCC RINGS	C250 (600x600)
S11	55.725	57.940	2.215	1200mm DIA. PCC RINGS	C250 (600x600)
S12	56.125	57.800	1.675	1200mm DIA. PCC RINGS	C250 (600x600)
S20^	57.230	57.980	0.750	450mm DIA. POLYPROPELENE	C250 (600x600)
S21^	57.080	57.830	0.750	450mm DIA. POLYPROPELENE	C250 (600x600)
S22^	56.750	57.500	0.750	450mm DIA. POLYPROPELENE	C250 (600x600)
S23^	56.600	57.980	1.380	450mm DIA. POLYPROPELENE	C250 (600x600)
S24^	56.425	57.820	1.395	450mm DIA. POLYPROPELENE	C250 (600x600)
S25	54.960	57.710	2.750	1200mm DIA. PCC RINGS	D400 (600x600)
S26	54.800	57.360	2.560	1500mm DIA. PCC RINGS	D400 (600x600)
S27	55.260	57.230	1.970	1200mm DIA. PCC RINGS	D400 (600x600)
S28^	55.900	57.980	2.080	1200mm DIA. PCC RINGS	C250 (600x600)
S29	55.100	56.430	1.330	1200mm DIA. PCC RINGS	D400 (600x600)
S30	53.740	55.000	1.260	1200mm DIA. PCC RINGS	D400 (600x600)
S31	54.970	56.170	1.200	1200mm DIA. PCC RINGS	D400 (600x600)
S32^	54.400	56.400	2.000	1200mm DIA. PCC RINGS	C250 (600x600)
S33	54.740	57.400	2.660	1200mm DIA. PCC RINGS	C250 (600x600)
S34*	57.230	57.980	0.750	450mm DIA. POLYPROPELENE	D400 (600x600)

^ WHERE INDICATED MANHOLES ARE TO BE PROVIDED WITH FABRICATED RECESSED COVER AND FRAME TO ACCEPT SURROUNDING FINISHES. COVERS MUST ACHIEVE LOAD CLASS SPECIFIED

FOUL WATER DRAINAGE MANHOLE SCHEDULE

MANHOLE REF.	I.L.	C.L.	DEPTH	DIA (MIN SIZE)	MIN. COVER SIZE & GRADE
F1^	57.130	57.980	0.850	450mm DIA. POLYPROPELENE	C250 (600x600)
F2^	57.030	57.980	0.950	450mm DIA. POLYPROPELENE	C250 (600x600)
F3^	56.995	57.980	0.985	1200mm DIA. PCC RINGS	C250 (600x600)
F4^	56.840	57.980	1.140	1200mm DIA. PCC RINGS	C250 (600x600)
F5^	56.775	57.980	1.205	1200mm DIA. PCC RINGS	C250 (600x600)
F6^	56.675	57.980	1.305	1200mm DIA. PCC RINGS	C250 (600x600)
F7^	56.650	57.960	1.310	450mm DIA. POLYPROPELENE	C250 (600x600)
F8^	56.520	57.960	1.440	450mm DIA. POLYPROPELENE	C250 (600x600)
F9^	57.015	57.830	0.815	450mm DIA. POLYPROPELENE	C250 (600x600)
F10^	56.890	57.980	1.090	1200mm DIA. PCC RINGS	C250 (600x600)
F11^	56.700	57.500	0.800	1200mm DIA. PCC RINGS	C250 (600x600)
F12	55.700	56.960	1.260	1200mm DIA. PCC RINGS	D400 (600x600)
F13	55.640	56.540	0.900	1200mm DIA. PCC RINGS	D400 (600x600)
F14	53.360	55.320	1.960	1200mm DIA. PCC RINGS	D400 (600x600)

^ WHERE INDICATED MANHOLES ARE TO BE PROVIDED WITH FABRICATED RECESSED COVER AND FRAME TO ACCEPT SURROUNDING FINISHES. COVERS MUST ACHIEVE LOAD CLASS SPECIFIED

LD1 - ACO M100D LINEAR DRAINAGE CHANNEL (OR SIMILAR APPROVED) WITH INTERNAL FALL & D400 GRATING.

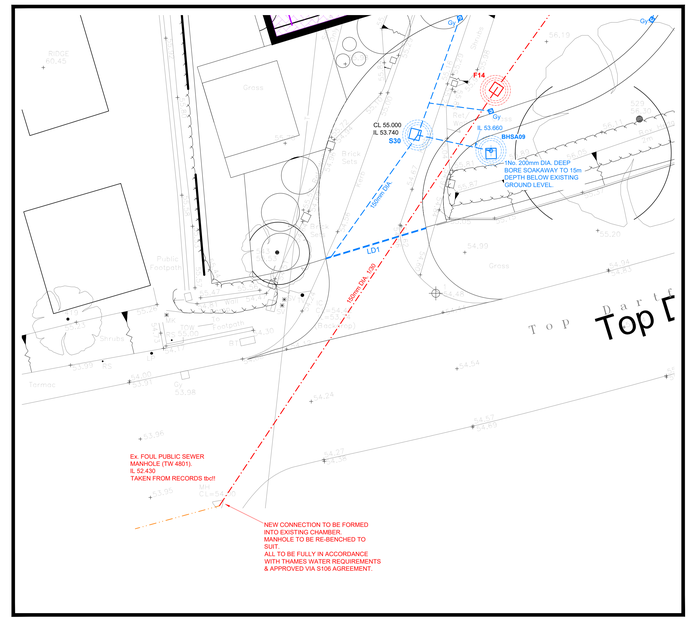
IC - 450mm DIA. POLYPROPELENE LEVEL INVERT INSPECTION CHAMBER WITH 600x600mm RECESSED COVER & FRAME WHERE REQUIRED TO ACCEPT SURROUNDING FINISHES. IL 57.130 UNLESS NOTED OTHERWISE.

RE - RODDING EYE. 600mm DP. UNLESS NOTED OTHERWISE.

(RA) - RODDABLE ACCESS TO BE FITTED TO SVP ABOVE FLOOR LEVEL

ALL MANHOLES & INSPECTION CHAMBERS WITHIN PAVED AREAS TO HAVE RECESSED COVERS TO RECEIVE SURROUNDING SURFACING. LOAD CLASS SPECIFIED ABOVE TO BE ACHIEVED IN ALL CASES.

SVP REST BEND INVERT LEVEL TO BE 57.325 (-0.675 BELOW FFL) UNLESS NOTED OTHERWISE.



DRAINAGE STRATEGY

THE FOLLOWING TEXT DESCRIBES THE SURFACE WATER DRAINAGE DISPOSAL STRATEGY FOR THIS DEVELOPMENT.

THE SITE IS CLASSIFIED AS BROWNFIELD (BEING PREVIOUSLY USED FOR RESIDENTIAL PURPOSES.) KEY POINTS FOR THE STRATEGY ARE AS FOLLOWS:

- THE FIRST CHOICE FOR SURFACE WATER IS ATTENUATION WITH DIRECT INFILTRATION, HOWEVER SITE INVESTIGATIONS IDENTIFIED THAT SHALLOW INFILTRATION WAS NOT FEASIBLE DUE TO POOR INFILTRATION RATES ACHEIVED.
- THERE ARE NO WATERCOURSES WITHIN CLOSE PROXIMITY OF THE SITE. NEITHER IS THERE A SURFACE WATER SEWER.
- FURTHER DEEP BORE INVESTIGATION FOUND GOOD INFILTRATION RATES AS INDICATED BELOW. DRILLING CONTINUED TO 30.0M AND NO GROUND WATER WAS ENCOUNTERED.

Location	Depth (m)	Run	Permeability k (m/s)
BH01	10	1	1.74X10⁻⁶
	15	1	5.73X10⁻⁶
		2	2.61X10⁻⁶
	20	1	4.31X10⁻⁶
		2	3.76X10⁻⁶
BH02	10	1	2.46X10⁻⁶
		2	4.12X10⁻⁶
	15	1	1.37X10⁻⁵
		2	4.03X10⁻⁶
	20	1	2.29X10⁻⁶
		2	4.98X10⁻⁶

- FOR THIS DESIGN, DISCHARGE HAS BEEN USED IN TWO LOCATIONS (BH1 & BH2) WITH THE HIGHLIGHTED VALUES (ABOVE) USED FOR THE CALCULATIONS.
- THE PROPOSED DEVELOPMENT HAS AN IMPERMEABLE AREA OF APPROXIMATELY 2653m2 (0.265ha) AND HAS A LEVEL DIFFERENCE, FALLING FROM NORTH TO SOUTH BY APPROXIMATELY 6.5M.
- THE SURFACE WATER FLOW HAS BEEN DESIGNED TO CAPTURE AND ATTENUATE RUNOFF IN 4No. CRATED TANKS WITH FLOW RESTRICTED TO 1.2L/S FROM THE UPPER LEVEL TANKS.
- DUE TO THE SITE TOPOGRAPHY AND PROPOSED LAYOUT THERE IS NO SPACE FOR ANY OTHER SUDS FEATURES SUCH AS SWALES AND PONDS ETC.
- FOUL WATER FLOW ASSUMED TO BE UNRESTRICTED INTO THE PUBLIC SEWER WHICH THE NEAREST POINT IS FOUND IN THE JUNCTION OF MABLE ROAD JUST OFF THE SOUTH-WESTERN CORNER OF THE PROPOSED SITE.
- THE SURFACE WATER DESIGN CATERS FOR ALL STORM EVENTS UP TO AND INCLUDING THE 1 IN 100 YEAR EVENT PLUS 40% CLIMATE CHANGE.

1. DO NOT SCALE FROM THIS DRAWING
2. WORK TO ONLY FIGURED DIMENSIONS AND CO-ORDINATES
3. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER IMMEDIATELY
4. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS, ARCHITECTS AND SPECIALIST DRAWINGS SPECIFICATIONS AND DETAILS
5. THE CONTRACTOR SHALL CHECK THE LEVELS AND CONDITION OF ALL EXISTING DRAINAGE PRIOR TO THE CONSTRUCTION OF ANY NEW DRAINAGE TO ENSURE THE PROPOSED DESIGN CAN BE ACHEIVED
6. COVER AND INVERT LEVELS, PIPE DIAMETERS AND PIPE RELATIONSHIPS OF EXISTING DRAINAGE TO BE CHECKED ON SITE AND ANY DISCREPANCIES REPORTED TO ENGINEER
7. BEFORE EXCAVATION COMMENCES THE CONTRACTOR SHALL ASCERTAIN THE DEPTHS, SIZES AND LOCATION OF ALL SERVICES TO BE CROSSED. ANY CONFLICT IN LEVELS BETWEEN NEW AND EXISTING SERVICES/SEWERS TO BE NOTIFIED TO THE ENGINEER.
8. ALL ADOPTABLE DRAINAGE WORKS TO BE IN ACCORDANCE WITH THE WATER AUTHORITIES REQUIREMENTS AND 'SEWERS FOR ADOPTION 7TH EDITION'
9. FOR ALL ADOPTED DRAINAGE WORKS THE MAIN CONTRACTOR SHALL USE A SUB-CONTRACTOR APPROVED BY THE LOCAL WATER AUTHORITY TO CARRY OUT THE WORK.
10. THE CONTRACTOR IS TO APPLY TO AND LIASE WITH THE WATER AUTHORITY ENGINEER IN RESPECT OF ANY NEW CONNECTIONS INTO THE EXISTING PUBLIC SEWERS, AFFORDING THEM REASONABLE NOTICE TO INSPECT THE WORKS DURING CONSTRUCTION
11. THE CONTRACTOR IS TO COMPLY WITH THE 'NEW ROADS AND STREET WORKS ACT:1991' FOR ALL WORKS IN THE PUBLIC HIGHWAY
12. ALL WORKS IN THE PUBLIC HIGHWAY SHALL BE CARRIED OUT WITH THE PRIOR APPROVAL AND TO THE SATISFACTION OF THE LOCAL AUTHORITY.
13. ALL PRIVATE DRAINAGE WORKS TO BE IN ACCORDANCE WITH PART H OF THE BUILDING REGULATIONS, BS EN 752 AND BS EN 12056
14. ALL PIPEWORK TO BE ESVC (HEPWORTH SUPERSLEVE) OR CONCRETE WITH CLASS B BEDDING. PLASTIC MAYBE ADOPTED OUTSIDE OF ANY VEHICULAR TRAFFICKED AREAS (PERMANENT AND TEMPORARY CONDITIONS). PLASTIC MAY BE USED AS AN ALTERNATIVE, SUBJECT TO PROVISION OF PRODUCT DATA SHEETS & ENGINEERS APPROVAL. ALL TO BE INSTALLED FULLY IN ACCORDANCE WITH THE MANUFACTURERS RECOMENDATIONS.
15. ALL BELOW SLAB FOUL DRAINAGE TO BE 100mm ESVC OR CONCRETE UNO. ON PLAN. PLASTIC MAY BE USED AS AN ALTERNATIVE AS FOR NOTE 14 ABOVE. ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
16. ADOPT HEAVY DUTY MANHOLE COVERS & GULLY GRATES IN ALL TRAFFICKED AREAS.
17. WHERE COVER TO CROWN OF PIPE IS LESS THAN 600mm CONCRETE ENCASEMENT (150mm MIN.) IS TO BE PROVIDED TOGETHER WITH COMPRESSIBLE BOARD JOINTS AT EACH SOCKET/SLEEVE JOINT FACE.
18. ALL GULLY, LINEAR DRAIN AND RWP CONNECTIONS TO BE 150mm DIA. U.N.O.
19. ALL SURFACE & FOUL WATER CONNECTIONS ARE SOFFIT TO SOFFIT, INCLUDING NEW PIPES ENTERING EXISTING MANHOLES UNLESS NOTED OTHERWISE
20. WHERE RWP'S, STUB STACKS AND SVP'S ARE CONNECTED DIRECTLY TO THE DRAIN, RODDING ACCESS POINTS ARE TO BE PROVIDED ABOVE FINISHED FLOOR/PATH LEVEL.
21. ALL MANHOLES DEEPER THAN 1.0m TO HAVE METAL STEP IRONS OR FIXED LADDERS.
22. ALL BRANCH PIPES FROM SVPs/STACKS TO BE 110mm DIA. UNLESS NOTED OTHERWISE
23. ALL REDUNDANT EXISTING DRAINAGE UNDER THE FOOTPRINT OF THE PROPOSED BUILDING TO BE GRUBBED OUT OR FULLY GROUTED AND CAPPED
24. ANY BACKDROP CONNECTIONS ON THE FOUL DRAINAGE SYSTEM TO BE 45 DEGREE RAKING BACK DROPS.
25. ALL INTERNAL MANHOLES TO BE DOUBLE SEALED AND HAVE MECHANICALLY FIXED AIRTIGHT COVERS AND FRAMES
26. PROPOSED EXTERNAL MANHOLE COVER LEVELS AND ORIENTATION INDICATED IS SUBJECT TO CONFIRMATION FROM THE ARCHITECTS/LANDSCAPE DESIGNER.
27. IT IS ASSUMED ALL OF EN-SUITE SHOWER GULLIES ARE TO BE CONNECTED TO THE ADJACENT SVP WITHIN THE DEPTH OF THE FLOOR FINISHES.
28. ALL FOUL DRAINS WITHIN 300mm OF UNDERSIDE OF CONCRETE GROUND BEARING SLAB TO BE ENCASED WITH 150mm CONCRETE CAST INTEGRAL WITH SLAB.

PRELIMINARY

REV	INITIALS	DATE	DETAIL
P5	MJC	08.03.24	SCALE BAR ADDED AT LPA REQUEST.
P4	MJC	05.02.24	AMENDED TO SUIT CONTRACTORS PREFERRED ATTENUATION CRATE MANUFACTURER, BOREHOLE DESIGN INFILTRATION RATES AND DEPTHS NOTED TO REFLECT DRAINAGE STRATEGY.
P3	MJC	31.10.23	UPDATED TO REFLECT LATEST ARCHITECTS LAYOUT. PRELIMINARY ISSUE FOR COMMENT & CO-ORDINATION
P2	MJC	28.07.23	SW FLOW CONTROL DEVICE CRITERIA CONFIRMED. BOREHOLE SOAKAWAY CHAMBER SPEC ADDED.
P1	MJC	26.06.23	PRELIMINARY TENDER

STATUS

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CLIENT: BARCHESTER	JOB NO: CDA-2601
PROJECT: PROPOSED CARE HOME, TOP DARTFORD ROAD, HEXTABLE.	DRG NO: 02
TITLE: PROPOSED SITE DRAINAGE	REVISION: P5
	SCALE: 1:125 @ A0
	DATE: APR 2023
	DRAWN BY: MJC
	CHKD: SEL