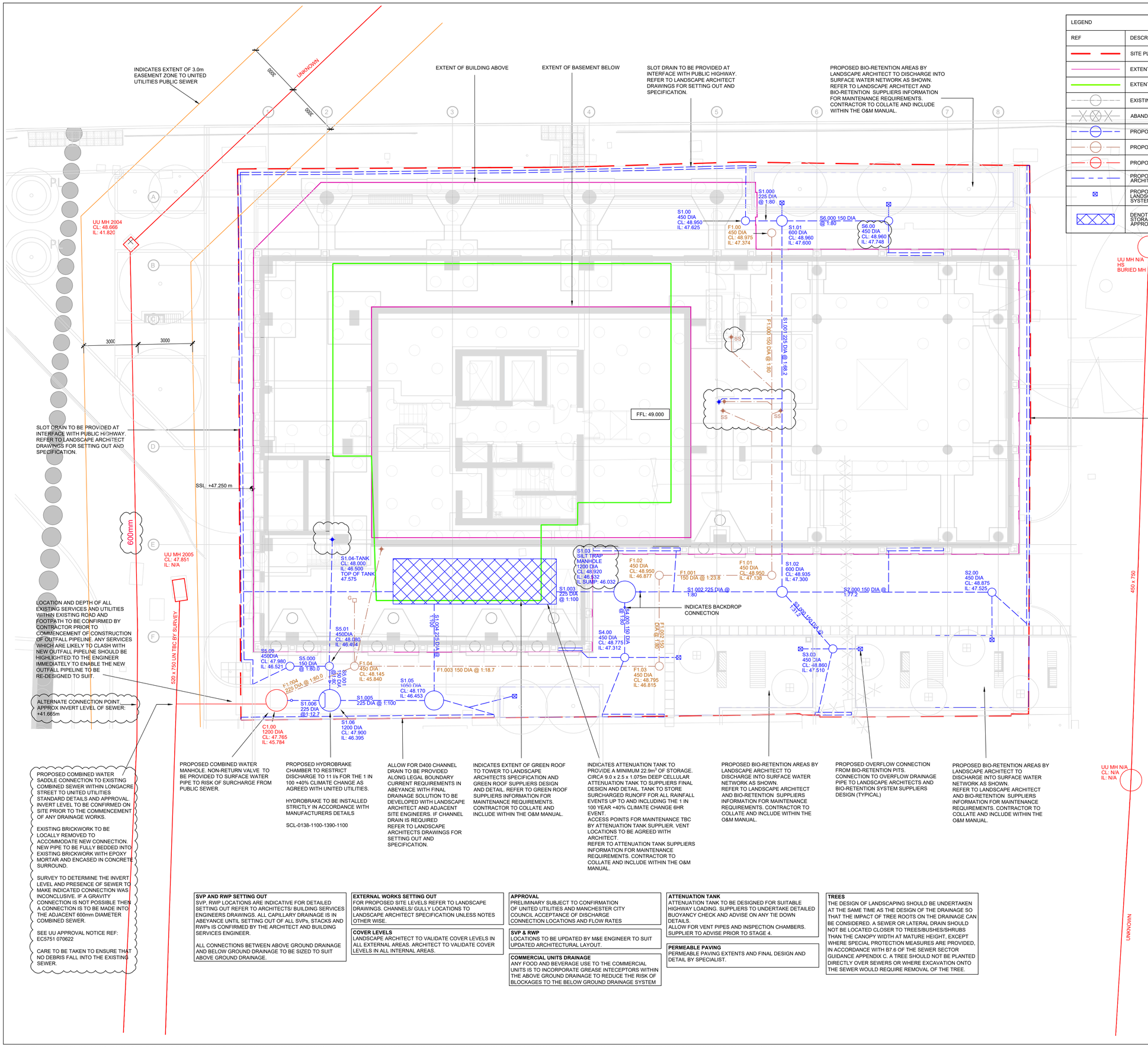

LEGEND	
REF	DESCRIPTION
	SITE PLANNING BOUNDARY
	EXTENT OF BUILDING ABOVE
	EXTENT OF GREEN ROOF ABOVE
	EXISTING COMBINED WATER PUBLIC SEWER
	ABANDONED PRIVATE DRAINAGE
	PROPOSED SURFACE WATER SEWER
	PROPOSED FOUL WATER SEWER
	PROPOSED COMBINED WATER SEWER
	PROPOSED BIO-RETENTION AREA TO LANDSCAPE ARCHITECTS DETAILS
	PROPOSED OVERFLOW DRAINAGE PIPE TO LANDSCAPE ARCHITECT AND BIO-RETENTION SYSTEM SUPPLIERS DETAILS
	DENOTES EXTENT OF BELOW GROUND CELLULAR STORAGE TANK BY ALDERBURGH OR EQUALLY APPROVED

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RENAISSANCE, ARCHITECTS, LANDSCAPE ARCHITECTS AND BUILDING SERVICES ENGINEERS DRAWINGS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE BELOW GROUND DRAINAGE SPECIFICATION SP-C-00050, MANHOLE SCHEDULE ON DRAWING C-01301 AND DETAILS SHOWN ON DRAWING SERIES C-03301 & C-03311 TO C-03312.
3. THE FINAL CONNECTION TO THE PUBLIC SEWER IS SUBJECT TO UNITED UTILITIES APPROVAL AND IS TO BE IN ACCORDANCE WITH THEIR AGREED DETAILS.
4. FOR ALL ABOVE GROUND DRAINAGE AND ASSOCIATED PUMPS REFER TO BUILDING SERVICES AND ARCHITECT'S DRAWINGS.
5. ALL BELOW GROUND DRAINAGE WORKS TO BE IN ACCORDANCE WITH RELEVANT BUILDING REGULATIONS AND SEWER SECTOR GUIDANCE APPENDIX C- DESIGN AND CONSTRUCTION GUIDANCE. IF DISCREPANCIES ARE NOTED BETWEEN SSG AND DRAWINGS THESE SHOULD BE BROUGHT TO THE ATTENTION OF RENAISSANCE FOR REVIEW.
6. RWPs, SVPs, SSs AND FLOOR GULLEYS ARE TO HAVE RODDABLE ACCESS POINTS ABOVE GROUND FLOOR TO BUILDING SERVICES DETAILS. ALL FLOOR GULLEYS AND RWP'S ARE TO BE TRAPPED.
7. ALL GULLY AND CHANNEL DRAIN LOCATIONS INDICATIVE.REFER TO ARCHITECT AND LANDSCAPE ARCHITECT DRAWINGS FOR SETTING OUT AND SPECIFICATION.
8. ALL FOUL AND SURFACE WATER DRAINAGE TO BE 150mm DIA UNLESS NOTED OTHERWISE.
9. THE ATTENUATION TANK AND FLOW CONTROL ARE TO BE TO SUPPLIERS DESIGN AND DETAILS. INSTALLATION IS TO BE IN ACCORDANCE WITH THE SUPPLIERS REQUIREMENTS.
10. SEWERS TO BE LAID IN CLASS S BEDDING (150mm GRANULAR BED AND SURROUND). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN; 1.2m IN HIGHWAYS OR VERGES, OR LESS THAN 0.9m IN PEDESTRIAN AREAS, THEN A 150mm CONCRETE SLAB SHOULD BE PROVIDED ABOVE THE GRANULAR BED AND SURROUND. REFER TO DETAILS SHEETS.
11. THE CONTRACTOR IS TO UNDERTAKE A FULL CCTV SURVEY AT COMPLETION OF THE PROJECT TO DEMONSTRATE THAT THE DRAINAGE IS CLEAN. ANY DEFECTS ARE TO BE CORRECTED BY THE CONTRACTOR PRIOR TO HANDOVER OF THE SYSTEM TO THE CLIENT.
12. THE CONTRACTOR IS TO KEEP A RECORD SET OF THE AS INSTALLED DRAINAGE ON SITE AND PROVIDE THIS TO RENAISSANCE UPON COMPLETION OF THE WORKS TO ALLOW FOR PRODUCTION OF A 'FINAL CONSTRUCTION' ISSUE DRAWING.
13. DURING THE WORKS ALTERATIONS TO THE DRAINAGE LAYOUT ARE TO BE MARKED UP BY THE CONTRACTOR AND AGREED WITH RENAISSANCE IN WRITING.
14. THE CHAMBER SIZE OF PCC MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
15. MANHOLE COVERS ARE TO BE ACCORDANCE WITH BS EN 124 FOR THE RATING INDICATED IN THE MANHOLE SCHEDULE. THE CONTRACTOR IS TO SUBMIT DETAILS FOR THE PROPOSED MANHOLE COVERS TO THE ENGINEER AND LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION.
16. COVER SLABS MUST CARRY THE BSI KITEMARK. WHERE THE CLEAR OPENING OF THE KITEMARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME, A LOAD BEARING REDUCING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO REQUIRED SIZE.
17. ALL SEWERS TO BE BSI KITEMARK (CERTIFIED TO WIS 4-35-01)
18. ALL CONCRETE PIPES TO BE TO ES EN 1916 CLASS 120 (54kN/m).
19. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2).
20. IF PLASTIC PIPES ARE TO BE USED THEN THE FOLLOWING MUST APPLY:
    A. BSI KITEMARK (CERTIFIED TO BS EN 13476-1 AND WIS 4-35-01)
    B. PIPES LESS THAN OR EQUAL TO 500mm DIA
    C. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE
    D. REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2)
17. THE MINIMUM CRUSHING STRENGTH FOR CLAY PIPES SHOULD BE AS FOLLOWS: 100mm DIA. 40kN/m, 150mm DIA. 40kN/m, 225mm DIA. 45kN/m AND 300mm DIA. 72kN/m.
18. THE MINIMUM CRUSHING STRENGTH FOR CONCRETE PIPES SHOULD BE - (CLASS 120 TO EN 1916/BS911-1 2002). PLASTIC PIPES SHOULD CONFORM TO WIS 4-35-01 AND BS EN13476.
19. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVIDING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
20. SEWER PIPES TO BE LAID IN MAXIMUM 3 METER LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER PIPES, AND THIS IS AGREED BY THE CONTRACTOR WITH THE PIPE MANUFACTURER.
21. ALLOW FOR ALL EXISTING DRAINAGE ON SITE TO BE GRUBBED UP AND BACKFILLED. ANY CONNECTIONS FROM THE SITE TO THE PUBLIC SEWER TO THE SITE ARE TO BE CAPPED AND GROUTED.

SVP AND RWP SETTING OUT
SVP, RWP LOCATIONS ARE INDICATIVE FOR DETAILED SETTING OUT REFER TO ARCHITECTS/ BUILDING SERVICES ENGINEERS DRAWINGS. ALL CAPILLARY DRAINAGE IS IN ABEYANCE UNTIL SETTING OUT OF ALL SVPs, STACKS AND RWPs IS CONFIRMED BY THE ARCHITECT AND BUILDING SERVICES ENGINEER.
ALL CONNECTIONS BETWEEN ABOVE GROUND DRAINAGE AND BELOW GROUND DRAINAGE TO BE SIZED TO SUIT ABOVE GROUND DRAINAGE.

EXTERNAL WORKS SETTING OUT
FOR PROPOSED SITE LEVELS REFER TO LANDSCAPE DRAWINGS. CHANNELS/ GULLY LOCATIONS TO LANDSCAPE ARCHITECT SPECIFICATION UNLESS NOTES OTHER WISE.

COVER LEVELS
LANDSCAPE ARCHITECT TO VALIDATE COVER LEVELS IN ALL EXTERNAL AREAS. ARCHITECT TO VALIDATE COVER LEVELS IN ALL INTERNAL AREAS.

APPROVAL
PRELIMINARY SUBJECT TO CONFIRMATION OF UNITED UTILITIES AND MANCHESTER CITY COUNCIL ACCEPTANCE OF DISCHARGE CONNECTION LOCATIONS AND FLOW RATES

SVP & RWP
LOCATIONS TO BE UPDATED BY M&E ENGINEER TO SUIT UPDATED ARCHITECTURAL LAYOUT.

COMMERCIAL UNITS DRAINAGE
ANY FOOD AND BEVERAGE USE TO THE COMMERCIAL UNITS IS TO INCORPORATE GREASE INTECEPTORS WITHIN THE ABOVE GROUND DRAINAGE TO REDUCE THE RISK OF BLOCKAGES TO THE BELOW GROUND DRAINAGE SYSTEM

ATTENUATION TANK
ATTENUATION TANK TO BE DESIGNED FOR SUITABLE HIGHWAY LOADING. SUPPLIERS TO UNDERTAKE DETAILED BUOYANCY CHECK AND ADVISE ON ANY TIE DOWN DETAILS.
ALLOW FOR VENT PIPES AND INSPECTION CHAMBERS. SUPPLIER TO ADVISE PRIOR TO STAGE 4.

PERMEABLE PAVING
PERMEABLE PAVING EXTENTS AND FINAL DESIGN AND DETAIL BY SPECIALIST.

TREES
THE DESIGN OF LANDSCAPING SHOULD BE UNDERTAKEN AT THE SAME TIME AS THE DESIGN OF THE DRAINAGE SO THAT THE IMPACT OF TREE ROOTS ON THE DRAINAGE CAN BE CONSIDERED. A SEWER OR LATERAL DRAIN SHOULD NOT BE LOCATED CLOSER TO TREES/BUSHES/SHRUBS THAN THE CANOPY WIDTH AT MATURE HEIGHT, EXCEPT WHERE SPECIAL PROTECTION MEASURES ARE PROVIDED, IN ACCORDANCE WITH B7.6 OF THE SEWER SECTOR GUIDANCE APPENDIX C. A TREE SHOULD NOT BE PLANTED DIRECTLY OVER SEWERS OR WHERE EXCAVATION ONTO THE SEWER WOULD REQUIRE REMOVAL OF THE TREE.

Rev:	Description:	Date:	By:	Chkd:
C03	COMMENTS INCORPORTED	15.06.22	HW	KG
C02	ADJUSTED MANHOLE INVERT LEVELS	25.05.22	HW	KG
C01	CONSTRUCTION ISSUE	18.05.22	HW	KG

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Project:
VICTORIA HOUSE MANCHESTER

Drawing Title:
BELOW GROUND DRAINAGE PLAN

Status:
CONSTRUCTION

Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	JUN'22	HW	HW	KG

Scale: 1:100 | Project No: 2007-04

Project – Originator – Volume – Level – Type – Role – Number: VHM-REN-00-FN-DR-C-01100 | Revision: C03

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