RIBA STAGE 2
THESE DRAWINGS ARE INTENDED TO COMMUNICATE THE INITIAL CONCEPT FOR THE PROPOSED BUILDINGS AND ARE APPROPRIATE FOR RIBA STAGE 2 (CONCEPT DESIGN).

ALL STRUCTURAL SIZES ARE INDICATIVE ONLY AND TO ASSIST WITH HIGH LEVEL COSTING BY THE PROJECT QUANTITY SURVEYOR AND CONTRACTOR. ALL STRUCTURAL SIZES AND REINFORCEMENT RATES ARE INDICATIVE AT THIS STAGE AND ARE SUBJECT TO CHANGE AS THE DESIGN DEVELOPS THROUGH RIBA STAGES 3 (SPATIAL CO-ORDINATION) AND STAGE 4 (TECHNICAL DESIGN) AND TO REFLECT INPUT FROM CONTRACTOR DESIGNED PACKAGES.

300mm DIA COMBINED SEWER
UU MH 6601
CL: +35.880
IL: +32.150 (BASED ON PURE UTILITIES SOLUTIONS SURVEY DATE MARCH 22)
1500mm DIA COMBINED SEWER
PROPOSED COMBINED WATER SADDLE CONNECTION INTO EXISTING COMBINED SEWER WITHIN GREAT BRIDGEWATER STREET SUBJECT TO UNITED UTILITIES AND LLFA APPROVAL. INVERT LEVEL OF CONNECTION POINT TO BE CONFIRMED PRIOR TO COMMENCEMENT OF DRAINAGE WORKS.
EXISTING BRICKWORK TO BE REMOVED TO ACCOMODATE NEW CONNECTION. NEW PIPE TO BE FULLY BED INTO EXISTING BRICKWORK WITH EPOXY MORTAR AND ENCASED IN CONCRETE SURROUND. CARE TO BE TAKEN TO ENSURE NO DEBRIS FALL INTO THE EXISTING SEWER.
LOWER ROOF AND UNDERSIDE OF BRIDGE ABOVE GROUND DRAINAGE TO ABOVE GROUND DRAINAGE ENGINEERS DESIGN AND DETAIL
SL1.08
1200 DIA PCC
HYDROBRAKE FLOW CONTROL
DESIGN FLOW: 5.7 l/s
DESIGN HEAD: 1.6 m
CL: 35.900
IL: 33.245
C1.00
1200 DIA PCC
CL: 35.040
IL: 32.715
ATTENUATION TANK VENT
SL9.00
CL: 35.930
TOP OF TANK: 34.930
IL: 33.330
50m²x 1.6m DEEP
ATTENUATION TANK
FL1.05
600 DIA PPIC
CL: 35.905
IL: 34.235
225mm @ 1:100
CLE STORE
20 Spaces
stackers & 90 lockers
Bar
192 m²
FL1.04
450 DIA PPIC
CL: 35.930
IL: 35.280
150mm DIA @1:80
Bar Store
WC
FL1.04
450 DIA PPIC
CL: 35.930
IL: 35.165
150mm DIA @1:56.9
Parcel Store
34 m²
Post
23 m²
FL1.05
600 DIA PPIC
CL: 35.905
IL: 34.420
FL1.05
600 DIA PPIC
CL: 35.905
IL: 34.530
150mm DIA @1:100
SVP FA
SVP
POTENTIAL CONNECTION FROM BASEMENT RISING MAIN IF REQUIRED
150mm DIA @1:80
225mm DIA @1:27.2
SL2.00
600 DIA PPIC
CL: 35.900
IL: 34.850
150mm DIA @1:100
SL1.07
600 DIA PPIC
CL: 35.905
IL: 33.620
150mm DIA @1:6.2
RWP FA
RWP FA
RWP FA
SL8.00
600 DIA PPIC
CL: 35.905
IL: 34.220
SL1.06
600 DIA PPIC
CL: 35.905
IL: 33.695
150mm DIA @1:80
150mm DIA @1:100
SL1.05
600 DIA PPIC
CL: 35.905
IL: 34.935
FL1.04
450 DIA PPIC
CL: 35.905
IL: 34.610
Sub-Station
26 m²
SL1.04
600 DIA PPIC
CL: 35.905
IL: 33.990
150mm DIA @1:100
150mm DIA @1:80
150mm DIA @1:100
150mm DIA @1:100
Residential Refuse Store 3
68m²
LV Switch
39 m²
Fire Escape
Luggage Store
21 m²
Plant
16 m²
Comms
11 m²
BOH Office
13 m²
Fire Escape
Residential Refuse Store 1
52 m²
FL1.02
450 DIA PPIC
CL: 35.930
IL: 35.280
150mm DIA @1:51.1
RISING MAIN LOCATION AND CONNECTION TO BE AGREED WITH BUILDING SERVICES ENGINEER
FL1.01
610 DIA PACKAGE PUMPING STATION
REFER TO SPECIFICATION BELOW
CL: 33.300
PIPE IL: 32.300
CHAMBER BL: 31.630
150mm DIA @1:80
SL6.00
600 DIA PPIC
CL: 35.905
IL: 34.165
Hotel & Resturant Refuse
10 m²
Residential Refuse Store 2
81 m²
FL1.03
450 DIA PPIC
CL: 35.905
IL: 34.855
Commercial Sprinkler Tank
Tanks
FL1.00
450 DIA PPIC
CL: 33.300
IL: 32.400
Hotel & Resturant Refuse
Commercial Sprinkler Pumps
Hotel & Resturant Refuse
11 m²
RWP
2440mm DIA COMBINED SEWER
EXTENTS OF PHASE 1
EXG DP
RWP
EXG DP
RWP
SL1.00
600 DIA PPIC
CL: 36.310
IL: 34.820
150mm DIA @1:100
100mm DIA @1:100
SL1.01
600 DIA PPIC
CL: 36.600
IL: 34.720
RWP
150mm DIA @1:51.5
SL1.02
600 DIA PPIC
CL: 35.760
IL: 34.410
150mm DIA @1:25.7
SL1.03
600 DIA PPIC
CL: 35.630
IL: 34.165
150mm DIA @1:100
SL3.02
1200 DIA HYDRO DOWNSTREAM DEFENDER
CL: 35.635
IL: 34.250
150mm DIA @1:100
SL3.01
600 DIA PPIC
CL: 35.680
IL: 34.265
150mm DIA @1:100
SL3.00
600 DIA PPIC
CL: 35.680
IL: 34.310

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RENAISSANCE, ARCHITECTS, LANDSCAPE ARCHITECTS AND BUILDING SERVICES ENGINEERS DRAWINGS.
2. THE FINAL CONNECTION TO THE PUBLIC SEWER IS SUBJECT TO UNITED UTILITIES APPROVAL AND IS TO BE IN ACCORDANCE WITH THEIR AGREED DETAILS.
3. FOR ALL ABOVE GROUND DRAINAGE AND ASSOCIATED PUMPS REFER TO BUILDING SERVICES AND ARCHITECT'S DRAWINGS
4. 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.
5. 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.
6. ALL GULLY AND CHANNEL DRAIN LOCATIONS INDICATIVE.REFER TO ARCHITECT AND LANDSCAPE ARCHITECT DRAWINGS FOR SETTING OUT AND SPECIFICATION.
7. THE ATTENUATION TANK AND FLOW CONTROL ARE TO BE TO SUPPLIERS DESIGN AND DETAILS. INSTALLATION IS TO BE IN ACCORDANCE WITH THE SUPPLIERS REQUIREMENTS.
8. 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.
9. DURING THE WORKS ALTERATIONS TO THE DRAINAGE LAYOUT ARE TO BE MARKED UP BY THE CONTRACTOR AND AGREED WITH RENAISSANCE IN WRITING.
10. 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.
11. 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.
12. 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.
13. ALL SEWERS TO BE BSI KITEMARK (CERTIFIED TO WIS 4-35-01)
14. ALL CONCRETE PIPES TO BE TO ES EN 1916 CLASS 120 (54kN/m).
15. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2).
16. 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/BS5911-1 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.
20. 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.

DRAWING LEGEND

- INDICATIVE PRIVATELY DRAINED AREA
- INTERFACE BOUNDARY BETWEEN PHASE 1 AND 2 AT GROUND FLOOR LEVEL
- PROPOSED SURFACE WATER DRAINAGE NETWORK
- PROPOSED FOUL WATER DRAINAGE NETWORK
- PROPOSED COMBINED WATER DRAINAGE NETWORK
- EXISTING UNITED UTLITIES WATER COMBINED SEWER
- APPROXIMATE EXTENT OF PROPOSED GEO-CELLULAR ATTENUATION TANK

SPRINKLER TANK OPERATION AND DRAIN-DOWN
NO ALLOWANCE HAS BEEN MADE WITHIN THE DESIGN FOR THE BASEMEN FLOODING OR FOR DRAIN-DOWN OF THE SPRINKLER TANK. WATER ASSOCIATED WITH EMPTYING OR TESTING OF THE SPRINKLER TANK IS TO BE MANAGED SEPARATELY AND IS NOT TO DISCHARGE INTO THE BASEMENT DRAINAGE.
MANAGEMENT STRATEGY IS TO BE CONFIRMED BY BUILDING SERVICES ENGINEER

IF BUNDING IS REQUIRED AROUND THE SPRINKLER TANKS THE LOCATION AND EXTENT SHOULD BE ADVISED BY THE ARCHITECT AND BUILDING SERVICES ENGINEER AND ALLOWANCES SHOULD BE MADE FOR A REINFORCED MASONRY BUND WALL

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

PROTECTIVE COVER SLAB
ALLOW FOR PROTECTIVE CONCRETE COVER SLAB OVER ANY DRAINAGE BENEATH TRAFFICKED AREAS WITH LESS THAN 1200mm COVER.

EXISTING SERVICES
UTILITY SCAN INDICATES BURIED SERVICES BENEATH THE SITE. UTILITY SCAN TO BE REVIEWED PRIOR TO ANY EXCAVATION WORKS.

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

ALL STORAGE VOLUMES ARE INDICATVIE ONLY AND SUBJECT TO CHANGE AS THE DESIGN PROGRESSES.

SVP AND RWP SETTING OUT
DRAINAGE INDICATED ON THIS DRAWING HAS BEEN PRODUCED WITH NO INPUT FROM A BUILDING SERVICES ENGINEER.

SVP AND RWP LOCATIONS ARE TO BE SET OUT AT STAGE 3

ALL CONNECTIONS BETWEEN ABOVE GROUND AND BELOW GROUND DRAINAGE TO BE SIZED TO SUIT ABOVE GROUND DRAINAGE

EXISTING GMPTE DRAINAGE TO BE DIVERTED AROUND CANOPY FOUNDATIONS

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 PROVIDED, IN ACCORDANCE WITH B7.6 OF THE SEWERAGE SECTOR GUIDANCE APPENDIX C. A TREE SHOULD NOT BE PLANTED DIRECTLY OVER A SEWER OR WHERE THE EXCAVATION ONTO THE SEWER WOULD REQUIRE THE REMOVAL OF THE TREE.

FOUL WATER PUMPING STATION
292 LITRE SINGLE PUMPING STATION
CHAMBER SIZE: 610mm x 1000mm HDPE
RISING MAIN: 63mm MDPE CONNECTOR TO CONNECT TO DISCHARGE PIPEWORK.
INLET: 2 NUMBER 110mm INLET SEAL
PUMP: DAB FEKA VS750 SUBMERSIBLE PUMP WITH INTEGRAL FLOAT
INTERNAL: 2" PIPEWORK AND FITTINGS INCLUDING BACKWATER VALVE ALARM TO BE INCLUDED
NOTE:
1. THERE MUST BE A MINIMUM OF 450mm BELOW THE BOTTOM OF THE INLET PIPE TO THE BASE OF THE CHAMBER TO ALLOW FOR THE PUMP TO OPERATE.
2. INLETS TO BE CUT ON SITE AND SEALED
3. ALLOW FOR MAINTENANCE ACCESS OF PUMPING STATION. REFER TO PUMP STATION MAINTENANCE REQUIREMENTS

Rev:	Description:	Date:	By:	Chkd:
P01	ISSUED FOR PLANNING	08.11.24	HW	KG

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Project:
VIADUX PHASE 2, MANCHESTER

Drawing Title:
BLOCK C, D & E - LEVEL 00 BELOW GROUND DRAINAGE PLAN

Status:
RIBA STAGE 2

Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	NOV 24	HW	--	KG

Scale: 1:125
Project No: 2209-01

Project:	Originator:	Volume:	Level:	Type:	Role:	Category/Number:	Rev:
V2B	REN	CC	00	DR	C	01100	P01

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