PILE CAPS	
TYPE	DESCRIPTION
750 x 750 x 900mm 1 PILE CAP	GRADE 40/50 CONCRETE PILE CAP. ALLOW 130kg/m3 OF REINFORCEMENT
2100 x 750 x 900mm 2 PILE CAP	GRADE 40/50 CONCRETE PILE CAP. ALLOW 130kg/m3 OF REINFORCEMENT
2100 x 1950 x 900mm 3 PILE CAP	GRADE 40/50 CONCRETE PILE CAP. ALLOW 130kg/m3 OF REINFORCEMENT
2100 x 2100 x 900mm 4 PILE CAP	GRADE 40/50 CONCRETE PILE CAP. ALLOW 130kg/m3 OF REINFORCEMENT
2100 x 2100 x 1500mm 4 PILE CAP	GRADE 40/50 CONCRETE PILE CAP. ALLOW 130kg/m3 OF REINFORCEMENT
2700 x 2700 x 1200mm 5 PILE CAP	GRADE 40/50 CONCRETE PILE CAP. ALLOW 130kg/m3 OF REINFORCEMENT
3450 x 750 x 900mm 3 PILE CAP	GRADE 40/50 CONCRETE PILE CAP. ALLOW 130kg/m3 OF REINFORCEMENT
4800 x 2100 x 1200mm 8 PILE CAP	GRADE 40/50 CONCRETE PILE CAP. ALLOW 130kg/m3 OF REINFORCEMENT

GROUND BEAM		
REF.	TYPE	DESCRIPTION
GB	600 x 450mm GROUND BEAM	GRADE 32/40 CONCRETE GROUND BEAM. ALLOW 230kg/m3 OF REINFORCEMENT
GB1	800 x 450mm GROUND BEAM	GRADE 32/40 CONCRETE GROUND BEAM. ALLOW 230kg/m3 OF REINFORCEMENT

NOTE: COMBINED PILE CAPS WHICH SUPPORT CORE WALLS, COLUMNS AND/OR RETAINING WALLS TO BE CONSIDERED TO HAVE A DEPTH OF 2.1m. THIS DEPTH IS SUBJECT TO DETAILED DESIGN ASSESSMENT TO ENSURE ADEQUACY AGAINST OVERTURNING DUE TO WIND LOADING.

PILES TYPE:

PILE WALL: 600mm DIAMETER ROTARY BORED PILES CAPABLE OF RESISTING 1350kN/pile AXIAL LOAD (SLS). PILES CAN BE DESIGNED WITH A TIE AT THE BASEMENT FLOOR AND GROUND FLOOR LOCATIONS IN THE FINAL CASE, BUT MAY BE UNRESTRAINED IN THE CONSTRUCTION STAGE (CONSTRUCTION SEQUENCE TO BE AGREED WITH UNITED LIVING). MAXIMUM ALLOWABLE DEFLECTION AT GROUND LEVEL TO BE 25mm.

FOUNDATION PILES: 450mm DIAMETER ROTARY BORED PILES CAPABLE OF RESISTING 1000kN/pile AXIAL LOAD (SLS) PILES TO BE DESIGN NOMINALLY UNRESTRAINED AT THE HEAD. LATERAL LOAD OF 40kN PER PILE UNDER CORES TO BE ALLOWED FOR. NOMINAL LATERAL LOAD OF 10kN ELSEWHERE (SLS).

SUBJECT TO DETAILED DESIGN BY SPECIALIST PILING CONTRACTOR

REFER TO LRW DRAWINGS FOR THE RED LINE BOUNDARY

REFER TO DRAWING **3060** & **3061** FOR CORE FOUNDATION PLAN

GENERAL NOTES (Buildings)

1. This drawing to be read in conjunction with all relevant drawings and specifications from Fairhurst and from other consultants and specialists.
2. Do not scale from Fairhurst drawings, or derive dimensions from digital media; use figured dimensions only. If in doubt, ask.
3. All dimensions are in millimetres unless noted otherwise.
4. All levels are in metres and relate to Ordnance Datum unless noted otherwise.
5. For building and grid setting out refer to architectural drawings.
6. All members are assumed to be set out central on grid, with levels to top of member unless noted otherwise.
7. Refer to architectural drawings for waterproofing details to DPC and above. Basement tanking to specialist design – any details shown on Fairhurst drawings are indicative.
8. Refer to architectural or fire engineering information for details of any fire protection required to the structure.
9. Any temporary works required for the construction of the permanent works shall be the responsibility of the contractor and designed by a suitably experienced and qualified person appointed by the contractor.
10. It is noted that the permanent works are designed to be stable in the final condition. The contractor should ensure stability of the works at all times, including that of any existing buildings that may be on the site.
11. Materials and products specified on the drawings shall be as stated or of equal specification, approved by the engineer in writing. All are to be installed in accordance with the manufacturer's recommendations.
12. All workmanship and materials shall comply with the latest codes of practice and in line with Local Authority, Statutory Authority and Health and Safety regulations.

FOUNDATION NOTES

1. The final surface of the formation shall be smooth and level, free from ridges or ruts, cracks, loose material or other defects.
2. Reinforced foundations should be cast on a minimum of 50mm concrete blinding, which shall be a minimum of a GEN0 designated mix.
3. Finishes to the foundations to be 'Basic' for all below ground structures with unformed finishes, in accordance with the definition in BS EN 13670 and the NSCS. Refer back to the architect and engineer for instruction should any of the concrete faces be visible.

PILING NOTES

1. All Piling and testing to be in accordance with ICE Specification for piling and embedded retaining walls (SPERW).
2. Piles to be designed in accordance with BS EN 1997-1 (Eurocode 7) by the piling specialist.
3. The specialist designer shall determine the load combinations and partial factors to use for the loadings stated upon the engineer's drawing.
4. The piles are to be designed nominally unrestrained at the head.
5. A minimum factor of safety of 2.5 is to be used in the design.
6. The pile designer may select the piling type and size most suitable for the task, considering the site location, access, installation, programme etc. However, this drawing has been prepared assuming 450 mm diameter CFA piles generally and 600 mm diameter piles for the contiguous piled wall. The pile designer / main contractor should advise the engineer at the earliest opportunity should they wish to deviate from this.
7. Piles are to be installed to a tolerance of +/- 75mm, and a rake of 1 in 75, with any eccentric effects that this may induce to be considered within the design.
8. The piles shall be designed to have a maximum 25mm settlement at working loads and this shall include elastic shortening of the pile. The settlement between adjacent piles or pile groups shall be limited to an angular limit of L/750, assuming one pile or group is fully loaded and the adjacent pile or group carries 50% of its working load.
9. All piles to be Integrity tested.
10. Dynamic load testing to be 50% of all piles with 50% to include CAPWAP analysis.
11. 3no. static load tests to be included to corroborate the Dynamic testing. Contractor to allow for any additional anchor piles that may be required.
12. Concrete strength and mix design to be selected by the pile designer to suit their design but shall take due attention from the Site Investigation for the required Design Chemical Class.
13. Concrete cubes to be taken from for strength testing in line with ICE SPERW.
14. Boring and concrete supply records for each pile to be supplied to the engineer within 24 hours of the pour for our review and in any case prior to pile head breakdown.
15. Any anomalies within testing to be reported to the engineer within 24 hours of test completion for our review.
16. Piles to be embedded 75mm into the base of pile caps. Anchorage of bars from piles into piles caps to be agreed between specialist pile designer and engineer.

INSITU CONCRETE NOTES

1. All concrete works shall be in accordance with the latest version of the National Structural Concrete Specification (NSCS).
2. Concrete mixes for the concrete elements to BS 8500-2 shall be as follows:
   Elevated slabs and Ground Floor slab - designated mix of RC32/40
   Basement slab - designated mix of RC32/40 with Waterproof additive (dosage to manufacturer recommendations)
   Columns - designated mix of RC40/50
   Cores/Shear Walls - designated mix of RC40/50
   Pile caps - designated mix of RC32/40
   Liner walls to Basement - designated mix of RC32/40 with Waterproof additive (dosage to manufacturer recommendations)
   External retaining walls - designated mix of RC32/40
3. The contractor shall allow for making and testing concrete cubes at a rate of three cubes per day per type of concrete mix being poured or otherwise as noted in the NSCS. The testing shall be undertaken by a UKAS accredited company, and the results made available to the engineer at the earliest opportunity for review.
4. Finishes to the concrete elements to be as follows, in accordance with the definitions in BS EN 13670 and the NSCS:
   Elevated Slabs Surface/Soffit - Ordinary/Ordinary
   Columns - Plain
   Core walls - Plain
   Retaining Walls Base/Stem - Basic/Plain
   Refer back to the architect and engineer for instruction should any of the concrete faces be visible in the final case, as Special finishes may be required.
5. No holes, chases, embedment of pipes etc shall be made in the concrete members, other than as shown on the structural drawings.
6. Construction Joints and Day Joints in concrete members shall be as shown on the drawings, or as otherwise agreed with the engineer in writing. Faces of Day Joints to be suitably prepared for aggregate interlock.
7. Kickers of 150mm height shall be used for vertical elements, to ensure correct placement of formwork, with the top face suitably prepared for aggregate interlock. Kicker-less construction may be permitted with the approval of the engineer in writing.
8. Allow for 25mm chamfer to all exposed arrises.
9. Proposals for the casting sequence to be submitted to the engineer for comment in adequate time prior to concrete pour.
10. Immediately following pouring, concrete to be protected from rain, significant weather of hot sun, or frost/ice/snow. In extremes of hot and cold, refer to the engineer for further instruction on casting in these conditions.
11. All reinforcement to be high-yield grade B500B conforming to BS 4449.
12. The contractor may allow the following reinforcement densities for tender purposes:
    Elevated slabs - 130 kg/m^3
    Columns - 275 kg/m^3
    Core/Shear walls/Parapets - 150 kg/m^3
    Pile caps - 130 kg/m^3
    Ground beams / Capping beam - 230 kg/m^3
13. The contractor should make their own allowances for any additional steel required as chairs, support, bracing etc to allow placing of the bars as called off by the engineer. Fabric reinforcement (mesh) will not be scheduled.

DO NOT SCALE FROM THIS DRAWING

SAFETY HEALTH AND ENVIROMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

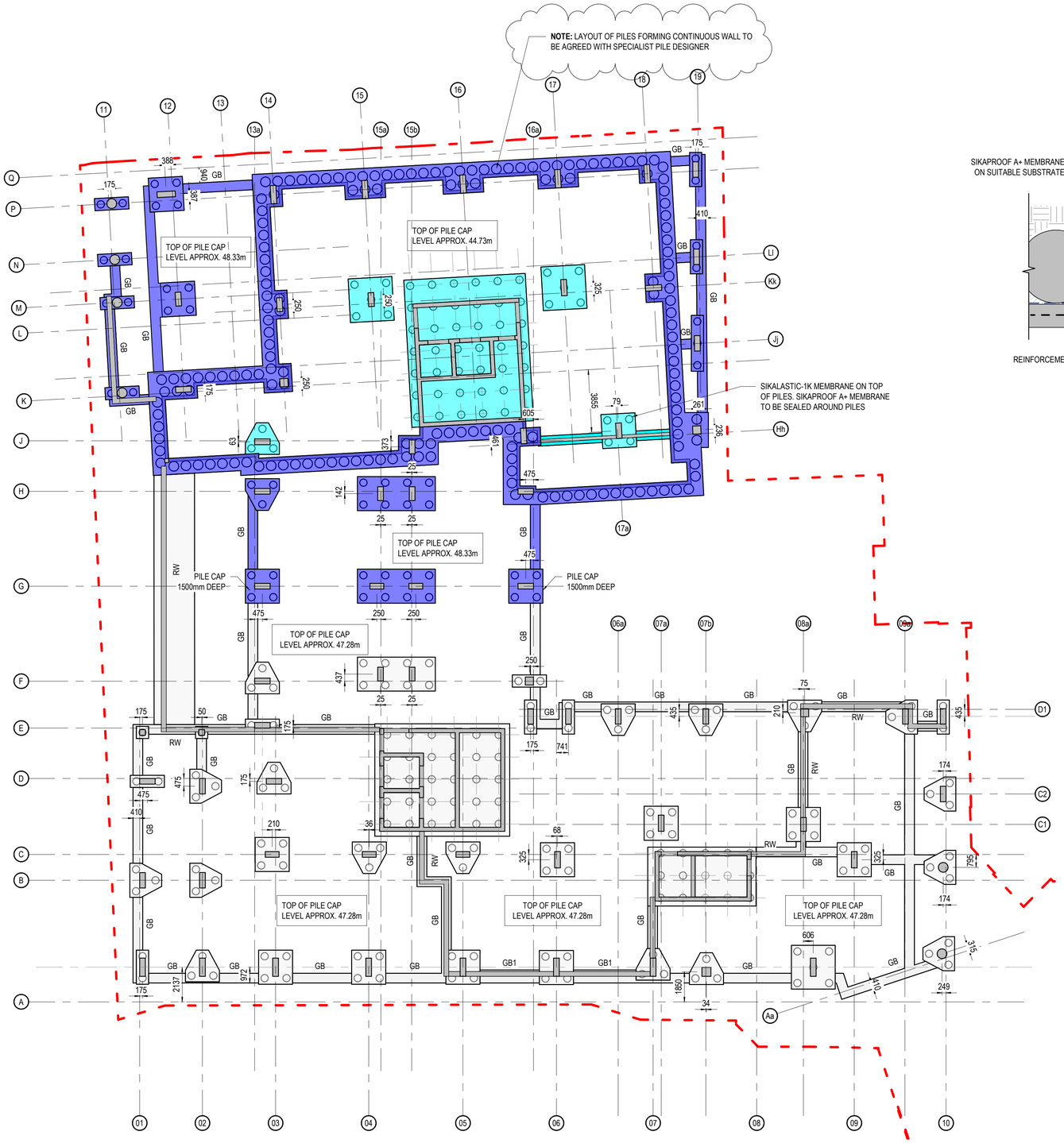
RISK LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO.

CONSTRUCTION
PROXIMITY TO ADJACENT BOUNDARIES AND EXISTING STRUCTURES
RETENTION CONSTRUCTION CLOSE TO FOOTPATH CONTAINING SERVICES
EXCAVATIONS FOR SUBSTRUCTURE AND RETENTION

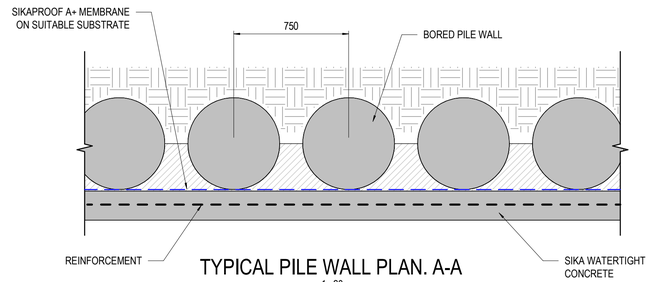
DEMOLITION
DEMOLITION OF EXISTING DERELICT BUILDING REMOVING SUPPORT FROM SAMS YARD

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFTEY FILE.

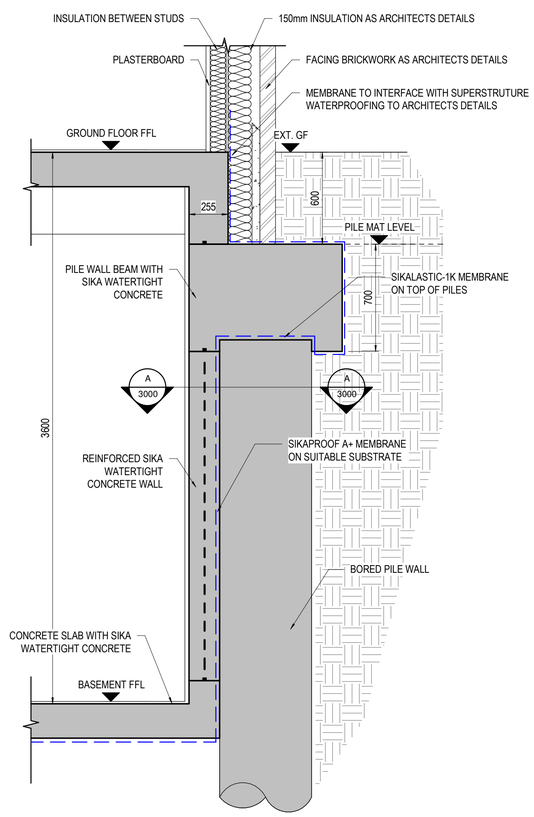
IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.



FOUNDATION PLAN
1 : 150



TYPICAL PILE WALL PLAN. A-A
1 : 20



TYPICAL PILE WALL SECTION
1 : 20

Rev	Date	Description	Dm/Chkd/Appd.
P8	19.01.24	NOTES ADDED, COLUMNS POSITION UPDATED, DETAIL UPDATED, DIMENSIONS ADDED	JR/MT/JT
P7	01.12.23	CORE PILES UPDATED	JR/MT/JT
P6	27.11.23	PILE CAPS UPDATED	JR/MT/JT
P5	01.09.23	COLUMN POSITION UPDATED	JR/MT/JT
P4	01.08.23	WATERPROOF MEMBRANE DETAILS AND BASEMENT LEVEL UPDATED	JR/MT/JT
P3	16.06.23	FOUNDATIONS UPDATED	JR/MT/JT
P2	26.05.23	COLUMNS MOVED	JR/MT/JT
P1	19.05.23	STRUCTURE UPDATED	JR/MT/JT

Revisions

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Client
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Project Title
1NQ BLOCK 1
TARIFF STREET
MANCHESTER

Drawing Title
FOUNDATION G.A.

Scale @ A1	Purpose of issue	
As indicated	TENDER	
Drawn	Checked	Approved
JR	JM	JT
Drawn Date	Checked Date	Approved Date
09.11.2022	09.11.2022	09.11.2022

Drawing Number.
143404 - FAI- B1- F1- DR- S- 3000- P8