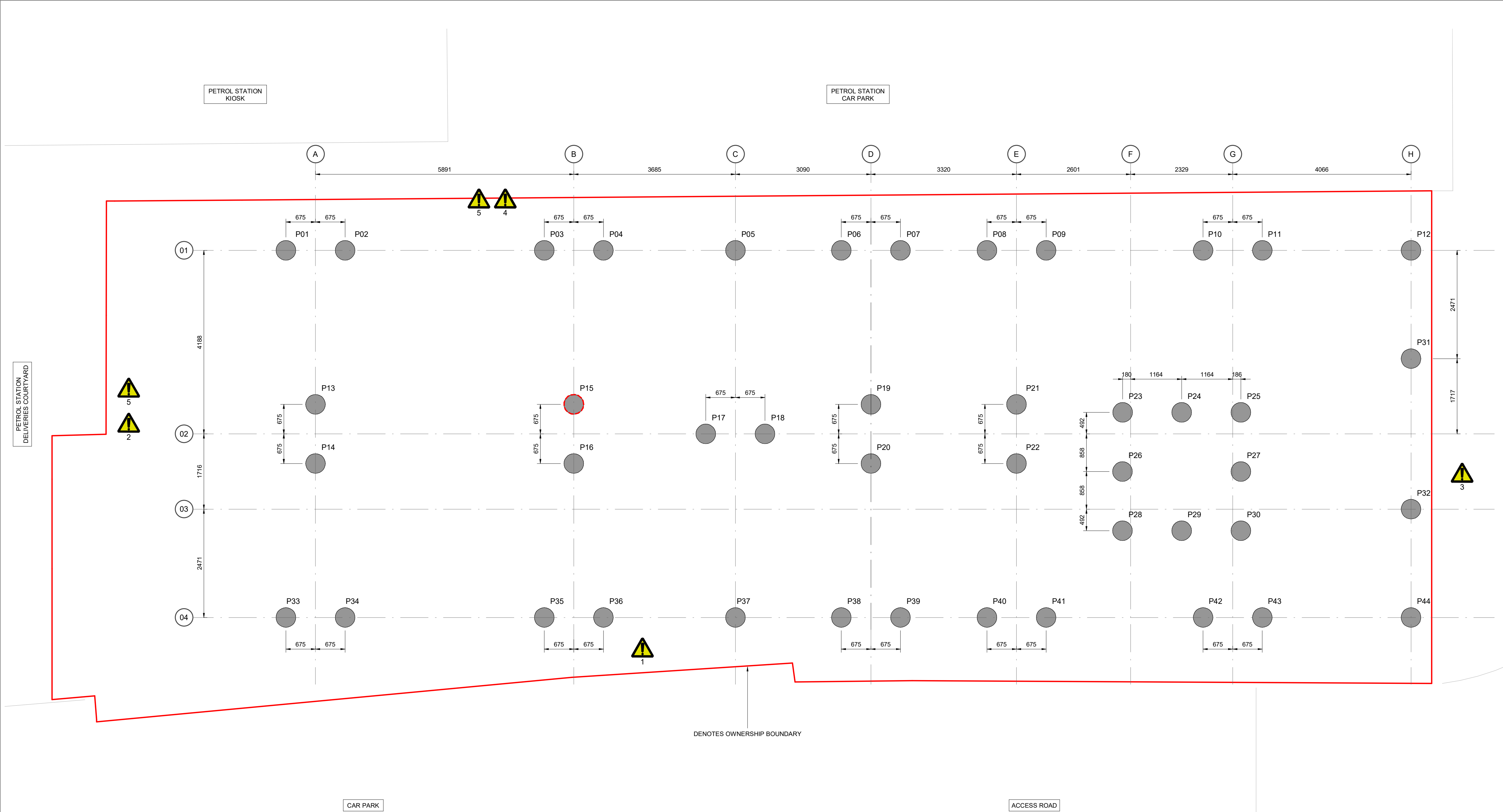




- NOTES:**
1. REFER TO DRAWING BSM-REN-00-XX-DR-S-00010 FOR GENERAL NOTES.
 2. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
 3. DO NOT SCALE FROM THIS DRAWING. ANY AMBIGUITIES OR ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS TO BE CHECKED/VERIFIED ON SITE.
 4. ALL LEVELS ARE IN METERS, ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
 5. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE PROJECT DESIGN PHILOSOPHY. RENAISSANCE DOCUMENT REFERENCE:- BSM-REN-00-XX-RP-S-00020.

- PILING NOTES:**
1. ALL PILING TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ICE SPECIFICATION FOR PILING AND EMBEDDED RETAINING WALLS AND THE PROJECT PILING SPECIFICATION. RENAISSANCE DOCUMENT REFERENCE:- BSM-REN-00-XX-SP-S-00080.
 2. THE PILING DRAWINGS ARE TO BE CONSIDERED AS 'DESIGN INTENT' AND MAY BE SUBJECT TO DESIGN DEVELOPMENT.
 3. THE PILING CONTRACTOR IS TO CONFIRM THAT THE GROUND INVESTIGATION AND OTHER INFORMATION PROVIDED IS SUITABLE FOR THEIR DESIGN. THE PILING CONTRACTOR IS TO ADVISE OF ANY ADDITIONAL INVESTIGATIONS IN THEIR TENDER RETURNS IF DEEMED NECESSARY.
 4. ALL PILES ARE TO BE DESIGNED BY THE PILING CONTRACTOR FOR THE WORST COMBINATION OF THE LOADS STATED. THE PILING CONTRACTOR IS TO SUBMIT THE DESIGN FOR REVIEW BY THE ENGINEER WHEN APPROPRIATE, INCLUDING DETAILS OF THE PARTIAL SAFETY FACTORS AND MODEL FACTORS ADOPTED IN THE DESIGN.
 5. ALL PILES ARE TO BE DESIGNED AS 'PINNED' HEAD, WITH NO LATERAL OR ROTATIONAL RESTRAINT PROVIDED BY THE FOUNDATIONS AND FRAME ABOVE, UNLESS REQUIRED FOLLOWING DETAILED PILE DESIGN.
 6. THE PILING CONTRACTOR IS TO ALLOW FOR UNDERTAKING STATIC LOAD TESTS ON WORKING PILES TO VERIFY THEIR DESIGN AND LOAD SETTLEMENT CHARACTERISTICS. ALL PILES TO BE INTEGRITY TESTED. A MINIMUM OF 1% OF ALL WORKING PILES ARE TO BE STATICALLY LOAD TESTED.
 7. PILING CONTRACTOR TO CLASSIFY THE SITE RISK LEVEL IN LINE WITH THE FPS HANDBOOK ON PILE LOAD TESTING INCLUDING SUBMISSION OF RELEVANT SCHEDULES, PAST PROJECTS AND OTHER RELEVANT DATA. ALL INFORMATION TO BE SUBMITTED TO THE ENGINEER FOR REVIEW.
 8. THE ACCESS ROUTE FOR ANY PILING EQUIPMENT IS TO BE ASSESSED BY THE CONTRACTOR'S TEMPORARY WORKS DESIGNER IN CONJUNCTION WITH THE PILING CONTRACTOR. PILING PLATFORM TO BE DESIGNED AS PART OF THE CONTRACTOR'S TEMPORARY WORKS PACKAGE AND PROVIDED AS NECESSARY TO ALLOW THE WORKS TO BE UNDERTAKEN IN A SAFE MANNER.
 9. PILING CONTRACTOR SHOULD REFER TO THE GROUND INVESTIGATION AND ADOPT A SUITABLE CONCRETE GRADE AND MIX IN ACCORDANCE WITH BRE DIGEST 1:SD1 THIRD EDITION (2005).
 10. ALL PILES TO BE UNIFORMLY REINFORCED AROUND CIRCUMFERENCE.
 11. INTERACTIONS BETWEEN EXISTING STRUCTURES/SERVICES/HIGHWAYS/FOUNDATIONS AND THE PILES MUST BE CONSIDERED BY THE PILING CONTRACTOR.
 12. ALL PILES TO BE DESIGNED FOR A DESIGN LIFE OF 120 YEARS.
 13. PILING CONTRACTOR SHOULD REFER TO THE GROUND INVESTIGATIONS AND ADOPT A SUITABLE CONCRETE GRADE AND MIX IN ACCORDANCE WITH THE BRE DIGEST 1: SD1 THIRD EDITION (2005).

PILE KEY:

- 450mm DIA CONTINUOUS FLIGHT AUGER (CFA) END BEARING PILES TO PILING SPECIALIST CONTRACTORS DESIGN.
- 450mm DIA STATIC LOAD TEST PILE (WORKING PILE)

HEALTH & SAFETY NOTES:
IN ADDITION TO THE HAZARDS AND RISKS NORMALLY ASSOCIATED WITH WORKS OF THIS NATURE PLEASE NOTE THE FOLLOWING ABNORMAL RISKS IDENTIFIED

- 1** **CONSTRUCTION** – THIS ELEVATION ABUTS AN EXISTING LOW LEVEL MASONRY WALL SUPPORTING A BOUNDARY FENCE FORMING A PARTY WALL INTERFACE. ALL CONSTRUCTION AND PERMANENT WORKS MUST ENSURE THAT STABILITY IS MAINTAINED AND THAT THERE IS NO DISTURBANCE TO THE WALL/FENCE OR THE EXISTING FOUNDATIONS WHICH MAY PROJECT TOWARD THE FACADE. NO UNDERMINING OR ADDITIONAL LOADING PERMITTED.
- 2** **CONSTRUCTION** – THE SITE BOUNDARY TO THIS ELEVATION IS DENOTED BY A MASONRY PARTY WALL. ITS STABILITY IS TO BE MAINTAINED THROUGHOUT CONSTRUCTION. NO UNDERMINING OR ADDITIONAL LOADING PERMITTED INCLUDING THE PLACING OF CONSTRUCTION MATERIALS WITHOUT A FULL ASSESSMENT BY A TEMPORARY WORKS ENGINEER.
- 3** **CONSTRUCTION** – THIS ELEVATION INTERFACES WITH AN EXISTING FOOTWAY WITH UNKNOWN BURIED SERVICES BENEATH. PRIOR TO CONSTRUCTION WORKS BEING UNDERTAKEN, A GPR SURVEY IS TO BE UNDERTAKEN TO IDENTIFY ALL SERVICES WITHIN THE FOOTWAY AND SURROUNDING AREAS INCLUDING WITHIN THE SITE BOUNDARY. ALL SERVICES ARE TO BE LOCATED AND MARKED AT GROUND LEVEL PRIOR TO COMMENCEMENT OF THE CONSTRUCTION WORKS. TRACKING OF CONSTRUCTION PLANT ACROSS THIS FOOTWAY TO BE REVIEWED BY A TEMPORARY WORKS ENGINEER TO ENSURE THE SERVICES ARE PROTECTED FROM DAMAGE (PILE MAT MAY NEED EXTENDING ACROSS THE FOOTWAY).
- 4** **CONSTRUCTION** – THIS ELEVATION INTERFACES WITH AN EXISTING BOUNDARY MASONRY WALL AND KIOSK BUILDING FORMING A PARTY WALL. THE EXTENT AND DEPTH OF THE EXISTING KIOSK BUILDING FOUNDATIONS ARE NOT KNOWN. A SUITABLE RETAINING SYSTEM IS REQUIRED TO ENSURE NO DISTURBANCE OR IMPACT ON THE WALL STABILITY DURING THE PERMANENT AND TEMPORARY WORKS. NO UNDERMINING OR ADDITIONAL LOADING PERMITTED.
- 5** **CONSTRUCTION** – ATTENTION IS DRAWN TO THE PARTY WALLS AND THE CONDITION, MOVEMENT AND CRACK MONITORING AND VIBRATION MONITORING MUST BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS

- EXCLUSIONS FROM THE AS DRAWN**
THE AS DRAWN STRUCTURAL SOLUTION IS REPRESENTATIVE OF THE COORDINATION AND INPUTS TO DATE. FURTHER DESIGN DEVELOPMENT/SUPPLY CHAIN ENGAGEMENTS/SURVEYS ARE REQUIRED TO DEVELOP THE CONSTRUCTION SOLUTION. THE FOLLOWING PROVISIONAL ALLOWANCE ESTIMATES SHOULD BE CONSIDERED. THESE SHOULD BE CONFIRMED WITH THE RELEVANT SUPPLY CHAIN PARTNERS/SUB CONTRACTORS:-
- GPR SURVEY** – WHILST AN EXISTING TOPOGRAPHICAL SURVEY EXISTS FOR THE SITE, NO GPR SURVEY APPEARS TO HAVE BEEN UNDERTAKEN. THIS SURVEY SHOULD BE UNDERTAKEN WITHIN THE SITE BOUNDARY AND THE IMMEDIATE PERIMETER TO ENSURE A FULL UNDERSTANDING OF THE EXISTING UNDERGROUND SERVICES CONTAINED WITHIN AND SURROUNDING THE SITE. PRIOR TO CONSTRUCTION WORKS, ALL EXISTING SERVICES ARE TO BE LOCATED AND MARKED AT GROUND LEVEL.
 - PILING MAT** – ALLOWANCE SHOULD BE MADE FOR AN EXTENSION OF THE PILING MAT OVER THE TOP OF THE EXISTING FOOTWAY TO THE BRUNSWICK STREET ELEVATION TO ALLOW PLANT TRACKING ONTO SITE WITHOUT DAMAGE OF ANY EXISTING UNDERGROUND SERVICES. PILING MAT AND ASSESSMENT OF PLANT WEIGHTS AND POTENTIAL FOR DAMAGE TO SERVICES TO BE ASSESSED BY THE TEMPORARY WORKS ENGINEER. MAIN CONTRACTOR TO PROVIDE PLANT DATA SHEETS TO INFORM THE TEMPORARY WORKS ENGINEERS ASSESSMENT.
 - STEEL STAIRCASE** – STEEL STAIRCASE REQUIRES COORDINATION, SIZES, DESIGN AND CONSTRUCTION DETAILS TO BE BY THE ARCHITECT AND STAIRCASE DESIGN SPECIALISTS.
 - STEELWORK CONNECTIONS** – ALLOW MINIMUM 10% ADDITIONAL TONNAGE FOR STEELWORK CONNECTIONS. TO BE CONFIRMED BY THE STEELWORK FABRICATOR UPON COST SUBMISSION. MOMENT CONNECTIONS TO HAVE ADDITIONAL CONNECTION ENHANCEMENT ALLOWANCE (SUGGEST 20%).
 - FIRE PROTECTION** – FOR FIRE PROTECTION TO STEELWORK, ALLOW FOR INTUMESCENT PAINT PROTECTION TO ALL STEELWORK TO SPECIALIST DESIGN AND DETAIL TO ACHIEVE FR80 IN ACCORDANCE WITH THE ARCHITECTS FIRE STRATEGY.
 - PARTY WALL** – ENGAGEMENTS ARE REQUIRED ALONG THE PARTY WALL ELEVATIONS INCLUDING APPLICATIONS AND NOTICES. SUITABLE ALLOWANCE TO BE MADE WITHIN THE CONSTRUCTION PROGRAMME.
 - THERMAL BREAKS** – THE LOCATION OF THERMAL BREAKS ARE INDICATED ON PLAN. THE FINAL THICKNESS AND LOCATION RELATIVE TO THE THERMAL LINE ARE TO BE CONFIRMED BY THE ARCHITECT. ALLOW FOR A 25mm FARRAT TBK THERMAL PACK WITH SIZE AND HOLES TO SUIT THE STEELWORK FABRICATORS CONNECTION ARRANGEMENT. A CONDENSATION/THERMAL BRIDGING ASSESSMENT IS TO BE UNDERTAKEN BY A SPECIALIST TO CONFIRM THE FINAL REQUIREMENTS.
 - RISER FLOORING** – ALLOW FOR PROPRIETARY GRP / STEEL RISER FLOORING SYSTEMS TO ALL RISERS TO BE INSTALLED WITH STEEL FRAME AND FLOOR. FINAL DESIGN AND DETAILS BY THE SUPPLIER.
 - WATERPROOFING** – ALLOWANCE TO BE MADE FOR TANKING AND WATERPROOFING TO THE FOOTINGS / LIT PIT IN ACCORDANCE WITH THE ARCHITECTS DESIGN AND DETAILS.
 - BALCONY FLOORING** – SECONDARY FRAMING AND SUPPORT FOR THE BALCONY DECK SUPPORT, BALUSTRADES AND HANDRAILS ARE TO THE DESIGN OF OTHERS, IN ACCORDANCE WITH THE ARCHITECTS DETAILS.

P03	DRAWING NUMBER (LEVEL) REVISED	24.04.23	GM	CB
P02	P42 MOVED TO GL G04	14.04.23	GM	CB
P01	STAGE 4 ISSUE	31.03.23	GM	CB
Rev:	Description:	Date:	By:	Chkd:

rennaissance

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Manchester
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Project:
**BRUNSWICK STREET,
MANCHESTER**

Drawing Title:
PILING PLAN

Status:
STAGE 4

Size:	Date:	Drawn By:	Designed By:	Checked By:
A1	MAR 23	GM	VN	CB

Scale:	1 : 50	Project No:	2004-04
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Project Code: Originator: Volume: Level: Type: Role: Category/ Number: Rev:

BSM - REN - 00 - FN - DR - S - 01080 - P03