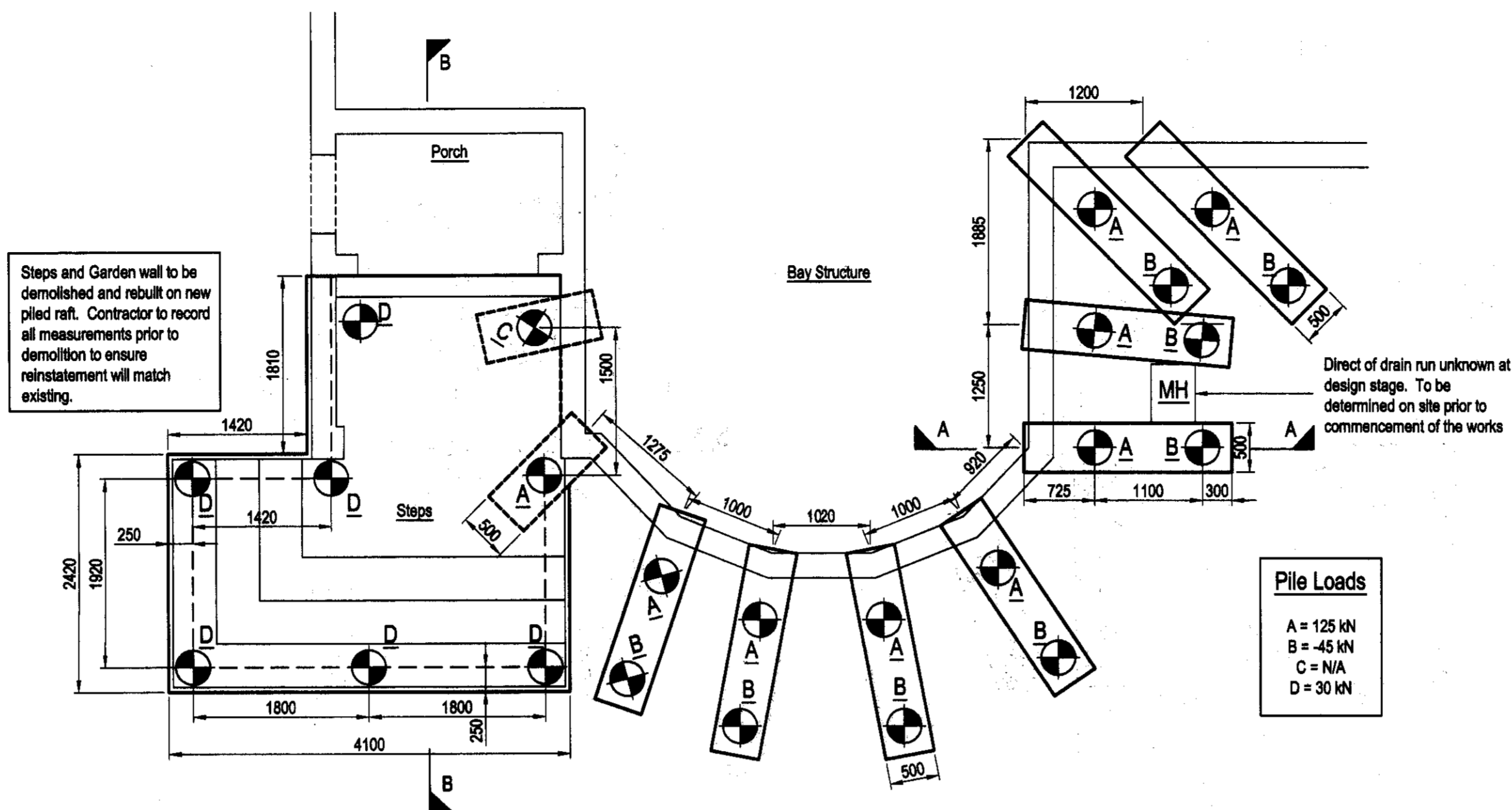


Traditional Underpinning to Basement.
Scale 1:50



Piled Underpinning Layout Plan
Scale 1:50

Underpinning

General
Underpinning is to be carried out in bays as indicated.
Prior to concreting, the underside of the existing foundations shall be carefully cleaned of all soil. The sides of the excavation and formation shall be protected from heavy rain or frost.
Concrete shall be placed with care avoiding loose soil or rubbish from falling into the excavation. The concrete shall be carefully compacted by the means of a mechanical poker vibrator.
The proposed underpinning works have been designed to improve the stability of the sections of the foundations that have suffered structural movement only and are not intended to include preventive underpinning to the other areas.
The underpinning depths shown are for tendering purposes only, the final depth should be agreed on site with the contract administrator and building control officer.
Underpinning bays are to be excavated from this direction to the depth shown below the external ground level.

The width and position of the underpinning bays relative to the wall above shown on the layout plan are indicative only - their final alignment must be agreed on site between the contract administrator and building control officer.
Sequence rules
The contractor shall agree the sequence of works on site with the contract administrator prior to commencing the works, the agreed sequence must be such that:
A) Not more than 20% of the total area to be underpinned is to be left in an unsupported condition at any one time.
B) Deeper piers are to be excavated and installed before adjoining shallower piers (if applicable - i.e. if the depth varies).
C) Maximum length of bays is as specified on the drawings.
D) 24 hours (min) is to elapse between concreting the bay and dry packing, 75mm minimum dry pack to be rammed between the underside of the existing footings and the top surface of the underpinning bay. Dry pack to be 75mm min thick of 3:1 Sand:Cement mix with expanding agent (Pulvisol or similar) with only enough water to hold mix together.
E) No adjacent bays are to be excavated until at least 24 hours after the dry-packing to any adjoining completed bay.
F) No departure from these rules will be permitted.

General

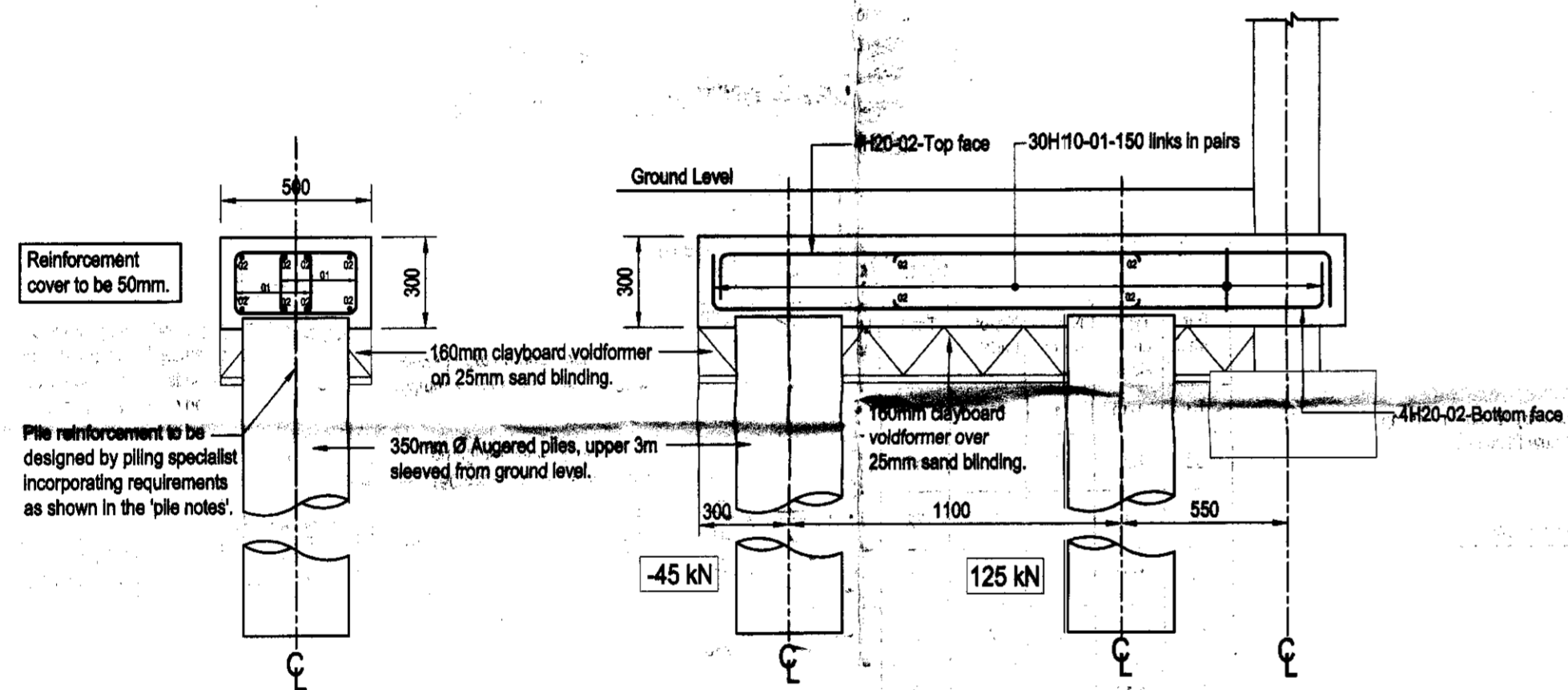
Do not scale off this drawing, except for planning purposes, the contractor shall check all dimensions and levels on site prior to demolition of the existing structure.
Any discrepancies are to be notified to the Contract Administrator (C.A). Contractor to locate all services prior to commencement of works & liaise with the C.A.
This drawing is to be read in conjunction with Cunningham Lindsey standard contract documentation & all other relevant contract documentation, unless alternative arrangements have been agreed. Layout is to remain unaltered unless otherwise agreed with contract administrator. All temporary works are to be designed & detailed by the contractor including the provision for pumping, shoring & propping. All excavations and exposed foundations are to be adequately supported by the contractor at all times in accordance with health and safety provisions.
All works to be in accordance with current building regulations.
All services to be located by contractor prior to commencement of any works on site.
All proprietary products are to be installed strictly in accordance with manufacturers recommendations.
On completion of the works the contractor is to be responsible for reinstating the surrounding ground finished surface to its original state.

Concrete

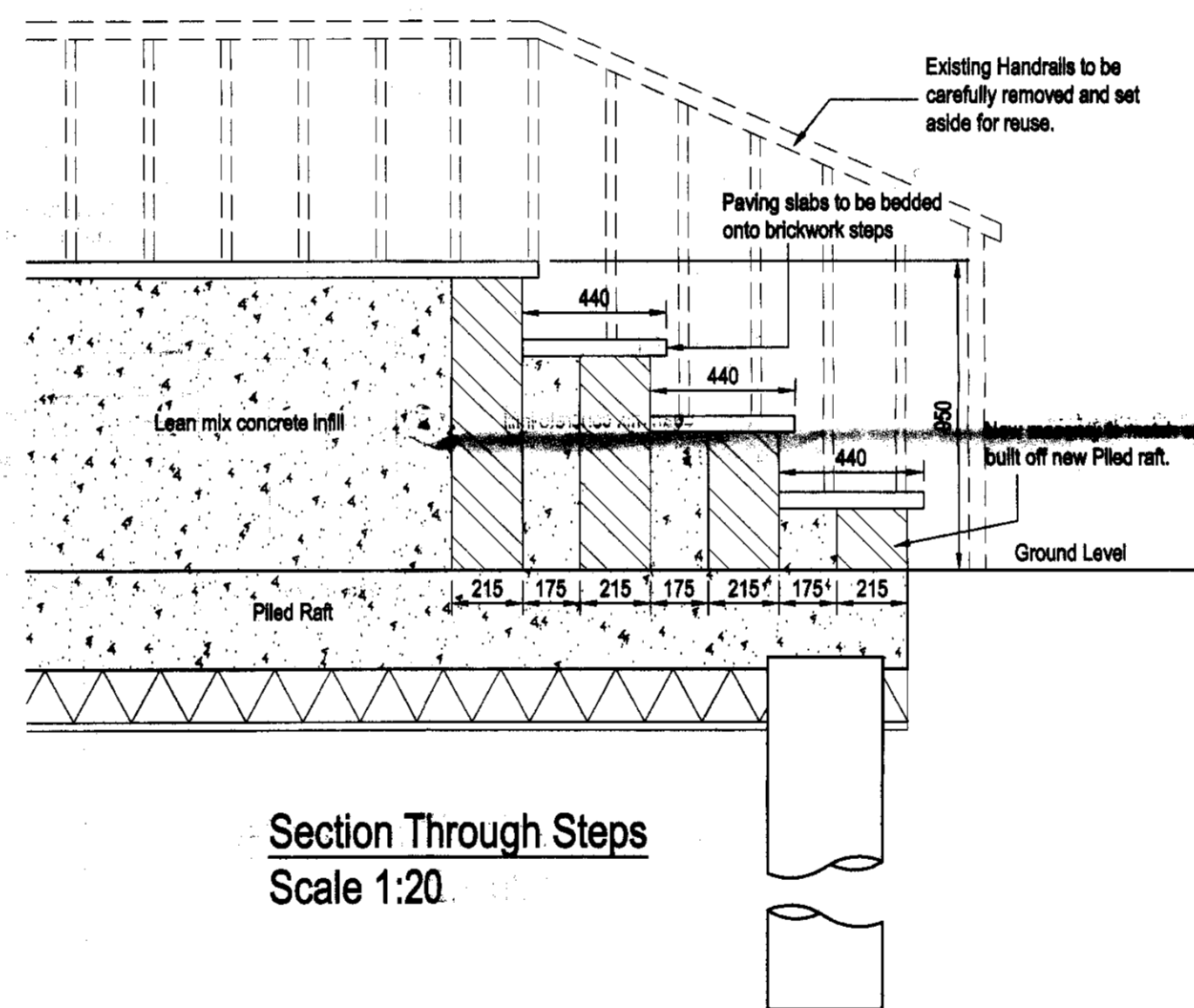
All work to be in accordance with BS 8110. All mass concrete for foundations to be min. C25/30.
All reinforced concrete to be Grade C32/40, and to have Class 2 concrete sulfate resistance. Water : Cement ratio to be 0.55. (ratio may change depending on the requirements of BS EN 206-1/BS 8500). Minimum cement content to be 325 Kg / cu.m.
All concrete to be vibrated.
No site batching unless authorised by contract administrator and design engineer.
The contractor must ensure that clayboard voidformer is installed to the manufacturers requirements, including the provision and installation of the voidpak system.

Piles - SWL As Shown

Pile location as per plan.
Piles to be designed and installed by specialist piling contractor with an appropriate factor of safety. ASUC Guarantee or equivalent insurance backed Guarantee to be provided.
Piles are to have a minimum sleeve length of 3m.
Specialist calculations are to be submitted to the local Authority 21 days prior to the commencement of the works, for approval.
All piling work is to be designed and installed in accordance with BS 8004 : 1986 Section 7 and I.C.E 'Specification for piling and embedded retaining walls'.
Pile reinforcement to be cut and bent a minimum of 1000mm into slab or beams.
All piles are to have a 50mm embedment into the reinforced slab or beams.



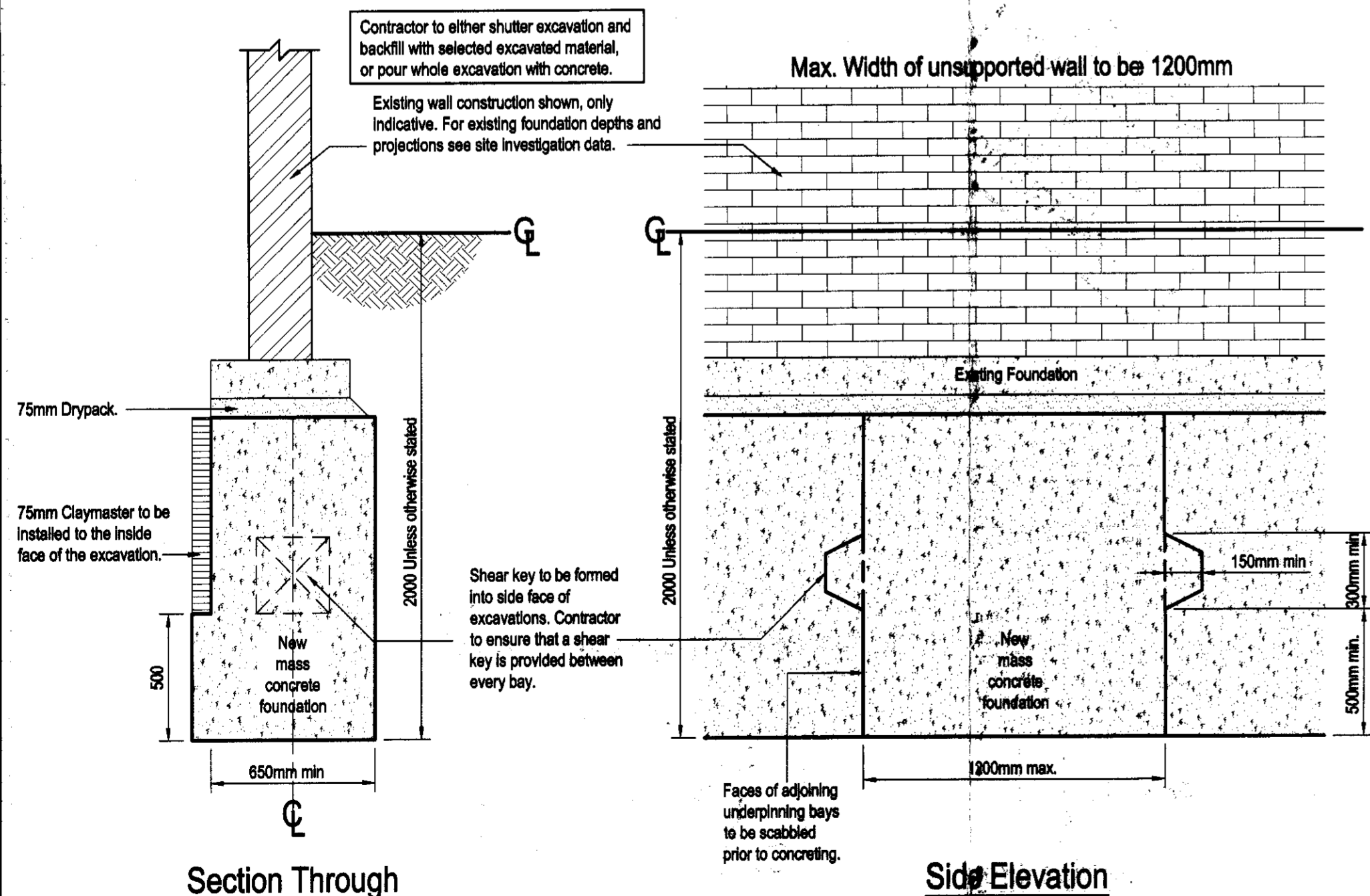
Section A-A Through Beam
Scale 1:20



Section Through Steps
Scale 1:20

Bar Mark	Type and size	No. of mem.	No. of bars	Total	Length of bar (mm)	Shape Code	A mm	B mm	C mm	D mm	ER mm
01	H10	1	240	240	1000	51	260	180	120		
02	H20	8	5	40	1600	11	1600	168			
03	H10	1	72	72	1325	51	900	190	120	120	
04	H20	3	2	6	2300	21	1090	160	1090		
05	H16	3	2	6	1775	21	890	420	690		
06	H16	3	2	6	1325	21	475	420	475		
07	H16	1	48	48	3275	11	3150	160			

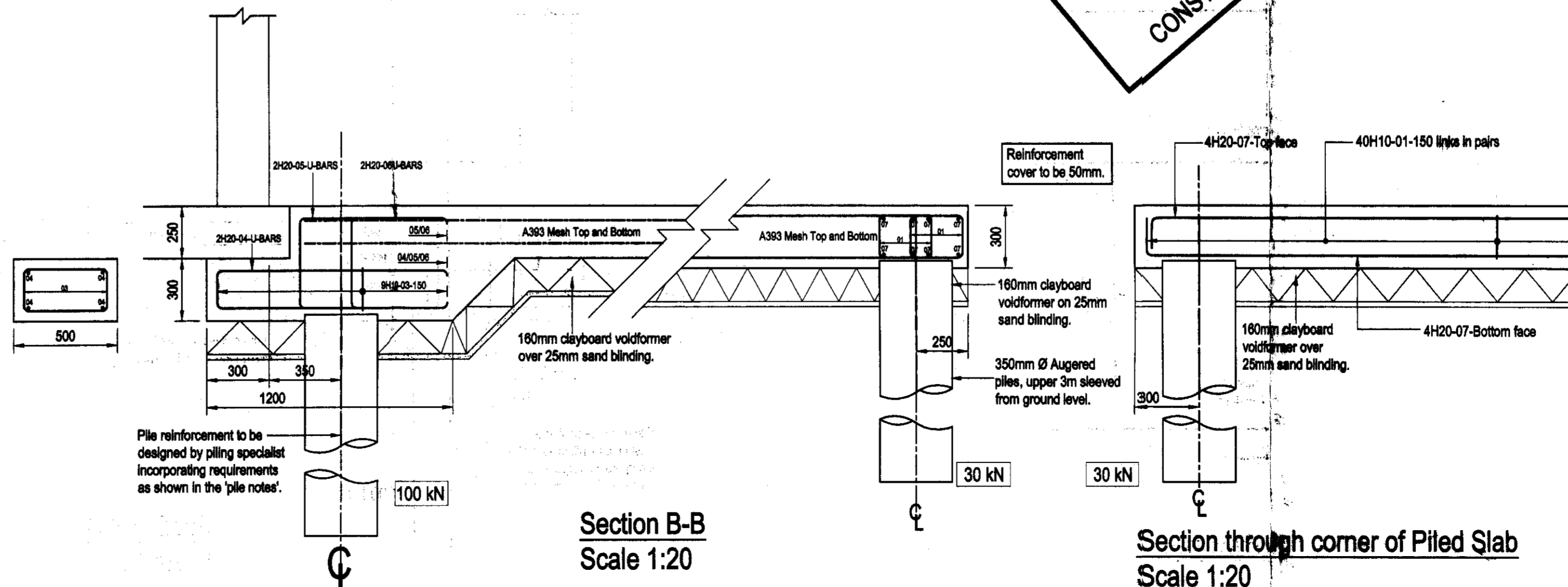
SUBJECT TO LOCAL AUTHORITY APPROVAL NOT FOR CONSTRUCTION



Section Through

Side Elevation

Typical Underpinning Details
Scale 1:20



Section B-B
Scale 1:20

Section through corner of Piled Slab
Scale 1:20

B	RA	06.11.07	Underpinning layout altered
A	RA	17.08.07	Drawing (amended A) approved by Lead Office
REV	DRAWN	DATE	DESCRIPTION



2nd floor Design Office, Solent House
Solent Business Park, Whiteley
FAREHAM, Hants, PO15 7AF

JOB ID	31 Heath Drive Limited
SITE ADDRESS	31 Heath Drive, London, NW3 7SB
PROJECT	Piled underpinning to main Property and new piled raft to step area
DRAWING TITLE	Plans, details and Sections
INITIAL DRG DATE	August 2007
DRAWN BY	Richard Abraham
SCALE	As Shown
CHECKED BY	DS
REFERENCE	2360106
DRG No.	101
Rev.	B