Construction Management Plan

Project: 61 Bayham Place, Camden NW1

CONTENTS:

EXECUTIVE SUMMARY

This Construction Management Plan (CMP) is for the demolition and construction of a new dwelling within a mews terrace of similar properties having mixed uses. Changes will be required to the CMP which will be updated as comments on it are received from relevant parties to the project and the public.

It is anticipated that the CMP will evolve as the project progresses and the final version will become a contractual requirement for the appointed contractor to adopt and implement.

The CMP identifies measures required to be undertaken to ensure the interests of the adjoining owners, the public and the construction staff are protected.

Specific management measures have been identified for the following issues:
Environmental Matters;

Noise Impacts ;

Traffic Impacts;

Air Quality;

Waste Generation;

Hazardous Materials;

Conservation area;

Health and Safety.

OBJECTIVES OF THE CONSTRUCTION MANAGEMENT PLAN

To provide:

1. a practical framework and guidelines to mitigate potential environmental harm for each activity undertaken
2. an instrument to assist the contractor to comply with current legislation the identification of environmental issues

3. the guide to reduce the potential impacts of demolition and construction activities on the adjoining properties;

Scope of this Plan

To establish the extent of the environmental impact the construction process may have on the local neighbourhood, traffic and adjoining buildings. It will cover the demolition stage including methods to stabilise the adjoining structures, the excavation and underpinning stage and finally the construction stage.

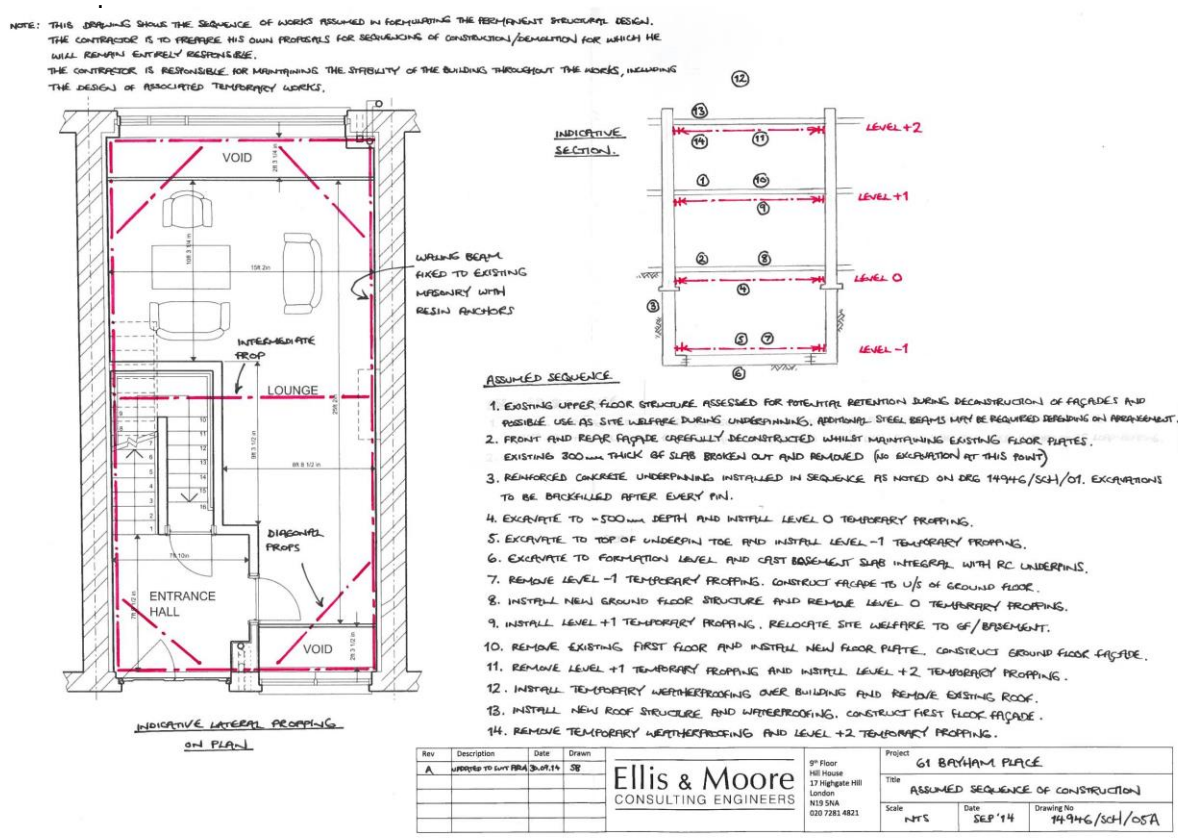
The plan deals with the demolition of the existing 2 storey mews, installing steel bracing to party walls, excavation for a basement storey, the rebuilding to create a 2 bedroom mews dwelling and the installation of services and drainage.

Environmental impact

Working hours – there will be strict instructions to the contractors and subcontractors that no work can be undertaken outside Camden's working hours directive.

> Control is through restricting the hours that noisy work is carried out from 08:00 until 18:00 Monday to Friday and 08:00 until 13:00 on Saturdays. No noisy works will be allowed on Sundays and Bank Holidays**.**

Demolition – due to the demolition taking place between party walls there will be a sequence of operations to ensure the stability of the party walls is maintained. Structural engineers, Ellis and Moore, have been engaged to provide the structural requirements for demolition. First steel bracing has to be installed and from there a sequence of demolition as shown in the following diagram.



Management of Identified Environmental Matters

Noise management	
Objective	To minimise noise and vibration
Management	Compliance with Camden working hours Notify neighbours of the construction activities and anticipated periods. Construction vehicle movements should avoid the use of residential streets to access the site where possible, particularly outside standard hours Schedule drilling, breaking and other very noisy work to give local residents and businesses some breaks
Responsibility	The main contractor
Construction	Use of silenced tools wherever practical. Sequential demolition will reduce the impact of noise and vibration. All control methods available will be utilised to reduce impact sound. Rotational drilling will be used to break up concrete ground cover to reduce the need for breaking tools wherever possible. To save the existing brickwork for reuse demolition of the external walls at the front and back will be carried out largely by hand.

Traffic management	
Objective	To avoid congestion, interruption of services to neighbours and safety of the public.
Management	Maintain full access into Bayham Place at all times. Manage vehicles taking excavated soil away and deliveries so as not to coincide. Recognise that the street has limited capacity to park larger vehicles required for construction. Ensure ease of access is retained for the school access within Bayham Place. Immediately in front of the site there are motor cycle bays which should be protected from accidental damage. There is a doctors parking bay near the site in Bayham Place and strict instructions will be given to site traffic not to impede this in any way Notify residents of construction traffic movements.
Responsibility	The main contractor
Construction	Limit the number of vehicle movements required for construction and phase use to avoid conflicts which could cause congestion and disruption to other traffic. Instruct drivers that turn around for larger vehicles is difficult in a dead end street.

Air quality	
Objective	To limit and contain dust and pollution and avoid migration of polluted air to the neighbourhood.
Management	Identify tasks and activities that will create dust and debris. Have in place an air quality management plan. Inform neighbours of proposed demolition and construction.
Responsibility	The main contractor
Construction	Prior to demolition scaffold the site and surround with dust control sheeting. Create openings that can be closed off to contain dust polluted air. Where possible during demolition and construction utilise tools with vacuum cleaners.

Waste disposal	
Objective	To minimise the accumulation of demolition and construction waste and its impact on neighbours.
Management	Provide a waste management plan to secure frequent and regular removal of waste from the site. Ensure waste areas and skips are covered before being removed to stop the migration of dust to other areas and neighbours.
Responsibility	The main contractor
Construction	Seek permission and provide a waste disposal area off site in Bayham Place or use skips if permitted. Always keep skips covered when full or waiting for disposal.

Hazardous materials	
Objective	No hazardous materials are known to exist on this site, but if discovered during demolition or excavation minimise any risks of spillage or run off.
Management	Identify any potential hazardous materials and immediately instruct action to secure and dispose of safely. Undertake an asbestos management survey prior to any demolition or construction work.
Responsibility	The main contractor
Construction	Not applicable here.

Conservation area	
Objective	To avoid any activity that would have an inverse impact on the conservation area.
Management	Identify any potential risk of damage to adjoining buildings that would impact on the character of the conservation area and the mews in general. Instruct safeguard measures to be taken.
Responsibility	The main contractor
Construction	Shrouding of the site should be completed before demolition commences.

Health and safety	
Objective	To avoid accidents to workmen or public.
Management	Identify all risks and hazards that could reasonably be expected to exist. Prepare a Site Safety plan including an emergency contingency plan. Set out methods of working below ground level and in the confined space of this site.
Responsibility	The main contractor
Construction	Ensure ease of delivery of heavy materials and access into the site. Avoid congestion on site with material storage. Materials should only be delivered when they are ready to be used in the work and can be installed without delay.

Services	
Objective	To avoid damage and thereby disruption to services and drainage serving the neighbourhood and this site.
Management	Identify all services, including drainage that could be affected by the excavation and construction. Obtain an asset search. Carefully take account of the site investigation report and its findings.
Responsibility	The main contractor
Construction	Prepare method statement for the connection of foul drainage to the existing sewer.

Additional Information

Traffic management

The site is located on a two way road but which is not a through road. Traffic congestion can be easily avoided partly because vehicular use of the road is comparatively small and also because vehicles parked on the road can be passed with ease.

To ensure safety of pedestrians it is proposed to seek permission to envelope the frontage of the site over the pavement with signage to ask pedestrians to use the opposite pavement.

There is a doctors parking bay near the site and strict instructions will be given to site traffic not to impede this in any way.

Construction Methodology

Before any demolition is commenced the steel propping at each level has to be installed and the existing floor pans retained. The front and rear walls can then be deconstructed carefully.
Excavation for underpinning can then follow and has to be done in the planned sequence as shown on drawing number 14946/Sch/01 appended to this CMP.

Basement excavation can then take place to 500mm depth to allow the next level of propping to be installed. After this the full depth of excavation can take place and the lowest level of steel propping installed. The basement can then be formed with the floor slab cast in concrete to be integral with the underpinning.

The basement construction must follow the sequence of work as stated on the engineer's drawing above 14946/Sch/05A.

As construction reaches each floor level the temporary steel propping is removed. When the ground floor pan has been installed it is anticipated that the contractor would use this level as the managing platform.

Following demolition the most practical and least time consuming methods of operation are to be undertaken. This dictates the desirability of fast building techniques and as much off site fabrication as possible. The primary structure would be steel beams supported on the existing brick load bearing party walls. The floor pans would be pre-cast concrete planks supported by the steel beams.

The roof would be constructed in a similar way.

Appendix

Structural schematic drawings.

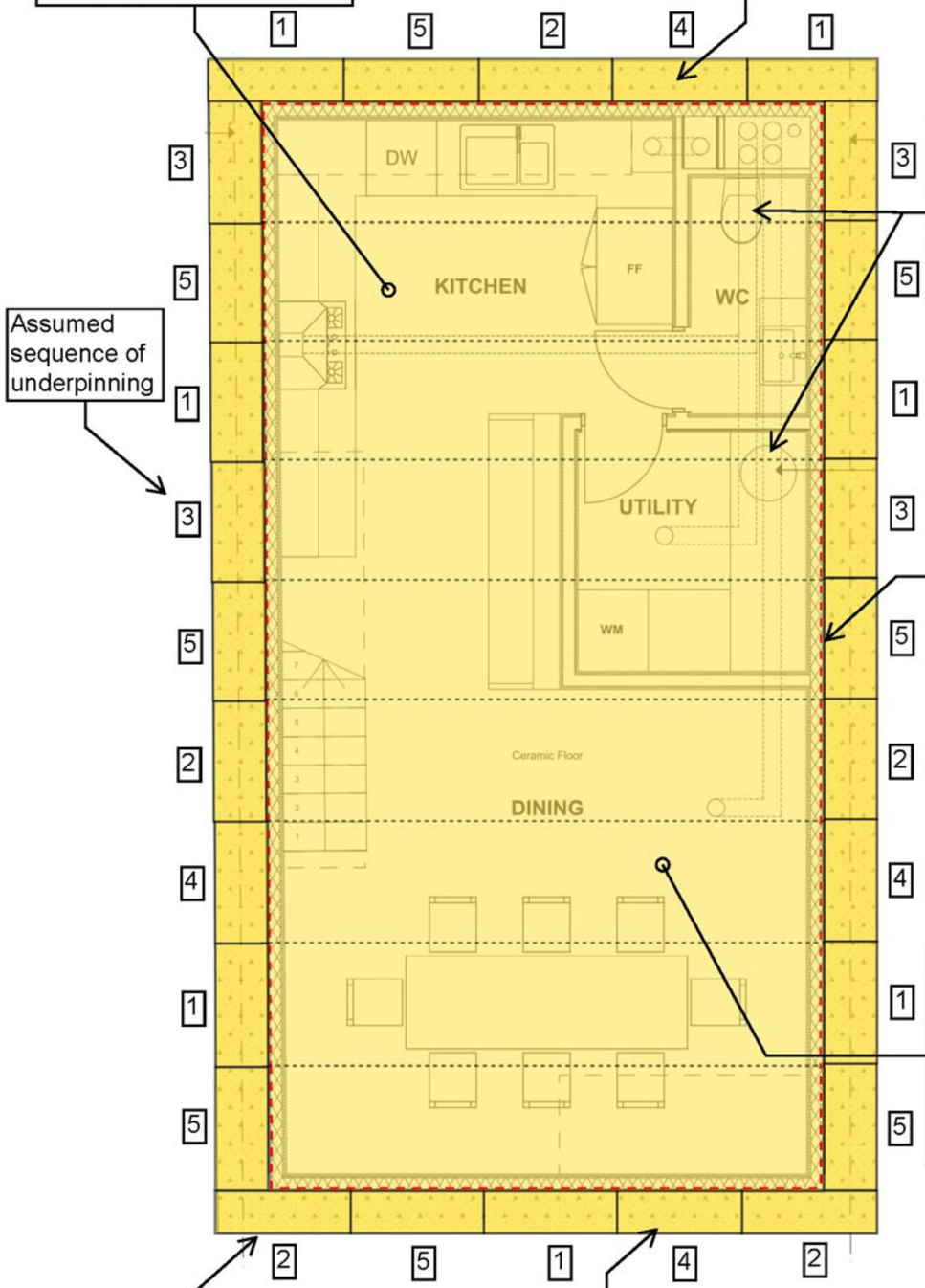
300mm thick RC ground-bearing slab integral with RC underpins (concrete to have proprietary waterproofing additive)

Reinforced concrete underpinning (1-1.2m wide bays, thickness to match brickwork wall over) installed with starter bars/kwikastrip to either side to provide horizontal reinforcement continuity with adjacent bays (concrete to have proprietary waterproofing additive)

RC underpins effectively span horizontally between party walls to permit void at first floor

Allow for intermediate torsional restraint beams to beams with balustrades

This section of floor assumed to be formed in timber joists (or void extended to boxing out)



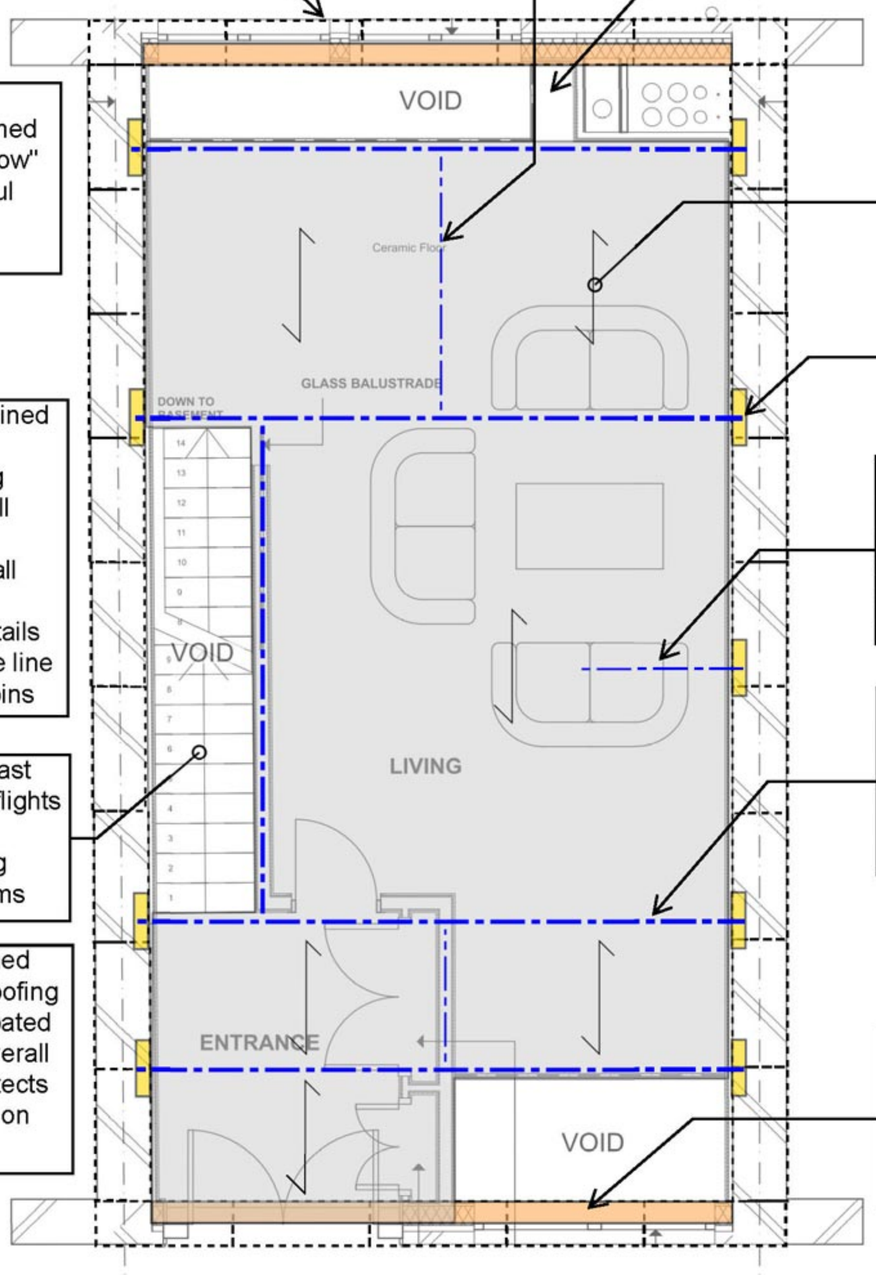
All basement services assumed to have "Saniflow" system with foul connection at ground level

Assumed sequence of underpinning

Assumed drained cavity waterproofing system to wall (anticipated 100mm overall thickness) to architects details located inside line of RC underpins

Assumed precast concrete stair flights supported off ground-bearing slab/steel beams

Assumed drained cavity waterproofing system (anticipated 200-250mm overall depth) to architects details located on top of RC slab



Indicates span of assumed 150mm thick precast concrete floor system to specialist manufacturers design

440x100x215mm deep mass concrete padstones cast into existing walls

Indicates position of 1200mm long 30x5.0mm thick galvanised mild steel strap cast into mass concrete padstone and fixed to top of precast floor

150-165mm deep steel beams (assumed 152x152x30 UC generally) with 10mm thick welded steel bottom plates span between party walls

Provide 100mm thick Class B Engineering Brickwork inner leaf below ground level to support precast concrete floor and to provide general robustness

Note: Existing services (gas pipe) in this location

RC wall to front and rear facades to be built in underpinning sequence to maintain stability of existing pavement services/neighbouring garden. Alternatively install sacrificial trench sheeting outside line of wall if space.

Rev	Description	Date	Drawn
A	Updated to suit arch	30.09.14	SB

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Project	61 Bayham Place, NW1 0JX		
Title	Initial Structural Scheme - Basement & GF		
Scale: NTS	Date: Sep 14	Drawing No: 14946/SCH/01A	

Indicates span of assumed 150mm thick precast concrete floor system to specialist manufacturers design

Allow for intermediate torsional restraint beams to beams at front and rear facades

Note: Potential chimney flues located within existing party wall may clash with beam bearings

Indicates position of 1200mm long 30x5.0mm thick galvanised mild steel strap cast into mass concrete padstone and fixed to top of precast floor

440x100x215mm deep mass concrete padstones cast into existing walls

Assumed precast concrete stair flights supported off steel beams

150-165mm deep steel beams (assumed 152x152x30 UC generally) with 10mm thick welded steel bottom plates span between party walls

Front and rear facades to be rebuilt in 100mm facing brickwork with timber studwork inner leaf (proprietary wall ties to be installed between the two in accordance with manufacturers guidance). Provide min 12mm thick plywood sheathing to studwork and resin-fix end stud to adjacent masonry.

Provide Catnic ANG angle lintels to outer leaf over new window openings (or proprietary feature arch lintels to match existing if required)

New parapet wall to be built in 215mm thick solid brickwork fully toothed and bonded to adjacent party walls (supported off outer leaf brickwork/steel beam at roof level)

Details of enclosing structure to roof stair to be confirmed. Assumed lightweight steel frame with cross-bracing within walls and timber flat roof joists

Generally roof structure similar to first floor below

Proprietary glazed balustrade to specialist manufacturers design and details assumed to be fixed to top of precast concrete roof slab (detail may require thermal break to avoid cold bridge)

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A	Updated to suit arch	30.09.14	SB

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Project	61 Bayham Place, NW1 0JX		
Title	Initial Structural Scheme - First Floor & Roof		
Scale: NTS	Date: Sep 14	Drawing No: 14946/SCH/02A	

NOTE: WALL CONSTRUCTION AND FLOOR JUNCTION SHOWN INDICATIVELY

ASSUMED EXISTING MANHOLE SUITABLE FOR RE-USE (TBC)

GL

150mm THICK PRECAST CONCRETE FLOOR SYSTEM

FFL TBC

CEILING VOID DEPTH TBC (SIZED TO ACCOMMODATE DRAINAGE RUNS FROM SANIFLOW SYSTEM WITHIN BASEMENT)

EXISTING CORBEL CAREFULLY REMOVED

NOMINAL 75mm DRYPACK

MADE GROUND

CLAY

NEW REINFORCED CONCRETE UNDERPINNING (WIDTH TO MATCH EXISTING WALL) WITH PROPRIETARY WATERPROOFING ADDITIVE.

HORIZONTAL REINFORCEMENT CONTINUITY TO BE ACHIEVED THROUGH USE OF EXTENDED STARTER BARS OR "KWIKASTRIP" CONTINUITY SYSTEM

FOR INDICATIVE DETAILS OF DRAINED CAVITY WATERPROOFING SYSTEM REFER TO DRAWING 14946/SCH/04

300mm THICK RC GROUND-BEARING SLAB WITH PROPRIETARY WATERPROOFING ADDITIVE

50mm CONCRETE BLINDING

ASSUMED CONSTRUCTION JOINT WITH HYDROPHYLLIC WATERBAR

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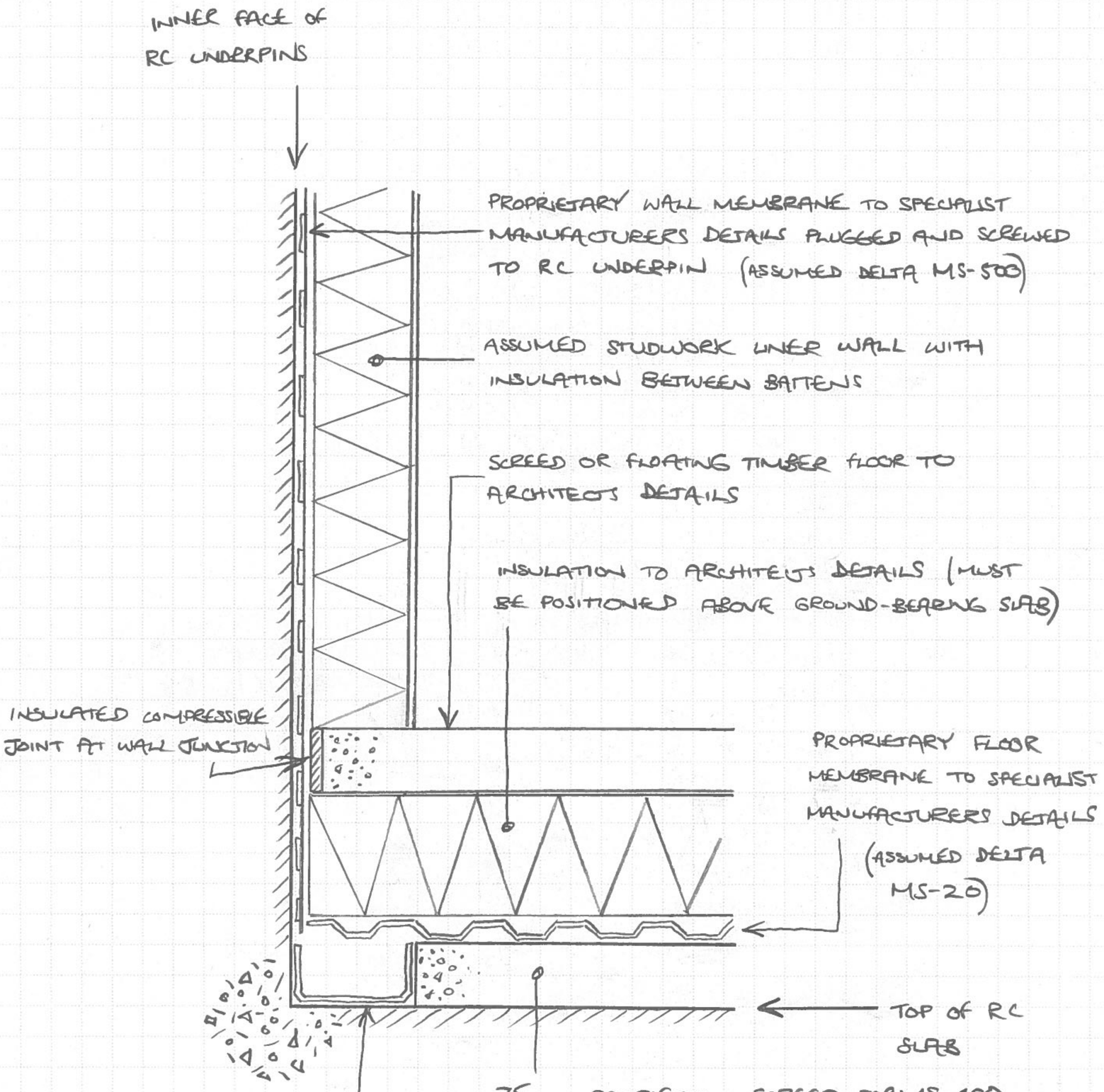
Project: 61 BAYHAM PLACE

Title: INDICATIVE SECTION THROUGH BASEMENT WALL

Scale: 1:20

Date: SEP '14

Drawing No.: 14946/SCH/03A



NOTE: THE ARCHITECT IS RESPONSIBLE FOR ALL WATERPROOFING STRATEGIES/DETAILS. SYSTEM SHOWN IS INDICATIVE ONLY AND INTENDED TO ASSIST ARCHITECTURAL COORDINATION.

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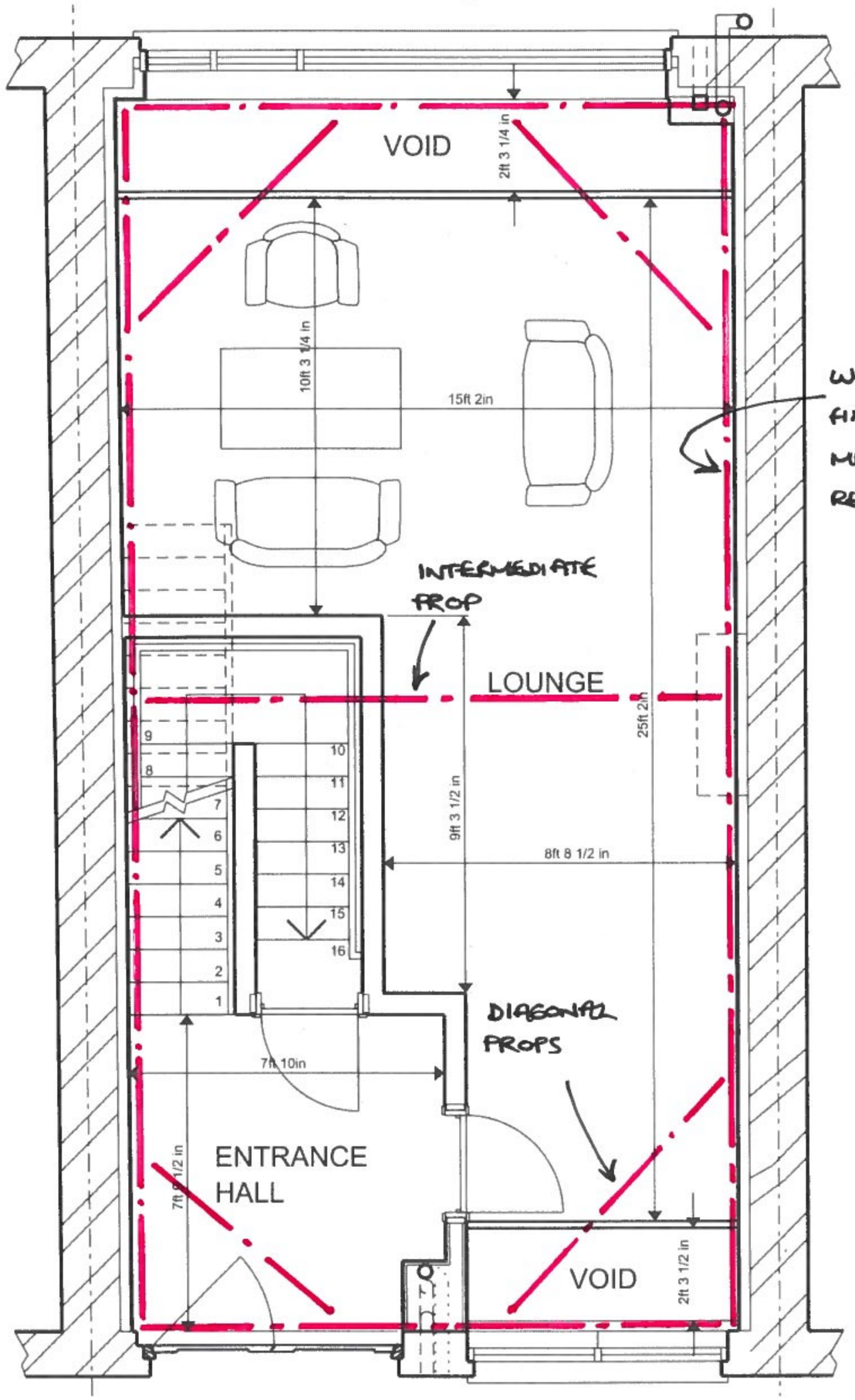
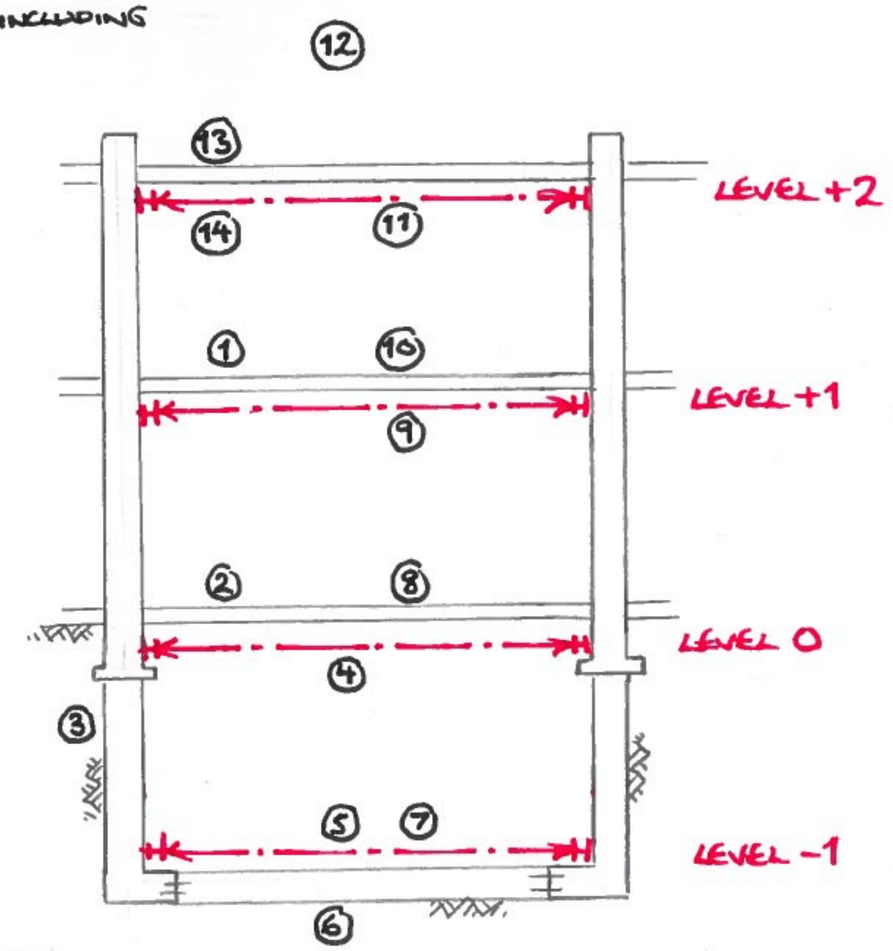
Project		
61 BAYHAM PLACE		
Title		
INDICATIVE DETAILS OF POTENTIAL DRAINED CAVITY SYSTEM		
Scale	Date	Drawing No.
1:5	SEP '14	14946/SCH/04

NOTE: THIS DRAWING SHOWS THE SEQUENCE OF WORKS ASSUMED IN FORMULATING THE PERMANENT STRUCTURAL DESIGN.
THE CONTRACTOR IS TO PREPARE HIS OWN PROPOSALS FOR SEQUENCING OF CONSTRUCTION/DEMOLITION FOR WHICH HE WILL REMAIN ENTIRELY RESPONSIBLE.
THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE STABILITY OF THE BUILDING THROUGHOUT THE WORKS, INCLUDING THE DESIGN OF ASSOCIATED TEMPORARY WORKS.



INDICATIVE LATERAL PROPPING ON PLAN

INDICATIVE SECTION.



ASSUMED SEQUENCE

1. EXISTING UPPER FLOOR STRUCTURE ASSESSED FOR POTENTIAL RETENTION DURING DECONSTRUCTION OF FAÇADES AND POSSIBLE USE AS SITE WELFARE DURING UNDERPINNING. ADDITIONAL STEEL BEAMS MAY BE REQUIRED DEPENDING ON ARRANGEMENT.
2. FRONT AND REAR FAÇADE CAREFULLY DECONSTRUCTED WHILST MAINTAINING EXISTING FLOOR PLATES. EXISTING 300mm THICK GF SLAB BROKEN OUT AND REMOVED (NO EXCAVATION AT THIS POINT)
3. REINFORCED CONCRETE UNDERPINNING INSTALLED IN SEQUENCE AS NOTED ON DRG 14946/SCH/01. EXCAVATIONS TO BE BACKFILLED AFTER EVERY PIN.
4. EXCAVATE TO ~500mm DEPTH AND INSTALL LEVEL 0 TEMPORARY PROPPING.
5. EXCAVATE TO TOP OF UNDERPIN TOE AND INSTALL LEVEL -1 TEMPORARY PROPPING.
6. EXCAVATE TO FORMATION LEVEL AND CAST BASEMENT SLAB INTEGRAL WITH RC UNDERPINS.
7. REMOVE LEVEL -1 TEMPORARY PROPPING. CONSTRUCT FACADE TO U/S OF GROUND FLOOR.
8. INSTALL NEW GROUND FLOOR STRUCTURE AND REMOVE LEVEL 0 TEMPORARY PROPPING.
9. INSTALL LEVEL +1 TEMPORARY PROPPING. RELOCATE SITE WELFARE TO GF/BASEMENT.
10. REMOVE EXISTING FIRST FLOOR AND INSTALL NEW FLOOR PLATE. CONSTRUCT GROUND FLOOR FAÇADE.
11. REMOVE LEVEL +1 TEMPORARY PROPPING AND INSTALL LEVEL +2 TEMPORARY PROPPING.
12. INSTALL TEMPORARY WEATHERPROOFING OVER BUILDING AND REMOVE EXISTING ROOF.
13. INSTALL NEW ROOF STRUCTURE AND WATERPROOFING. CONSTRUCT FIRST FLOOR FAÇADE.
14. REMOVE TEMPORARY WEATHERPROOFING AND LEVEL +2 TEMPORARY PROPPING.

Rev	Description	Date	Drawn
A	UPDATED TO SUIT PLA	30.09.14	SB

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