

85 CAMDEN MEWS LONDON NW1 9BU

SECTION 106

DETAILED CONSTRUCTION BASEMENT PLAN

Contents:


- 1.0 Executive Summary
- 2.0 Content of the Basement Construction Plan
- 3.0 Detailed Basement Construction Plan Check List

DESIGN TEAM

ARCHITECT = CULLINAN STUDIO

PERMANENT WORKS ENGINEER = AXIOM STRUCTURES

TEMPORARY WORKS DESIGNER = AXIOM STRUCTURES

	Signature:	Issued / Checked
Project / Basement Design Team Leader Andrzej Plocieniak MSc CEng MStructE		B1 - 2018-12-18 For Approval
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1.0 Executive Summary

- 1.1 Basement construction plan has been provided in response to the requirement through Section 106 Agreement.
- 1.2 It is confirmed Andrzej Plocieniak MStructE CEng from Axiom Structures Limited has been appointed as a “Basement Design Engineer” and will be retained throughout the construction phase by the owner. Andrzej has extensive experience in basement construction as a permanent and temporary works engineer.
- 1.3 It is confirmed that Kai Cheong (Ryan) Lee MStructE CEng from Axiom Structures has been appointed as the “Certifying Engineer”. Ryan has in excess of 10 years of design and inspection experience in basement projects. Refer to separate document for certifying report.
- 1.4 Comprehensive specialist reports and investigation works have been carried out to ensure that the modelling of ground conditions and water environment is appropriately conservative. This includes:
- Basement Impact Assessment: Site Investigation Report by Southern Testing
 - Ground Movement Report by Geotechnical Consulting Group
- 1.5 The best endeavours have been undertaken to prevent impact on the structural integrity of the neighbouring properties. Site surveys were carried out as well as inspection to the neighbouring properties as part of Party Wall process.

2.0 The Basement Construction Plan contains the following information:

- Proposed construction sequence and temporary works drawings by the “Basement Design Engineer”
 - Permanent and temporary works structural engineering drawings, specifications and calculations by the “Basement Design Engineer”
 - Method statement on works at party walls and associated designer’s risk assessment by Axiom Structures
 - Baseline Environmental Noise Factual Report
 - Construction Management Plan by Clive Winstanley (Construction Planning Associates).
- 2.1 The following information has been also reviewed and approved as part of Party Walls process which further gives confidence in the provided information.

3.0 Detailed Basement Construction Plan Checklist

As set out in the Section 106 Agreement, the sub-clauses as outlined in Table 1 below are to be considered as part of the Detailed Basement Construction Plan. This is to confirm that all items have been thoroughly considered as part of the design process.

Sub - Clause	Description	Information Provided
(i)	<i>The Owner to appoint an independent suitably certified engineer (qualified in the fields or geotechnical and or structural engineering) from a recognized relevant professional body having relevant experience of sub-ground level construction commensurate with the Development (“the Basement Design Engineer”) AND for details of the appointment to be submitted to the Council too written approval such approval not be unreasonably withheld or delayed (and the Owner to confirm that any change in Basement Design Engineer during the Construction Phase with the Council in advance).</i>	It is confirmed that the “Basement Design Engineer” will be retained by the client throughout construction to monitor the permanent and temporary works. Temporary works are to be monitored by a temporary works co-ordinator and supervisor as part of contractor’s team.

(ii)	<i>The Basement Design Engineer to formulate the appropriate plan to fulfil the requirements of the Detailed Construction Basement Plan and at all times to ensure the following:</i>	
	<i>a) That the design plans have been undertaken in accordance with the terms of this Agreement incorporating proper design and review input into the detailed design phase of the Development and enduring that appropriate conservative modelling relating to the local ground conditions and local water environment and structural condition of Neighbouring Properties have been incorporated into the final design; and</i>	Refer to item 1.4 above. Extensive investigation and analysis have been carried out.
	<i>b) That the result of these appropriately conservative figures ensure that the Development will be undertaken without any impact on the structural integrity of the Neighbouring Properties beyond "Slight" with reference to the Burland Category of Damage, and</i>	Refer to item 1.4 above. Highly recognised geotechnical consultancy have carried out analysis to confirm no impact beyond "Slight"
	<i>c) That the Development Design Engineer having confirmed that the design plans have been undertaken in accordance with this Agreement and includes a letter of professional certification confirming this and that the detailed measures set out in sub-clauses (1)-(7) below have been incorporated correctly and appropriately and are sufficient in order to achieve the objectives of the Detailed Basement Construction Plan;</i>	
	<i>1. Reasonable endeavours to access and prepare a detailed structural appraisal and conditions survey of all the Neighbouring Properties to be undertaken by an independent suitably qualified and experienced chartered surveyor (and for details to be offered if this is not undertaken in full or part);</i>	Survey of the existing building and conditional survey of existing neighbouring buildings have been carried out as part of Party Wall process
	<i>2. A method statement detailing the proposed method of ensuring the safety and stability of Neighbouring Properties throughout the Construction Phase including temporary works sequence drawings and assumptions with appropriate monitoring control risk assessment contingency measures and any other methodologies associated with the basement and the basement temporary works;</i>	Temporary works drawings and method statement by Axiom Structures (TW-400 etc)
	<i>3. Detailed design drawings incorporating conservative modelling relating to the local ground conditions and local water environment and structural condition of Neighbouring Properties prepared by the Basement Design</i>	Structural drawings and calculations by Axiom Structures

	<i>Engineer for all elements of the groundworks and basement authorised by the Planning Permission together with specifications and supporting calculations for both the temporary and permanent basement construction works;</i>	
	<i>4. The Basement Design Engineer to be retained throughout the Construction Phase to inspect approve and undertaking regular monitoring of both permanent and temporary basement construction works throughout their duration and to ensure compliance with the plans and drawings as approved by the building control body;</i>	It is confirmed that the “Basement Design Engineer” will be retained by the client throughout construction to monitor the permanent works. The temporary works will be monitored by a temporary works co-ordinator and supervisor from the contractor
	<i>5. Measure to ensure the on-going maintenance and upkeep of the basement forming part of the Development and any and all associated drainage and/or ground water diversion measures order to maintain structural stability of the Property the Neighbouring Properties and the local water environment (surface and groundwater);</i>	Permanent below ground drainage design and drawing has been provided by Axiom Structures for the new basement. From review, the stability of the property is not expected to be impacted.
	<i>6. Measures to ensure ground water monitoring equipment shall be installed prior to implementation and retained with monitoring continuing during the Construction Phase and not to terminate monitoring until the issue of the Certificate of Practical Completion (or other time agreed by the Council in writing); and,</i>	It is understood that from a previous Site Investigation, stand pipes were placed in the boreholes and it is intended to have these monitored by a Site Investigation contractor during Construction
	<i>7. Amelioration and monitoring measures of construction traffic including procedures for co-ordinating vehicular movement with other development taking place in the vicinity and notifying the owners and or occupier of the residencies and businesses in the locality in advance of major operations delivery schedules and amendments to normal traffic arrangements.</i>	Construction Management Plan and drawings provided by Clive Winstanley (Construction Planning Associates)

Table 1 – Detailed Basement Construction Plan Sub-Clauses