
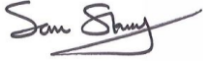
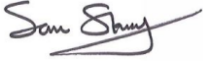


Project Name: **36 Avenue Road, NW8 6HS** Planning Ref: **2015/3328/P**
 Project Number: **2190088** Status: **For Information**
 Title: **S106 Agreement Certifying Engineer Review Report**

Document Control							
revision:	P1	prepared by:	Adam Atkinson MEng CEng MStructE	checked by:	Sam Stacey MEng CEng MStructE	approved by:	Sam Stacey MEng CEng MStructE
date:	26/02/2019	signature:		signature:		signature:	

1 Introduction

I, Adam Atkinson, have been appointed as the 'Certifying Engineer' under the requirements of Clause 2.11 (sub-clause 3 and 4) of the Section 106 Agreement of the Town and Country Planning Act 1990 (as amended) Section 278 of the Highways Act 1980 dated 11 May 2018 to review the 'Detailed Basement Construction Plan' for the development and to report on the compliance with S106 Agreement Clauses 2.11)1-4.

2 Documents Reviewed

I have reviewed Elliott Wood Partnership Ltd's 'Detailed Basement Construction Plan' dated 20.02.19.

3 Neighbouring Properties to be Considered

38 Avenue Road. The property was built in 2008 and is well known to Elliott Wood Partnership as they were appointed as the structural engineers for the project. I understand that condition surveys will be carried out prior to commencement of the works on 36 and 34 Avenue Road and 1 Radlett Place by suitably qualified persons.

4 Proposed Basement Construction

The basement is a two-level construction comprising a perimeter contiguous piled embedded wall and lengths of an underpinning type sequence as a temporary retaining structure and will be a 'bottom-up' construction to form the excavation. The piled wall and underpinning extends around the whole perimeter, including the party wall elevation with 38 Avenue Road as well as 34 Avenue Road and 1 Radlett Place.

Internally the basement walls and suspended slab are founded on ground bearing strip footings. The basement slab has been designed to resist vertical hydrostatic pressures, with heave protection proposed to alleviate uplift pressures from the unloading of the clay formation.

A perimeter RC lining wall is proposed inside of the piled wall. This has been designed to resist lateral hydrostatic loads in the permanent condition, with the piled wall resisting the permanent horizontal loads from surcharge and lateral soil pressures. In the temporary condition, the piled wall has been designed to resist the lateral soil and surcharge pressures spanning between levels of temporary horizontal propping. The slabs at each basement level act as props to the surrounding walls in the permanent condition.

Where openings are proposed in the Upper Ground and Ground Floor slabs, the RC lining walls are to incorporate local thickenings to provide continuity in the lateral support to the secant piled wall at these locations.

5 Basement Ground Water Control

Groundwater has not been indicated in the Site Investigations. It is therefore not considered likely that groundwater is an issue in this case. The permanent design has however allowed for water to be present at 2/3 height of the basement.

In the permanent condition, watertight concrete construction is to be used together with an internal drained cavity system.

6 Ground Movement and Building Damage Assessment

The Building Damage report indicates that the maximum anticipated damage to adjoining properties will be no worse than 'very slight', classified as Category 1, in accordance with the Burland Scale. This is therefore within the acceptable limits set out by LBC.

7 S106 Clauses

2.11.1 Gary Povey of Elliott Wood is a suitably qualified and experienced Engineer and recognised with the Institution of Structural Engineers.

2.11.2a I have reviewed the design of the basement development and can confirm that it is in strict accordance with the terms of the S106 Agreement. Appropriate and conservative modelling of local ground conditions and local water environment have been adopted whilst also carefully considering the condition of the neighbouring properties.

2.11.2b The ground movement assessment and building damage report by AGE concludes that the anticipated damage to adjoining properties will be no worse 'very slight', classified as Category 1, in accordance with the Burland Scale. I can confirm this is therefore within the acceptable limits set out by LBC.

2.11.2c(i) Condition surveys of 38 and 34 Avenue Road and 1 Radlett Place will be carried out prior to commencement on site. Given Elliott Woods knowledge of 38 Avenue Road it is not considered likely that a structural appraisal will be required. It is also considered unlikely that structural appraisals of 34 Avenue Road and 1 Radlett Place will be necessary given their distance from the site.

2.11.2c(ii) I have reviewed the temporary works sequencing drawings, basement construction method statement, piling method statement and structural monitoring proposals and I am satisfied that the proposed sequence of works and temporary works proposal ensures the safety and stability of the neighbouring properties throughout the construction phase.

2.11.2c(iii) Detailed design drawings, specification and calculations for the basement development for permanent works and temporary works have been produced by Elliott Wood Partnership Ltd and Cranston Consulting respectively. I have reviewed this information and I am satisfied that the design of the basement development appropriately considers the local ground conditions, local water environment and structural condition of neighbouring properties.

2.11.2c(iv) Elliott Wood has been appointed to visit the works during the construction phase to monitor that the works are being carried out broadly in line with their drawings and specifications. Their appointment includes carrying out periodic site visits during the construction phase for this purpose. No allowance has been made for a Resident Engineer as this has not been considered necessary for the scale of works in this case.

2.8.2c(v) The evidence shown highlights that the Client understands their duty to ensure the adequate and regular maintenance of the internal and external drainage system will be carried out.

2.8.2c(vi) I have reviewed the ground water monitoring proposal carried out by SAS and I am satisfied this demonstrates adequate measures for ground water monitoring during the construction phase until practical completion or other time agreed by the Council in writing.

2.8.2c(vii) The Construction Management Plan carried out by Clayton Business Limited sets out the construction traffic planning procedures for informing residents and planned construction traffic.

8 Certifying Engineer's Statement

I have reviewed the design plans submitted in the Detailed Basement Construction Plan and I am satisfied that the requirements of the Section 106 Agreement have been met.

Adam Atkinson

MEng CEng MStructE



26.02.2019