



12 Platt's Lane

Structural Methodology Report

Brief

This document is the structural methodology report carried out for the purposes of the planning application for the proposals at no. 12 Platt's Lane. It should be noted that this report outlines and suggests the assumed construction at this stage. It should also be noted that, as is standard for works of this type, the main contractor will be fully responsible for the design and erection of all temporary works.

The purpose of the report, with the Basement Impact Assessment prepared by Soils Ltd, is to demonstrate that a subterranean development can be constructed on the particular site having regard to the sites existing structural conditions and geology.

The Basement Impact Assessment prepared by Soils Ltd references to the stages set out in the CPG4 Basement & Lightwells planning document.

Richard Tant Associates

Richard Tant Associates are consulting Civil and Structural Engineers comprising a number of chartered engineers. We have experience in post basement construction and have successfully carried out a number of basements in the Borough Camden from the Basement Impact Assessment stage through to construction on site.

Description of Proposed Basement and Internal Works

12 Platt's Lane is a semi-detached red brick, three storey Victorian house comprising timber floors and load bearing masonry walls. There are no signs of significant differential movement and the property appears to be in sound structural condition.

The proposal is to form a new single storey basement structure generally below the existing building with an excavation of approximately 3.7m below the existing ground level. At the rear a basement patio is proposed with light wells to the front and side. A number of the internal load bearing ground floor walls is also due to be removed and a steel frame will be introduced integrated with the proposed basement and light wells.

Basement Works

A geotechnical report including a flood risk assessment has been carried out by Soils Ltd; the bore holes confirm up to 1.4m of made ground overlying London Clay. Water inflow was recorded in window sample 3 at a depth of 3m and then later monitoring results of the standpipe recorded a water level of 1.2m below ground level. We note the Soils Ltd report highlights that groundwater inflow is likely to be very slow. Based on this geotechnical information the new basement construction is to comprise reinforced concrete underpinned retaining walls with an internal cavity drain system. This will be described in more detail throughout this report. Please refer to our drawings 4387-SM01, SM02, SM03 and SM04.

Internal Works

The proposal is to remove a number of internal ground floor load bearing walls; steel frames will be provided integrated with the proposed basement construction and temporary works to support the first floor walls and ground floor perimeter walls over the light wells. For further details of these internal works and the basement works with the temporary works please refer to our drawings 4387-SM01, SM02, SM03 and SM04.



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Supporting the Proposed Loads

The vertical and horizontal loads will be supported via reinforced concrete retaining walls or reinforced concrete underpinning with the vertical loads from the internal floors and ground floor walls being supported via the new steel frames in turn supported via new internal pad foundations and proposed basement walls. Refer to calculation sheets for justification: 4387-P1 et seq.

Structural Integrity of Surrounding Structures and Utilities

We do not expect there to be any utilities, tunnels or infrastructure within the area of influence of the proposed basement works apart from the existing foundations mentioned above and therefore we do not expect any impact regarding the structural integrity to these items.

Slope Instability

The proposal is to construct the walls in stages that will be temporarily propped until the final base is constructed and cured. No battering back is proposed. We therefore confirm slope instability will not be initiated due to these works. Please refer to the proposed drawings, 4387-SM01, SM02, SM03 and SM04.

Impact on Drainage and Surface Water

We do not expect there to be any existing public drainage within the area of influence of the proposed basement works. With regards to surface water the basement is mainly below existing hard standing. Refer to the surface flow assessment in the Soils Ltd. basement impact assessment.

Geological & Hydrological Concerns

The application is informed and supplemented by the hydrological section of the geotechnical report and flood risk assessment carried out by Soils Ltd and identified in their basement impact assessment.

Structural Stability of the Existing Buildings

The proposed basement is to be constructed between reinforced underpinning generally under the existing building's external walls except at the back of the patio and around the light wells where new reinforced concrete retaining walls are proposed. The reinforced concrete underpinned walls and reinforced concrete walls will be designed to retain soil and water pressures. Refer to calculation sheets for justification. These works are not expected to create any significant differential settlement or have a detrimental effect on the structural stability of the existing building or neighbouring buildings. For the permanent design a ground movement analysis will be carried out to confirm expected movement.

Impact on Trees

There are a number of trees near the proposed basement. Wassells, an Arboricultural consultancy, are involved and confirm the proposed trees will not be adversely effected by these works.



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Temporary Works

Please refer to the proposed drawings, 4387-SM01, SM02, SM03 and SM04 for details of the temporary works. When the contractor is appointed he will be fully responsible for the temporary works including the design and erection.

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