

Camden Planning Department 2nd Floor, 5 Pancras Square c/o Town Hall, Judd Street London WC1H 9JE

25/03/2024 Ref: 24.1070-AMP-LET-001-P01 - Structural Statement

To Whom it may concern,

AMP structures have compiled this structural statement in relation to a planning submission associated with 73 South End Road, NW3 2RJ. The purpose of the statement is to provide some initial structural commentary on the proposals in relation to the existing building and surrounding site.

The opinions expressed in this statement are based on a number of the following: professional opinion, consultation of others, views of occupiers etc. This assessment has been prepared by Richard Colley, a Chartered Structural Engineer with previous experience of basement assessment and basement structural design. It has been further reviewed by Harvey Mistry, a Chartered Structural Engineer.

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Property description and proposed works

The property is a traditionally built semi-detached house constructed circa 1890 and is grade II listed. The building has subsequently been converted into four flats, sharing a common side entrance. This letter is in relation to the proposed works to Flat 1 which comprise half of the ground floor demise and all of the lower ground floor. The lower ground floor opens out onto the garden at the rear of the property via a lowered patio area.

The proposals include a rear extension and provision to lower the internal finished floor level by approximately 400mm from the current level. The lowering works would be limited to the rearmost section of the lower ground floor only. The front section of the lower ground floor is proposed to remain at the as built levels.

A query has been raised if the proposed development necessitates a rigorous basement impact assessment approach. Based on the magnitude of works proposed it is not expected that the works would induce a similar impact as a typical basement excavation. As such a proportionate approach has been taken to assess the potential impacts. AMP structures have carried out a high-level desktop study and screening exercise based on the Camden Pro Forma BIA guidance, in order to identify any aspects which may require further investigation.



As part of the assessment we have reviewed:

- Proximity to bodies of water / aquifers
- Site topography and geology
- Changes in hard-standing
- Surrounding above ground infrastructure and adjacent buildings

Desk study findings

From the desk study it is noted the property is not above any aquifers associated with the superficial or bedrock geology. The property is located more than 50m from the nearest water course (Hampstead Heath ponds), at approximately 90m. It is understood to be outside of the surface water catchment area associated with the ponds. The current site condition comprises hard standing in the areas of proposed development to the main house, as such it's not expected for any increased hard standing associated with these works.

The site topography slopes from the front elevation to the rear at a fall of approximately 0.6m over 4.7m distance and therefore shallower than a 1 in 7 gradient. The area has previously been worked and existing retaining structures are present around the building perimeter, likely constructed as part of the original development. The proposed development is understood not to alter the current prevailing ground trajectory. Geological maps show clays are likely to be the primary founding stratum. Clays are susceptible to shrinking and swelling with changes in ground water content. The existing and proposed founding levels however are expected to be below any influence from the surrounding trees. The proposed works would further strengthen the building foundations and limit the effects of the seasonal or tree-induced changes in moisture content. As the works are limited to the rear of the property, they do not intersect with public highways or pedestrian rights of way

The property is noted to be in flood zone 1 and similarly has a low risk of surface water flooding.

Investigation findings

As part of the scoping works identified in the screening process AMP Structures have specified intrusive investigations to review the existing structure and inform the potential impact of the development.

A trial pit was carried out to the rear of the property indicating that the current formation levels of the foundations are approximately 520mm below the existing external patio ground level. And are founded on a natural clay stratum. The trial pit was noted to be dry and no ground water was encountered.





Conclusion

At the proposed excavation levels it is anticipated that only minor underpinning of the walls would be required to achieve the proposals. The depth of underpinning would be similar to that of remedial underpinning for ground movement. Given the relatively shallow change in level between the internal and external levels, it is considered that the weight of the walls from the building will provide sufficient capacity to counteract any lateral pressures associated with the lowering of the floor.

The existing retaining walls were not noted to surcharge the main walls, however consideration of the thrust loads has been considered. Underpinning is a commonly used construction technique; with adoption of safe and good practices by a competent contractor, the impacts to the surrounding built environment are likely to be limited to category 1 (very slight) on the Burland scale. These are defined as:

"Fine cracks that can easily be treated during normal decoration. Perhaps isolated slight fracture in building. Cracks in external brickwork visible on inspection"

Based on the proposed works and standard construction techniques used to achieve them at a relatively shallow level change; it is anticipated that the impact on the surrounding built environment will be minor compared to a full basement excavation.

The proposals would of course be developed post planning with a full set of structural designs and calculations.

We hope this is sufficient for your purposes. Please do not hesitate to contact us, if you require any further information.

Kind Regards,

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Site Photographs



Photo 01 – Trial Pit



Photo 02 - Rear retaining structure adjacent to trial pit