

Basement Impact Assessment

The Basement Impact Assessment is submitted by LB Camden to Campbell Reith and Partners for technical audit. This is a detailed process and leads to discussion with the clients Geotechnical Engineers regarding all aspects of the BIA. Any issues will be resolved and then they will advise LB Camden of the outcome along with any recommendations, which could lead to the BIA being updated. LB Camden has set the standard for dealing with all aspects of basement planning applications as evidenced by outsourcing audit review to Campbell Reith Consulting Engineers, who are a well-regarded engineering consultancy. [Basement developments and planning applications - Camden Council](#)

1. The calculation of the risk of damage to neighbouring properties on the Burland scale has assumed that there is currently no subsidence damage at the neighbouring properties. **This is incorrect.** The calculation of the Burland values must consider the cumulative effect of the existing subsidence damage plus the effect of the proposed works, as it is the cumulative effect that will determine what damage the neighbours have to rectify. Given that the proposed works are already at the upper limit of the Burland value of 1 (see figure 20 (incorrectly labelled as figure 19 in the index)), it is expected that when factoring in the existing subsidence damage the Burland value will be at least greater than 1 and accordingly planning permission must be refused in accordance with the Camden Local Plan A5(n).

The Burland Scale is not a method of calculation. Rather it is a table of crack widths in structures and their impact based on field observations of typical damage and ease of repair. Uncertainty is accepted and addressed by monitoring of nearby structures, before, during and after construction along with an action plan should thresholds be exceeded.

2. Groundwater Flow screening: The answer to question 4 in Table 3.1 should be yes. Paved areas are being changed to open cell paving and lawns (see 7.62 in the Planning Statement).

Screening identifies considerations to be taken forward to the BIA and mitigation. In this case the existing condition was impermeable paving and betterment was to adopt open cell paving and lawns.

3. Land Stability screening: The answer to questions 3 and 4 in Table 3.2 should be yes. The neighbouring land has a significant slope.

The slope is not significant and is within the stable range for the geology of the site and surrounding area. This is supported by the mapping from both the Arup study and the Redington Frognaal Neighborhood plan of geology, slope facets, springs and underground rivers.

4. Surface Flow and Flooding screening: The answer to questions 2, 3 and 4 in Table 3.3 should be yes. Paved areas are being changed to open cell paving and lawns (see 7.62 in the Planning Statement).

[See comment against Item 2](#)

5. With reference to 8.1:

“Roots were encountered in all the three windowless sampler boreholes at depths ranging between 1.00m and 5.00m bgl. If roots are encountered during the construction phase foundations must not be placed within any live root penetrated or desiccated cohesive soils or those with a volume change potential. Should the foundation excavations reveal such materials, the excavations must be extended to greater depth in order to bypass these unsuitable soils.

The likelihood of encountering roots appears to be high given the presence of roots within all of the boreholes. Therefore, it is unclear how the proposed pile wall and raft can be arranged such as to avoid live root penetrated or desiccated cohesive soils. The likelihood of needing to excavate below 3.5 metres appears to be high which

would invalidate the current Basement Impact Assessment.

The pile wall is designed to accommodate upwards vertical movement from all causes i.e. heave from ground relief on excavation and clay movement where roots are severed. The basement slab will be designed to accommodate similar ground movements, though the option to excavate root penetrated clay and replace it with non-shrinkable fill will be retained.

6. In 10.2 the author wrote:

“The proposed development considered the excavation of 3.50m of Made Ground, corresponding to an unloading of the soils at formation level evaluated as circa 65kPa, adopting for the removed soils an average unit weight of 18kN/m³.”

This appears to be wrong because as per the borehole data, below 1.6 metres there is no made ground (see Table 5.2).

The soil properties and conclusion within the text regarding the magnitude of unloading are correct. The strata name to be updated during audit

7. Contrary to paragraph 6.141 of the Camden Local Plan, there does not appear to be a minimum of 1 metre of soil above the basement development where this extends beyond the footprint of the building, and it has not been accounted for in the models for the ground movement calculations.

A detailed review of ground movement calculations will be part of the audit made by Campbell Reith Consulting Engineers.

8. Contrary to paragraph 6.146 of the Camden Local Plan, the light wells at the rear of the proposed development are too close to the boundary of the neighbouring property, especially given the proposed development encroaches onto the land of the neighbouring property.

Comment on such matters are not within Soils Limited's remit

9. It is unclear what the dimensions of the engineered foundation design are, even the author of the Basement Impact Assessment does not know, yet this is critical to assessing the impact on the neighbouring properties. Clearly there is an engineered foundation design because there is costing for one in the Financial Viability Report which we are led to believe is accurate.

The Basement Impact Assessment remains a live document such that changes and revision to the scheme can be accommodated and updates to the BIA will be provided should final designs warrant.

10. The planning drawings (GA Section AA and GA Section BB) show the depth of the basement is around 4 metres. Whereas the Basement Impact Assessment appears to excavate only to a depth of 3.5 metres, but with piles down to 15 metres below ground level. This is inconsistent. Unless and until the applicant can provide consistency, the application must be rejected because it properly reviewed.

See comment for Item 9.

11. The planning application is based on some drawings at revision P01, but others at revision P02. The Basement Impact Assessment only uses revision P01 drawings. See for example drawings for GA Section AA and GA Section BB. This is inconsistent.

The applicant will address this.

12. The author of the Basement Impact Assessment states:

“Cross sections of the proposed development were not available to Soils Limited at the

time of writing this BIA”

yet the cross sections are included in Appendix E. This is inconsistent.

This will be corrected during audit.

13. The proposed development is around 10 metres above ground, but with proposed foundations of 15 metres below ground level, yet this is all for only two semi-detached houses. This does not sound like a sustainable use of materials. It is clear that the footprint for building accommodation on the proposed site is insufficient which has resulted in a proposal that is irrational and distorted.

Opinion so no comment given