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Consideration of requirement for a Basement Impact Assessment

Prepared by

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Having worked through the guidance contained within CPG4, it is apparent that a full BIA is not required for this particular development. An existing basement is to be brought up to modern constructions standards in this terraced Victorian building. The basement works comprise extending an existing rear basement room into an existing rear basement lightwell to create more usable and better lit living accommodation. The proposed basement stays within the footprint of the existing basement level (including the external lightwell).

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The following tables relate to

Camden Planning Guidance 4 - Basements and Lightwells. STAGE 1 SCREENING REPORT

Section 1 Subterranean (ground water) flow screening chart

1a: Is the site located directly above an aquifer?

No: Property is founded on essentially impermeable London Clay - based on local knowledge and local trial holes. See attached appendix for 'Lost Rivers of London', 'Surface water features map' and trial hole logs.

1B: Will the proposed basement extend beneath the water table surface?

No: See Q1 - Water table not evident locally. The front original arched vaults beyond the house do not suffer from water ingress.

2: Is the site within 100 m of a watercourse, well (used/disused) or potential spring line?

No: The property is just beyond the North East of Regents Park. The nearest watercourse is Regents Canal to the South. The Environment Agency's 'Risk of Flooding from Rivers and Sea' map shows that this immediate area is not a risk from river flooding as it is beyond the flood plain. See also mapping on the attached appendix.

3: Is the site within the catchment of the pond chains on Hampstead Heath?

No. See OS map on page 2 of appendix.

4: Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?

Yes: The planting in the lightwell becomes a new drained terrace area. However the existing rear garden is paved and this will be changed to soft landscaping (planting

and grass).

5: As part of the site drainage, will more surface water (e.g. rainfall and run-off) than at present be discharged to the ground?

6: Is the lowest point of the proposed excavation (allowing for any drainage and foundation space under the basement floor) close to, or lower than, the mean water level in any local pond (not just the pond chains on Hampstead Heath) or spring line?

No: Any additional surface water will be taken out via the existing drainage system.

No: Surface Water Features Map and Lost Rivers Map in the appendix show that no features are near to the property. This is a built up area of Victorian properties, most of which already have basements.

Section 2 Slope Stability Screening

1: Does the existing site include slopes, natural or manmade, greater than 1 in 8?

No: See the attached Slope Angle Map in the appendix and the widely spaced contours on the O S map.

2: Will the proposed re-profiling of landscaping at site change slopes at the property boundary to more than 1 in 8?

No: The proposed landscaping is level.

3: Does the development neighbour land, including railway cuttings and the like, with a slope greater than 1 in 8?

No

4: Is the site within a wider hillside setting in which the general slope is greater than 1 in 8?

No: It is a residential area with very little slope to the adjacent ground / roads.

5: Is the London Clay the shallowest strata in the area?

Yes: The clay extends 'to depth' in the area as is shown on the local Geological Map. See our Impact Assessment at the end of this document.

6: Will any trees be felled as part of the proposed development and / or any works proposed within any tree protection zones where trees are to be retained?

No: The works are limited to the rear of the existing property and trees are at the rear of the garden, away from the property.

7: Is there a history of seasonal shrink - swell subsidence in the local area and / or evidence of such effects at the site?

No: Although founded in shrinkable London Clay, we are working to extend an existing basement. This is already below the normal depth of seasonal ground movement as are the adjacent properties, which also include basements.

8: Is the site within 100 m of a watercourse or a potential spring line?

No: Nothing is shown on local maps (see appendix) - or from local knowledge. The property is founded in impermeable London Clay away from leakage resulting from sand or gravel layers.

9: Is the site within previously worked ground?

No

10: Is the site within an aquifer?

No: See answer to item 8.

11: Is the site within 50m of the Hampstead Heath Ponds?

No: See OS Map in the appendix.

12: Is the site within 5 m of a highway or pedestrian right of way?

No. The new basement works are at the rear of the property.

13: Will the basement significantly increase the differential depth of foundations relative to neighbouring properties?

No: The new element is at the same depth as the existing.

14: Is the site over (or within the exclusion zone of) any tunnels, e.g. railway lines?

No: The main railway line from Euston Station is clearly marked on local maps and figure 18 of the appendix. OS Maps allow us to calculate that our minor basement improvement is at least 100 metres away from the railway and any exclusion.

Section 3 Surface flow and flooding screening flowchart.

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|---|--|
| 1: Is the site within the catchment areas of Hampstead Heath? | No, see OS Map on page 2 of appendix. |
| 2: As part of the proposed site drainage, will surface water flows (e.g. volume of rainfall and peak run-off) be materially changed from the existing route? | No: Existing drainage routes will be maintained. |
| 3: Will the proposed basement development result in a change in the proportion of hard / paved external areas? | Yes, the rear garden is paved and will become soft landscaping. The paved area currently drains into this same area. |
| 4: Will the proposed basement result in changes to the profile of the inflows (instantaneous and long term) of surface water being received by adjacent properties or downstream water courses? | No: The alteration to this existing basement is small and will not intersect water flows. |
| 5: Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses? | No: See 4 |
| 6: Is the site in an area known to be at risk from surface water flooding, such as South Hampstead, West Hampstead, Gospel Oak and Kings Cross, or is it at risk from flooding, for example because the proposed basement is below the static water table of a nearby surface water feature? | No: The nearest watercourse is Regents Canal to the South. The Environment Agency's 'Risk of Flooding from Rivers and Sea' map shows that this immediate area is not at risk from river flooding as it is beyond the flood plain. See also the maps in the appendix. |

CONCLUSION

It can be seen from the above assessment and the Architects before and after section drawings that the proposed works are limited in nature and make only a relatively small change to the existing basement footprint. No new basement is being formed. As we have answered Yes to item 5 in Section 2, we attach a brief Basement Impact Assessment, following guidance given in Camden's Hydro-geological report by ARUP, at the end of this document.

Neighbouring properties will be protected by their rights under the Party Wall Act.

We consider that no further risk assessment is required and would comment that similar scale schemes in the Camden area have been approved with no additional assessment being required.

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Basement Impact Assessment in response to - **Section 2, Item 5.**

<u>Item</u>	<u>Area of concern</u>	<u>Impact Assessment</u>
5: Is the London Clay the shallowest strata in the area? (Yes)	<p>(i) Forming basements in London Clay can mean that adjacent properties could suffer from differential ground movement as their shallow foundations could be in clay that is affected by seasonal ground movement.</p> <p>(ii) As London Clay is impermeable Hydrological issues are not of concern in this case.</p> <p>(iii) Consideration must be given to the stability of the ground during the works and the long term stability of the neighbouring properties.</p>	<p>(i) In this case the neighbouring properties already have basements as does 117 Albert Street. Our basement will extend to the rear of the property but will be at the same depth as the existing thus having no impact of the risk of differential movement. The properties are already below the impact of seasonal ground movement.</p> <p>(iii) The reinforced concrete side walls will be constructed in metre sections in an agreed sequence as is normal for this type of construction.</p>