

# Cooper Associates

Consulting Structural Engineers



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## Consideration of requirement for a Basement Impact Assessment for

17A Chesterford Gardens, NW3 7DD

Job Number: CA6669

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Client: Seema Kapoor  
Prepared by: Eur Ing **D Dorosinski** BEng MSc CEng MIStructE  
Date: March 2023  
Revision: A

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### Cooper Associates Structural Engineers Limited

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# 1.0 Screening

## 1.1. A screening process has been undertaken and the findings are described below.

Question	Response	Details
1a. Is the site located directly above an aquifer?	Yes	Property is founded on Claygate Member (based on geological maps (see Appendix C) and test pits dug on site) which has EA aquifer designation "Secondary A", meaning a permeable layer capable of supporting water supplies at a local rather than strategic scale.
1b. Will the proposed basement extend beneath the water table surface?	No	The properties existing basement is already as low as the proposed basement extension and this does not have problems with a water table. A test pit was dug in the existing basement and groundwater was encountered more than a meter below the existing basement slab level.
2. Is the site within 100m of a watercourse, well (used / disused) or potential spring line?	No	The Environment Agency confirms that this immediate area is not at risk from river flooding. See Appendix A.
3. Is the site within the catchment of the pond chains on Hampstead Heath?	No	See Appendix B.
4. Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?	No	The proposed basement is below the existing structure. The hard surfacing will remain unchanged.
5. As part of site drainage, will more surface water (e.g. rainfall and run-off) than at present be discharged to the ground (e.g. via soakaways and/or SUDS)?	No	No additional surface water will be generated as the proposed basement is below the existing structure.
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	There are no local ponds nearby that would affect the proposed works.

## 1.2. Slope Stability

Question	Response	Details
1. Does the existing site include slopes, natural or man-made greater than 7 degrees (approximately 1 in 8)?	No	See the attached Slope Angle Map in Appendix C.
2. Will the proposed re-profiling of landscaping at the site change slopes at the property boundary to more than 7 degrees (approximately 1 in 8)?	No	The landscaping will remain as existing.

3. Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7 degrees (approximately 1 in 8)?	No	See the attached Slope Angle Map in Appendix C.
4. Is the site within a wider hillside setting in which the general slope is greater than 7 degrees (approximately 1 in 8)?	No	See the attached Slope Angle Map in Appendix C.
5. Is the London Clay the shallowest strata at the site?	No	The shallowest strata is Claygate Member.
6. Will any trees be felled as part of the development and/or are any works proposed within any tree protection zones where trees are to be retained?	No	No trees will be cut down.
7. Is there a history of seasonal shrink-swell subsidence in the local area and/or evidence of such effects at the site?	No	We are working to the front of an existing basement that is below the normal depth of seasonal ground movement as are the adjacent properties, which also include basements. The new structure is at the middle of our clients building and away from the neighbours buildings.
8. Is the site within 100m of a watercourse or a potential spring line?	No	Nothing is shown on local maps or from local knowledge.
9. Is the site within an area of previously worked ground?	No	Based on test pits dug on site.
10. Is the site within an aquifer. If so, will the proposed basement extend beneath the water table such that dewatering may be required during construction?	No	Property is founded on Claygate Member which has EA aquifer designation "Secondary A". The properties existing basement is already as low as the proposed basement extension and this does not have problems with a water table.
11. Is the site within 50m of the Hampstead Heath Ponds?	No	The property is at least 750m from Hampstead Heath's Ponds.
12. Is the site within 5m of a highway or pedestrian right of way?	No	The property is located over 5m from a highway or pedestrian right of way.
13. Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?	No	The proposed new structure is away from the neighbours foundations.
14. Is the site over (or within the exclusion zone of) any tunnels, e.g. railway lines?	No	See Appendix D.

### 1.3. Surface Water and Flooding

Question	Response	Details
1. Is the site within the catchment of the ponds chains on Hampstead Heath?	No	The property is at least 650m from Hampstead Heath's catchment area.
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	Works are away from the areas of surface water.

3. Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas?	No	The proposed basement is below the existing structure. The hard surfacing will remain unchanged.
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 watercourses?	No	The properties existing basement does not have problems with a water table. The area of the proposed basement extension is approximately 12m <sup>2</sup> . The construction of this small extension will not result in changes to the profile of the inflows of surface water.
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 identified to have surface water flood risk according to either the Local Flood Risk Management Strategy or the Strategic Flood Risk Assessment or is it at risk from flooding, for example because the proposed basement is below the static water level of nearby surface water feature.	No	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.

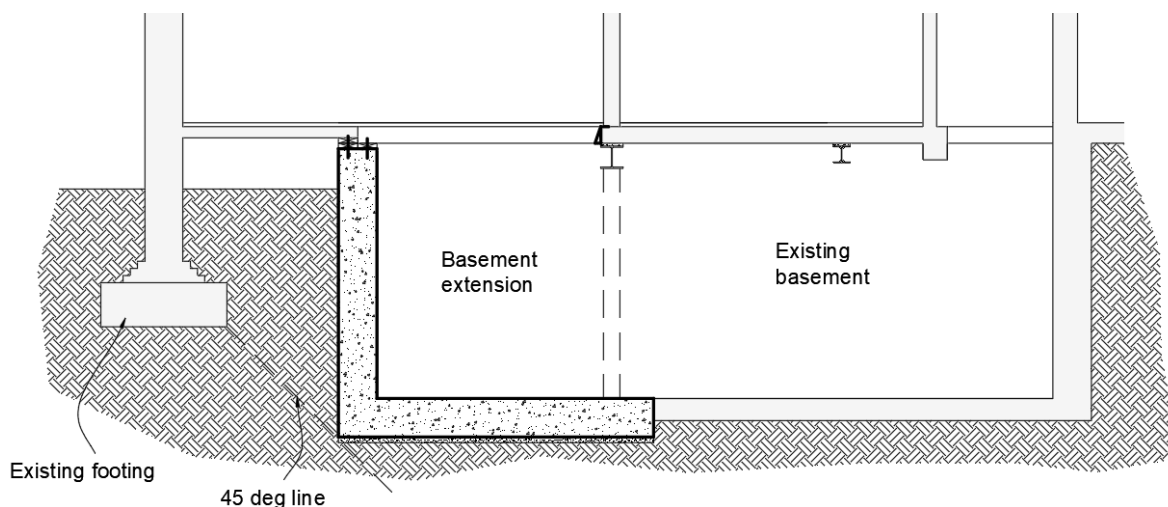
## 1.4. Conclusion

It can be seen from the above assessment that the proposed works are limited in nature and make only a relatively small change to the existing basement footprint. All new works are confined to the footprint of the existing building and do not extend or underpin the neighbours buildings.

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

Works will be carried out by a Contractor with experience of work of this nature.

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.



Proposed section through basement extension

## Appendix A – Flood Map for Planning



# Flood map for planning

Your reference  
**NW3 7DD**

Location (easting/northing)  
**525987/185558**

Created  
**20 Jul 2022 15:23**

**Your selected location is in flood zone 1, an area with a low probability of flooding.**

You will need to do a flood risk assessment if your site is **any of the following**:

- bigger than 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

### Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.









Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2021 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>



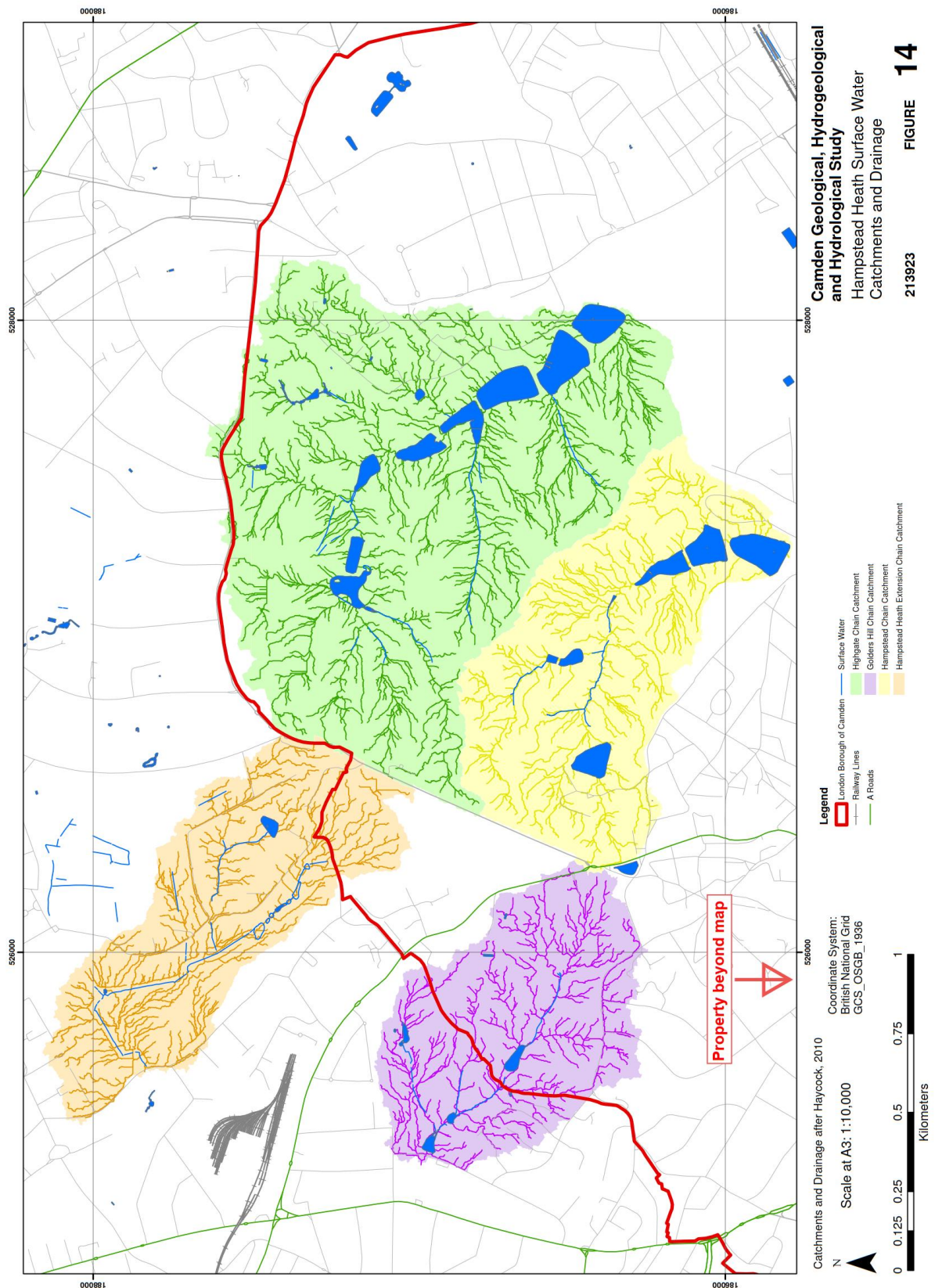
Scale  
**1:2500**

Created  
**20 Jul 2022 15:23**

	Selected point
	Flood zone 3
	Flood zone 3: areas benefitting from flood defences
	Flood zone 2
	Flood zone 1
	Flood defence
	Main river
	Water storage area

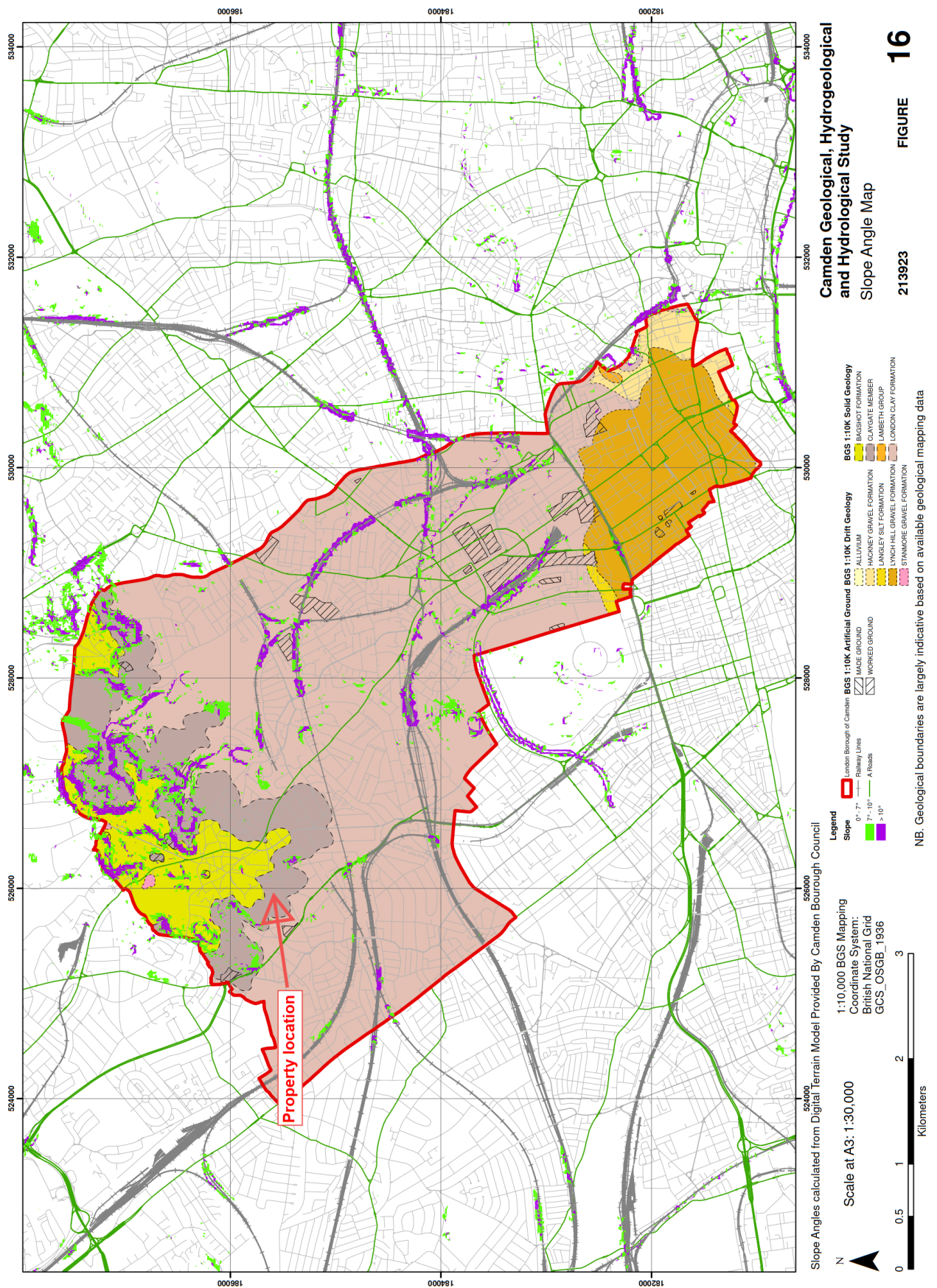
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## Appendix B – Boundaries of the catchment of the pond chains on Hampstead Heath





# Appendix C – Slope Angle Map





## Appendix D – Map showing transport infrastructure.



Source - London Borough of Camden, January 2010. *Camden Core Strategy Proposed Submission*.

### Camden Geological, Hydrogeological and Hydrological Study Transport Infrastructure

213923

FIGURE **18**