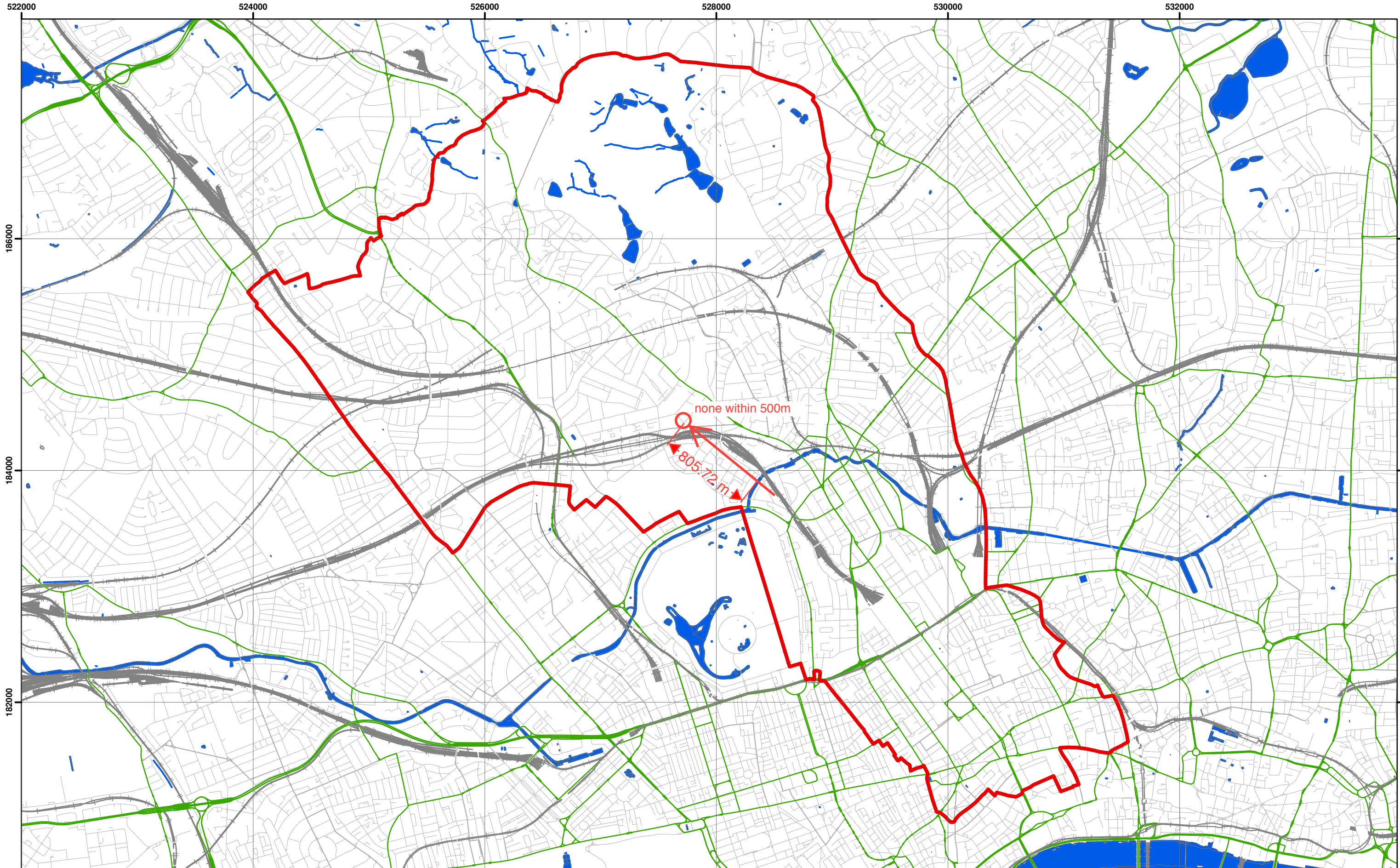


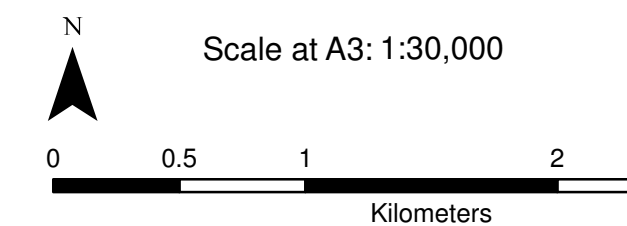
**Camden Geological, Hydrogeological and Hydrological Study**  
**Watercourses**

Source – Barton, Lost Rivers of London





Data Source: London Borough of Camden, 2010

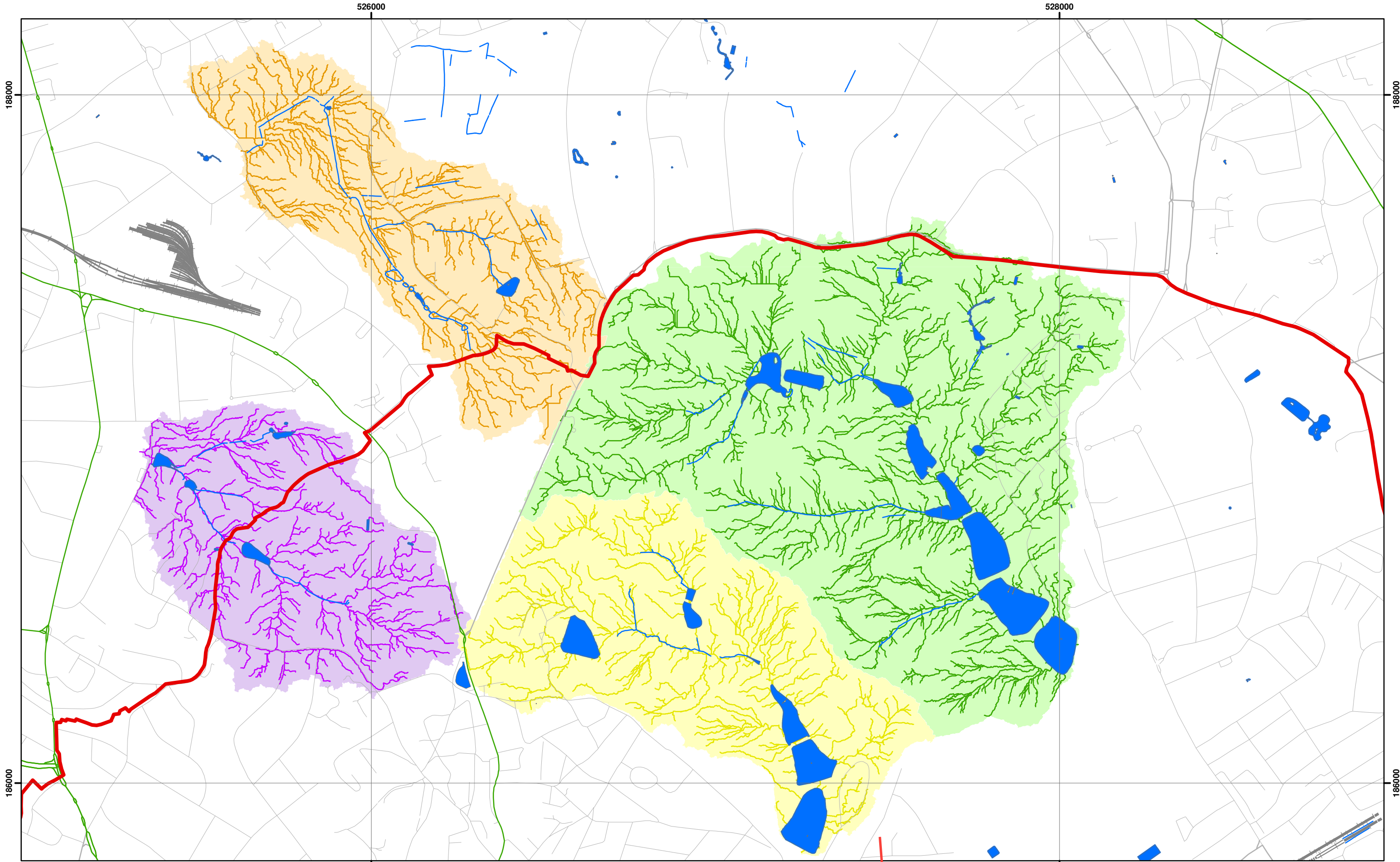


Coordinate System:  
British National Grid  
GCS\_OSGB\_1936

- Legend**
- London Borough of Camden
  - Railway Lines
  - A Roads
  - Surface water

**Camden Geological, Hydrogeological  
and Hydrological Study**  
Camden Surface Water Features





Catchments and Drainage after Haycock, 2010



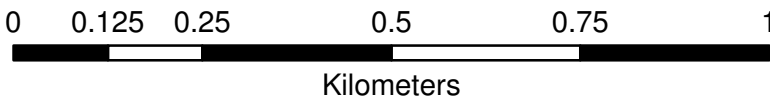
Scale at A3: 1:10,000

Coordinate System:  
British National Grid  
GCS\_OSGB\_1936

**Legend**

- London Borough of Camden
- Surface Water
- Railway Lines
- A Roads
- Highgate Chain Catchment
- Golders Hill Chain Catchment
- Hampstead Chain Catchment
- Hampstead Heath Extension Chain Catchment

not within catchment



**Camden Geological, Hydrogeological  
and Hydrological Study**

Hampstead Heath Surface Water  
Catchments and Drainage

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FIGURE **14**

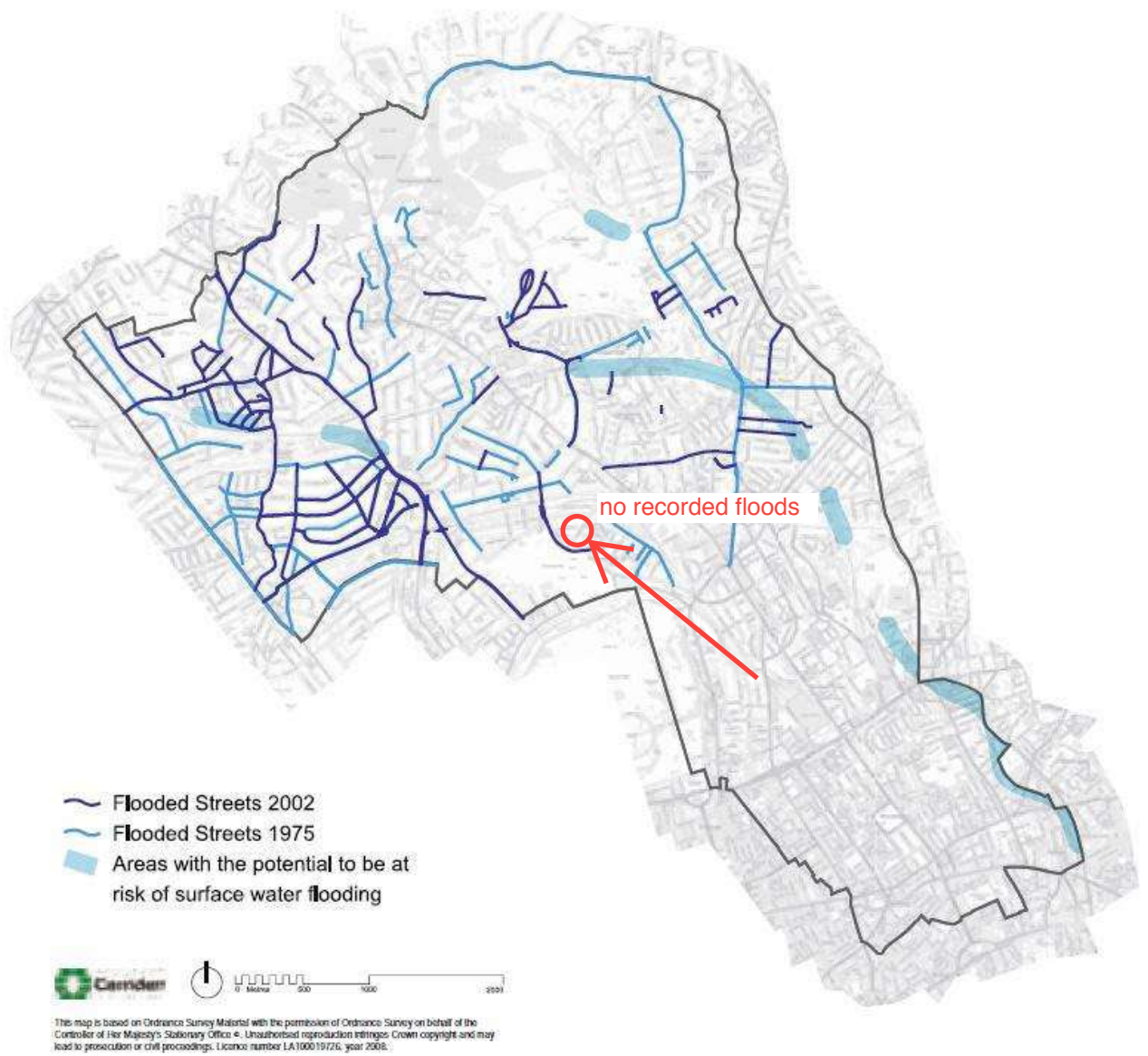
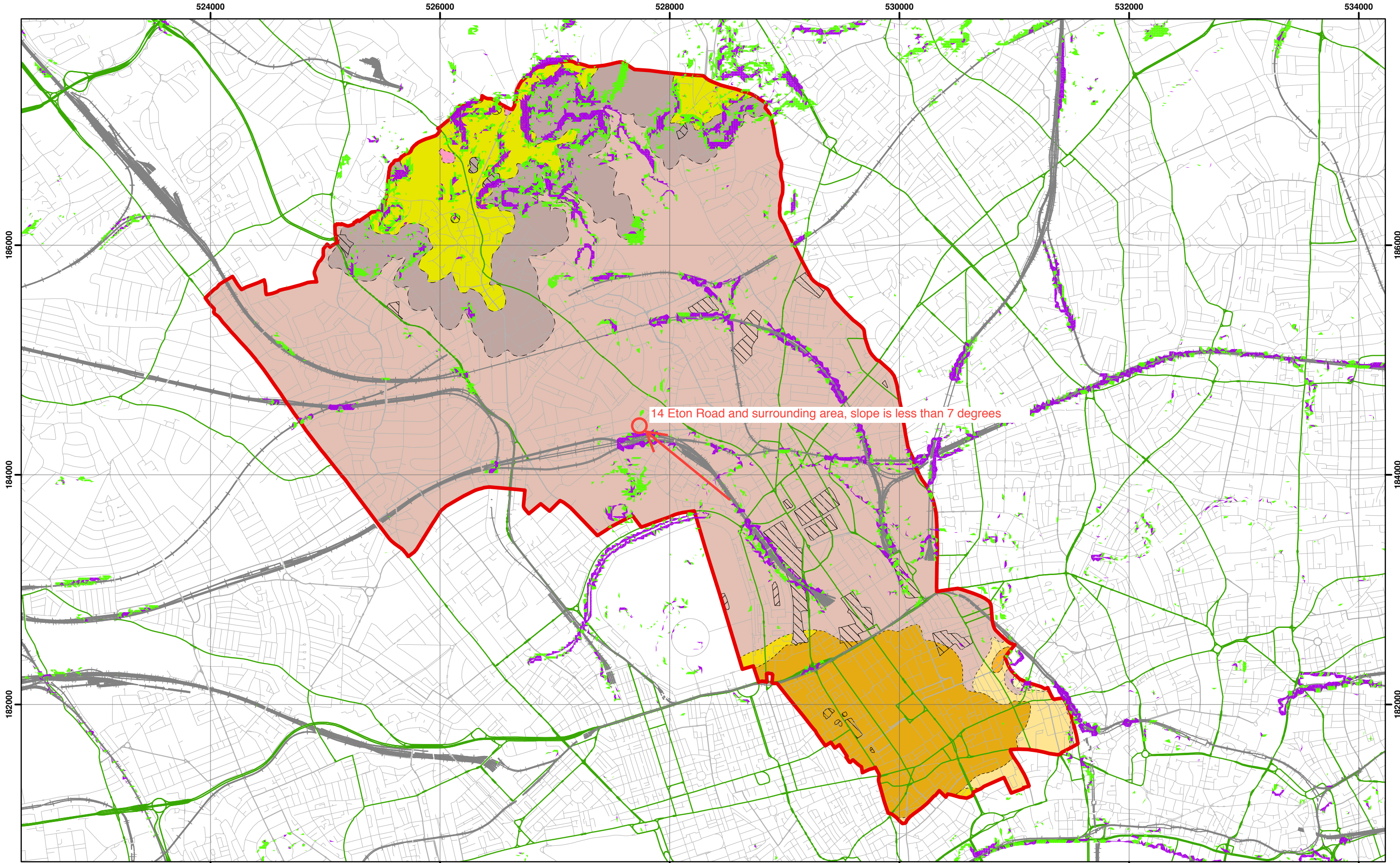


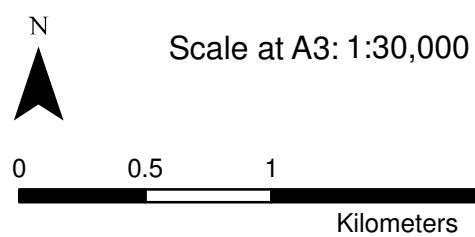
Figure 5 from Core Strategy, London Borough of Camden

**Camden Geological, Hydrogeological  
 and Hydrological Study  
 Flood Map**





Slope Angles calculated from Digital Terrain Model Provided By Camden Borough Council



1:10,000 BGS Mapping  
Coordinate System:  
British National Grid  
GCS\_OSGB\_1936

**Legend**

- |              |                          |                             |                             |                         |
|--------------|--------------------------|-----------------------------|-----------------------------|-------------------------|
| <b>Slope</b> | London Borough of Camden | BGS 1:10K Artificial Ground | BGS 1:10K Drift Geology     | BGS 1:10K Solid Geology |
| 0° - 7°      | Railway Lines            | MADE GROUND                 | ALLUVIUM                    | BAGSHOT FORMATION       |
| 7° - 10°     | A Roads                  | WORKED GROUND               | HACKNEY GRAVEL FORMATION    | CLAYGATE MEMBER         |
| > 10°        |                          |                             | LANGLEY SILT FORMATION      | LAMBETH GROUP           |
|              |                          |                             | LYNCH HILL GRAVEL FORMATION | LONDON CLAY FORMATION   |
|              |                          |                             | STANMORE GRAVEL FORMATION   |                         |

NB. Geological boundaries are largely indicative based on available geological mapping data

**Camden Geological, Hydrogeological  
and Hydrological Study**

**Slope Angle Map**

213923

FIGURE

**16**



**Areas of greatest potential for slope instability**

**The assessment of the potential for slope instability**

Due to a long history of intensive landuse and urban development it has only been possible to recognise and map, with confidence, a few areas of past landslide activity. However, beyond the north London district, areas of similar bedrock geology and topography contain significant areas of mapped landslides. Therefore, a slope instability assessment has been made to act as a guide to where areas of significant landslide potential are present, but obscured, and where further information regarding their stability are needed before development or major changes in landuse are made (Forster et al. 2003).

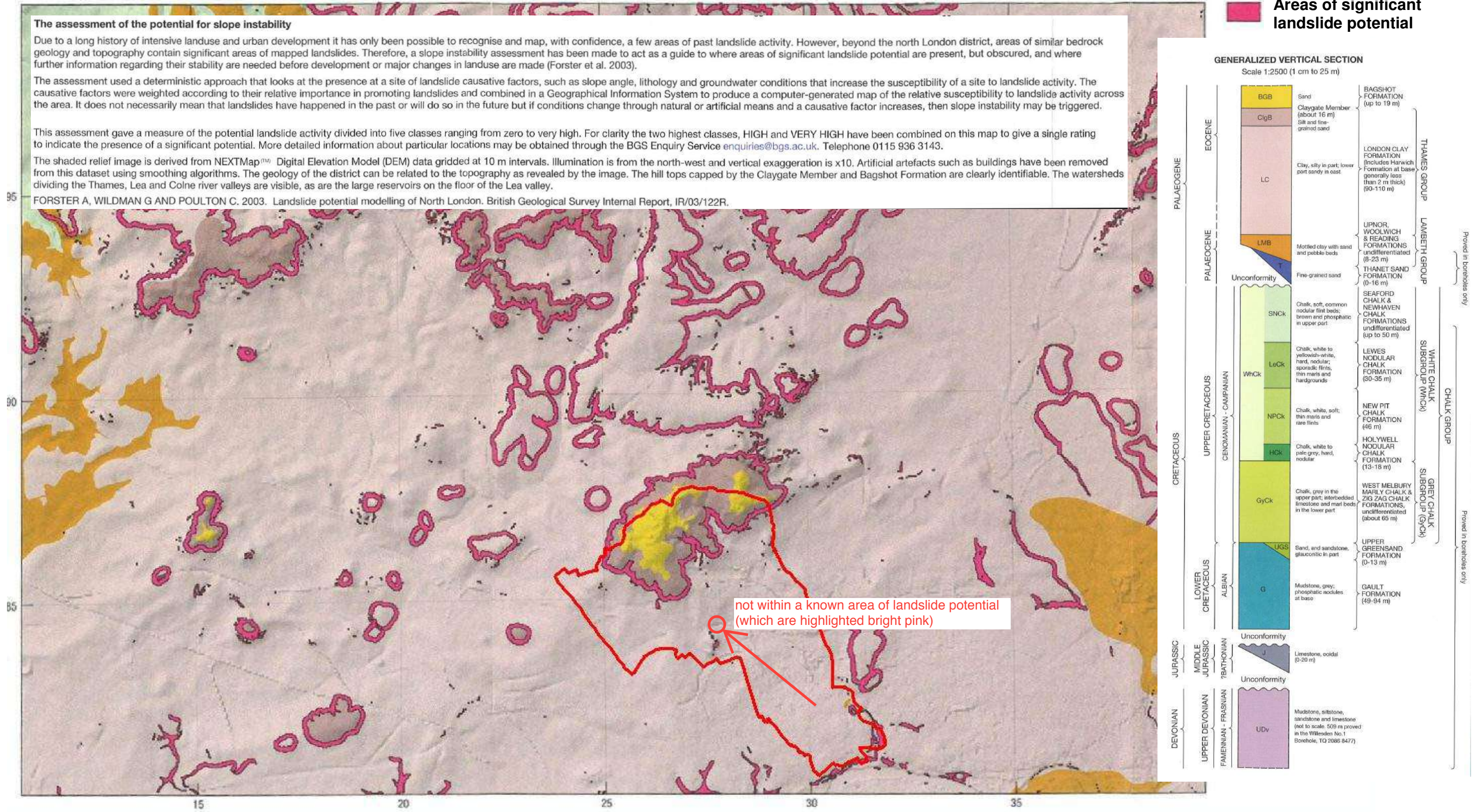
The assessment used a deterministic approach that looks at the presence at a site of landslide causative factors, such as slope angle, lithology and groundwater conditions that increase the susceptibility of a site to landslide activity. The causative factors were weighted according to their relative importance in promoting landslides and combined in a Geographical Information System to produce a computer-generated map of the relative susceptibility to landslide activity across the area. It does not necessarily mean that landslides have happened in the past or will do so in the future but if conditions change through natural or artificial means and a causative factor increases, then slope instability may be triggered.

This assessment gave a measure of the potential landslide activity divided into five classes ranging from zero to very high. For clarity the two highest classes, HIGH and VERY HIGH have been combined on this map to give a single rating to indicate the presence of a significant potential. More detailed information about particular locations may be obtained through the BGS Enquiry Service enquiries@bgs.ac.uk. Telephone 0115 936 3143.

The shaded relief image is derived from NEXTMap™ Digital Elevation Model (DEM) data gridded at 10 m intervals. Illumination is from the north-west and vertical exaggeration is x10. Artificial artefacts such as buildings have been removed from this dataset using smoothing algorithms. The geology of the district can be related to the topography as revealed by the image. The hill tops capped by the Claygate Member and Bagshot Formation are clearly identifiable. The watersheds dividing the Thames, Lea and Colne river valleys are visible, as are the large reservoirs on the floor of the Lea valley.

FORSTER A, WILDMAN G AND POULTON C. 2003. Landslide potential modelling of North London. British Geological Survey Internal Report, IR/03/122R.

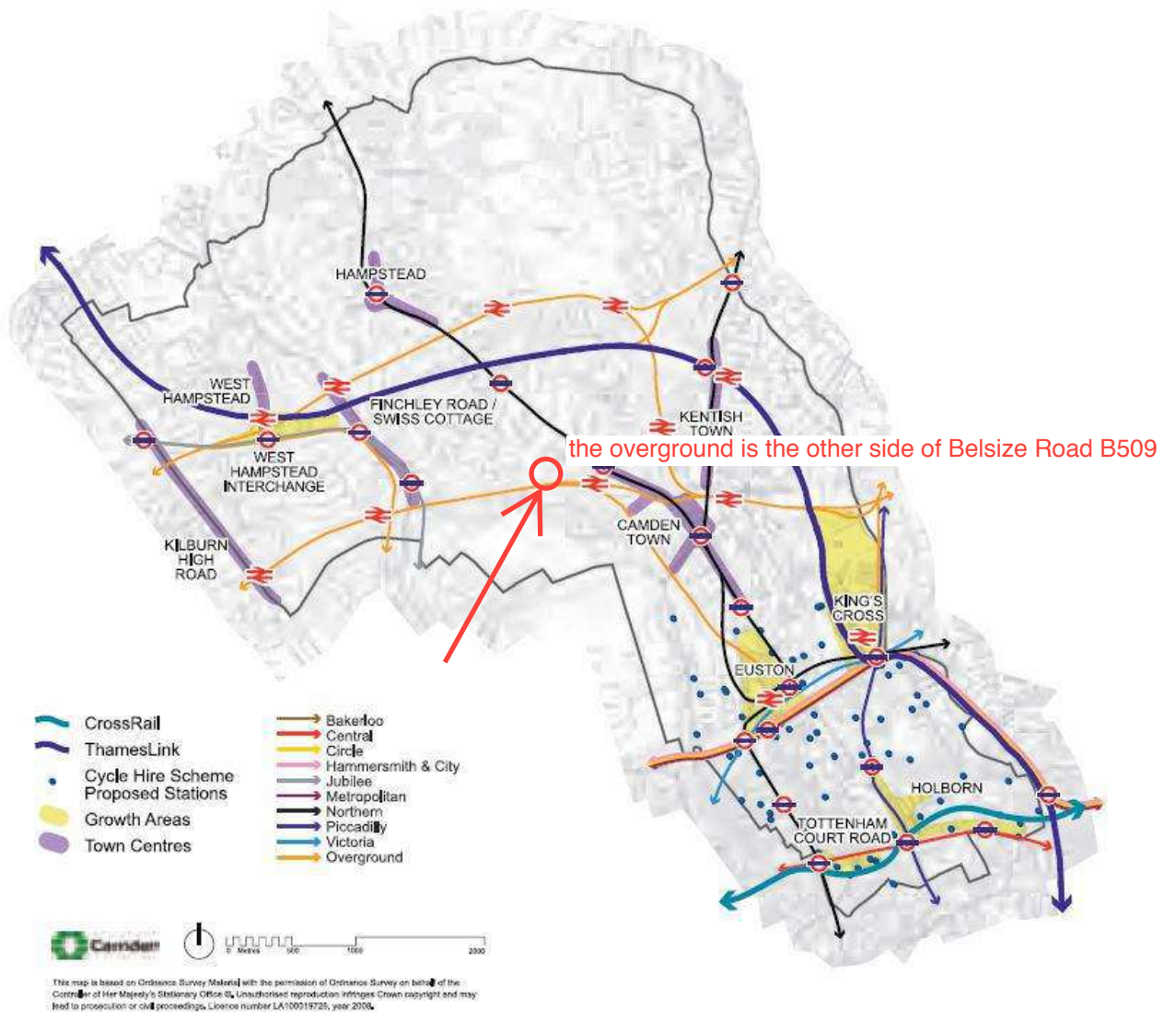
**Areas of significant landslide potential**



Source - British Geological Society, 1:50,000 Series England and Wales Sheet 256 – North London

**Camden Geological, Hydrogeological and Hydrological Study**  
Areas of landslide potential

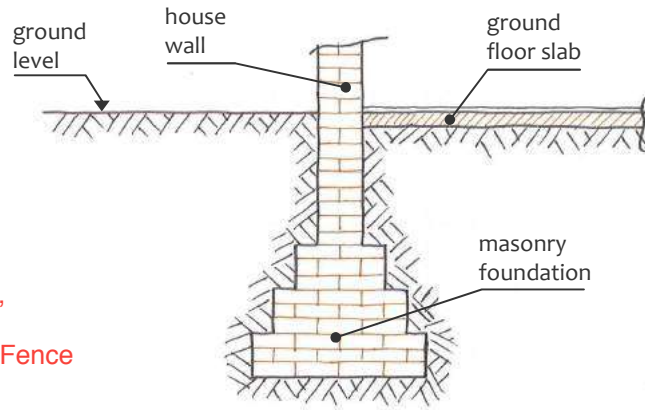




Source - London Borough of Camden, January 2010. *Camden Core Strategy Proposed Submission*.

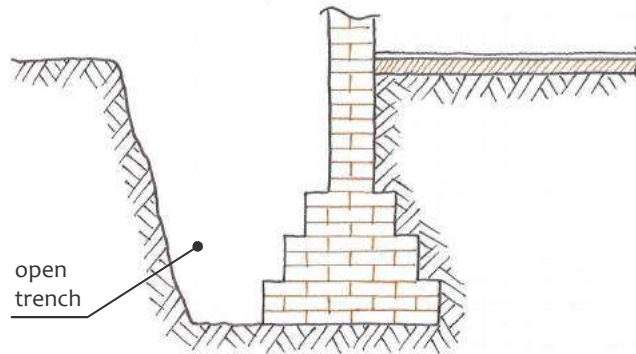
## Camden Geological, Hydrogeological and Hydrological Study Transport Infrastructure

Stage 0: original foundation, typical of houses

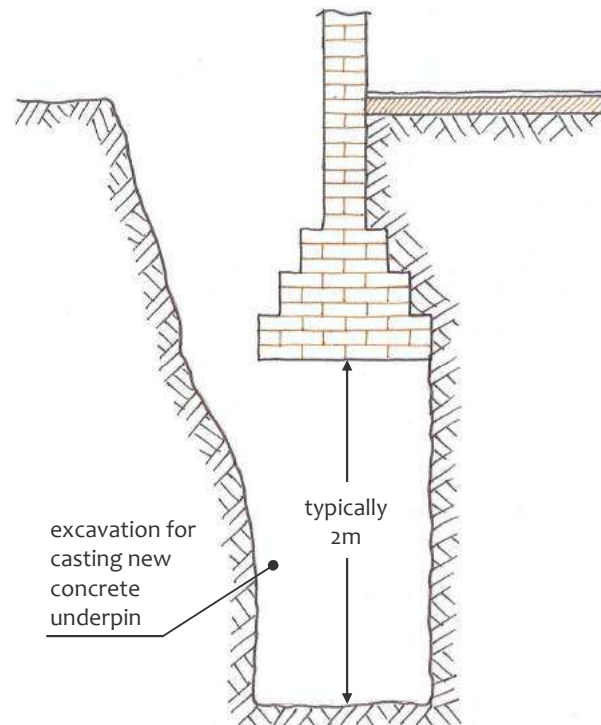


Where neighbours foundations are undermined, traditional underpinning sequence to be used. Possibility of taking down and re-building Party Fence Walls also to be investigated.

Stage 1: exposure of original foundation by digging a short trench along a section of the wall to be underpinned



Stage 2: excavation of pit to form underpin: see Fig. 2.1b for details



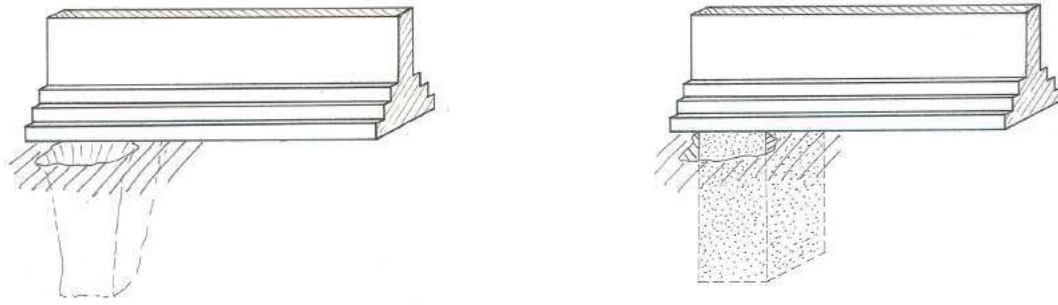
Indicative, schematic sketches only. Actual dimensions are likely to vary. Not to scale.

**Camden Geological, Hydrogeological and Hydrological Study**  
Typical underpinning construction sequence

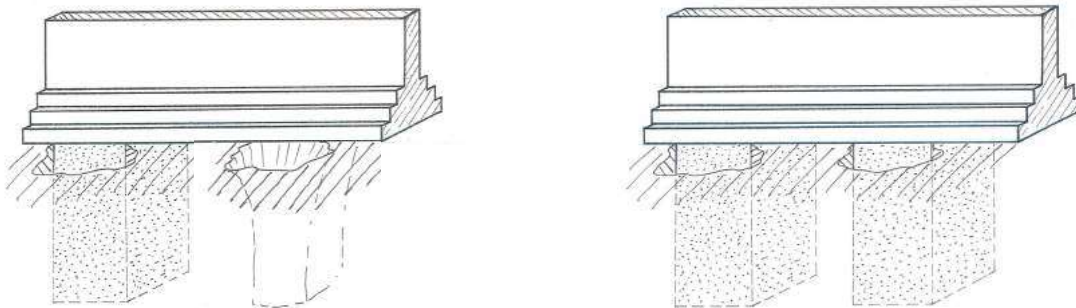


Where neighbours foundations are undermined, traditional underpinning sequence to be used. Possibility of taking down and re-building Party Fence Walls also to be investigated.

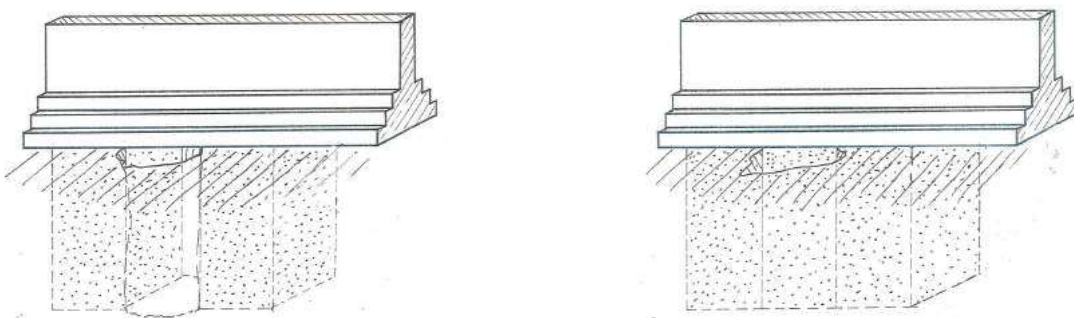
Stage 2a: excavation and concreting of initial section



Stage 2b: excavation and concreting of another section, not adjacent to first one



Stage 2c: excavation and concreting of an intermediate section, to form contiguous rows of underpin



Indicative, schematic sketches only.  
Actual dimensions are likely to vary.  
Not to scale.

**Camden Geological, Hydrogeological  
and Hydrological Study**  
Underpinning construction sequence with  
'hit and miss' pattern



## Appendix C2 - Correspondence with LUL





**London Underground**  
Infrastructure Protection

3<sup>rd</sup> Floor  
Albany House  
55 Broadway  
London SW1H 0BD

[www.tfl.gov.uk/tube](http://www.tfl.gov.uk/tube)

Your ref:  
Our ref: 20403-SI-11-130717

John Hurle  
Structure Mode  
[JohnHurle@structuremode.com](mailto:JohnHurle@structuremode.com)

13 July 2017

Dear John,

**14 Elton Road London NW3 4SS**

Thank you for your communication of 12<sup>th</sup> July 2017.

I can confirm that London Underground has no assets within 50 metres of your site as shown on the plan you provided.

If I can be of further assistance, please contact me.

Yours sincerely

**Shahina Inayathusein**  
Information Manager  
Email: [locationenquiries@tube.tfl.gov.uk](mailto:locationenquiries@tube.tfl.gov.uk)  
Direct line: 020 3054 1365