AP GEOTECHNICS
a ground investigation and consultancy service

Devonshire House
60 Station Road
Addlestone
Surrey KT15 2AF

t 01932 848460
f 01932 851255
e mail@apgeotechnics.co.uk
w www.apgeotechnics.co.uk

239 HAVERSTOCK HILL LONDON NW3 4PR

Basement Impact Assessment Screening Document

Client
Mr M Spalter

Architect
Davies Architecture Limited

Report No. 3690v2

20 March 2012

CONTENTS

239 HAVERSTOCK HILL
LONDON NW3 4PR

Basement Impact Assessment
Screening Document

1
Introduction

This Screening Document has been commissioned by Davies Architecture Limited on behalf of owner Mr M Spalter to address the requirements of Camden Planning Guidance CPG4 for Basements and Lightwells.

An Hydrological Assessment and Geotechnical Investigation have been commissioned for the site and will provide supporting information to this Screening Document.

2
Proposed development

The property is one of a pair of established semi - detached houses as illustrated at Appendix A. The current ground floor layout and the outline of the proposed basement is shown at Figure B1 and the trees in the front garden at Figure B2 of Appendix B. Sections through the proposed basement are given at Figure B3.

3
Screening process

The first stage of the Basement Impact Assessment (BIA) is a screening process to establish whether or not a BIA is required. The screening process is proscribed in CPG4 by flow charts for subterranean (ground water) flow, slope stability and surface flow and flooding. Each stage asks a series of questions which are answered as follows.

3.1
Ground water flow

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

No. The stratum beneath the site is classified as Unproductive by the Environment Agency; i.e. deposits with low permeability that have negligible significance for water supply or river base flow. The nearest aquifer is the Claygate Beds which are a Secondary A aquifer; i.e. permeable layers capable of supporting water supplies at a local rather than strategic scale. They outcrop some 180 m to the north west as shown at Figure C1 and lie upslop of the property.

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

A standpipe will be installed for the Hydrological Assessment commissioned from AP Geotechnics. Please refer to that report and the forthcoming Geotechnical Investigation for further discussion.

Question 2: Is the site within 100 m of a watercourse, well or potential spring line?

No surface water features were noted during the walk over survey and none are recorded on the Environment Agency web site. The site lies between two tributaries of the Tyburn mapped some 480 m north west and 300 m south east of the site by Barton[1] as shown at Figure C2. Both are fully culverted.

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

No. Reference to Arup[2] Figure 14 shows the site to be some 530 m south of the nearest catchment which is that for the Hampstead chain.

Question 4: Will the proposed basement development result in a change in the proportion of hard surface/paved area?

The footprint of the basement and the light wells will add about 29 m^2 to the current footprint of some 95 m^2.

Question 5: As part of the site drainage, will more surface water than at present be discharged to the ground?

It is assumed that the small amount of additional roof water will be discharged to the existing sewer. However, this should be confirmed by the project drainage engineer.

Question 6: Is the lowest point of the proposed excavation close to or lower than the mean water level in any local pond or spring line?

No local ponds or spring lines have been observed, see Q2 above.

---

[1] *Barton, N; The Lost Rivers of London; Historical Publications Ltd., 1992*

[2] *Camden geological, hydrogeological and hydrological study; Ove Arup & Partners Ltd., November 2010*

3.2
Slope stability

Question 1: Does the existing site include slopes greater than 7°?

At the location of the subject property, Haverstock Hill slopes down to the south east at a gradient of approximately 2°. The site itself is approximately level from the front garden to the rear boundary.

Question 2: Will the proposed reprofiling of landscaping change slopes at the property boundary to more than 7°?

No changes are proposed to the slopes at the property boundaries. Local excavation to provide light wells to the basement will be supported by retaining walls.

Question 3: Does the development neighbour land with a slope greater than 7°?

The surrounding road layout and adjoining property are such that Haverstock Hill and neighbouring property to the south east are set slightly lower than the site level. Retaining walls provide support in these areas rather than earth banks.

Question 4: Is the site within a wider hillside setting in which the general slope is greater than 7°?

No. The gradient of Haverstock Hill in the vicinity of the property is less than 1°, increasing to about 1.6° to the south east. The overall gradient to the south west is about 1.7°.

Question 5: Is the London Clay the shallowest stratum at the site?

Yes. The British Geological Survey show the site to be directly underlain by London Clay, no superficial deposits are recorded.

Question 6: Will any trees be felled as part of the proposed development?

No. All trees will remain unaffected.

Are any works proposed within any tree protection zones?

The basement construction is outside of the canopy of the horse chestnut in the front garden as shown at Figure B2. The extent of the tree protection zone should be confirmed by an arboriculturalist.

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

London Clay is well documented as experiencing shrinkage and swelling on change of moisture content. However, no such evidence was seen during the walk over survey.

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

No. Refer to Section 3.1 Q2 above.

Question 9: Is the site within an area of previously worked ground?

The site is entirely within the curtilage of the present house.

Question 10: Is the site within an aquifer?

No. The underlying stratigraphy of London Clay is designated as Unproductive by the Environment Agency.

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

No. The nearest ponds are approximately 530 m to the north.

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

No. The basement is coincident with the front elevation of the existing house, 9.5 m from the back of footway.

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

The basement will have approximately 2.5 m headroom. The depth of the foundations at the party wall should be established and the Structural Engineer consider any measures necessary to mitigate differential movement.

Question 14: Is the site over or within the exclusion zone of any tunnels?

The nearest known tunnel carries the rail track from east to west some 80 m south of the site as shown at Figure C3.

3.3 Surface flow and flooding screening

Question 1: Is the site within the catchment of pond chains on Hampstead Heath?

No. Reference to Arup[2] Figure 14 shows the site to be some 530 m south of the nearest catchment which is that for the Hampstead chain.

Question 2: As part of the proposed site drainage, will surface water flows be materially changed from the existing route?

No. It is proposed to utilise the existing sewer network.

Question 3: Will the proposed basement development result in a change in the proportion of hard surfaced /paved external areas?

The proposals will add about 29 m^2 to the current building footprint of some 95 m^2.

Question 4: Will the proposed basement result in changes to the profile of the inflows of surface water being received by adjacent property or downstream watercourses?

No. Catchment and distribution routes will remain fundamentally unchanged.

Question 5: Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses.

The proposals will not affect water quality as all run off will discharge to the existing drainage network.

Question 6: Is the site known to be in an area at risk from surface water flooding?

The JBA Pluvial Flood Map is given at Figure C4 and shows the site not to be at risk of groundwater flooding. The site does not lie within a river flood plain. Haverstock Hill is not listed as at risk from surface water flooding in CPG4.

A W Parr
AP GEOTECHNICS LTD.
20 March 2012

APPENDICES

A Photograph

Photograph of front elevation of Nos. 239 & 241

B Scheme Drawings

Figure B1: Existing ground floor plan showing outline of proposed basement
Figure B2: Tree survey
Figure B3: Proposed sections

C Figures

Figure C1: Geology of outcrop
Figure C2: Lost rivers
Figure C3: Location of rail tunnel
Figure C4: Pluvial flood map

APPENDIX A

PHOTOGRAPH

239 Haverstock Hill

Photograph of front elevation of Nos. 239 & 241

APPENDIX B

SCHEME DRAWINGS

239 Haverstock Hill

Existing ground floor plan showing outline of proposed basement

Scale 1:100 @ A3

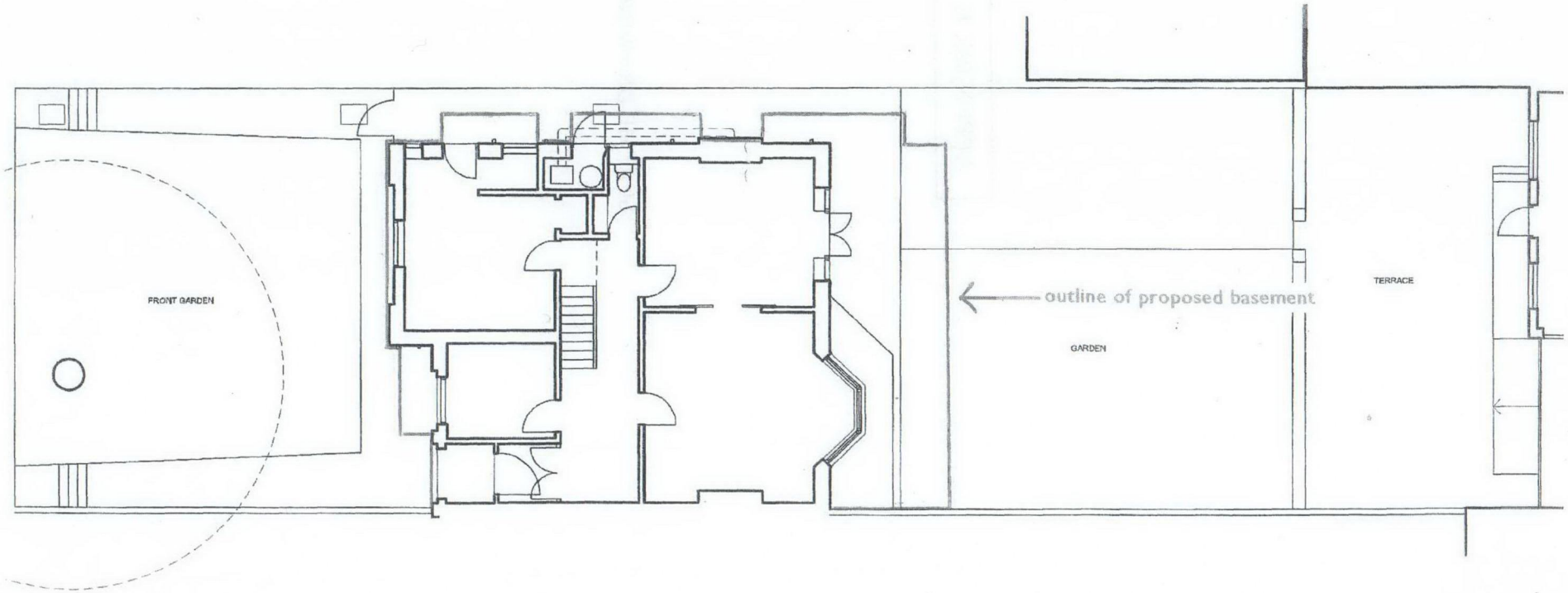


Figure B1

239 Haverstock Hill

Tree survey

Scale 1:100 @ A3

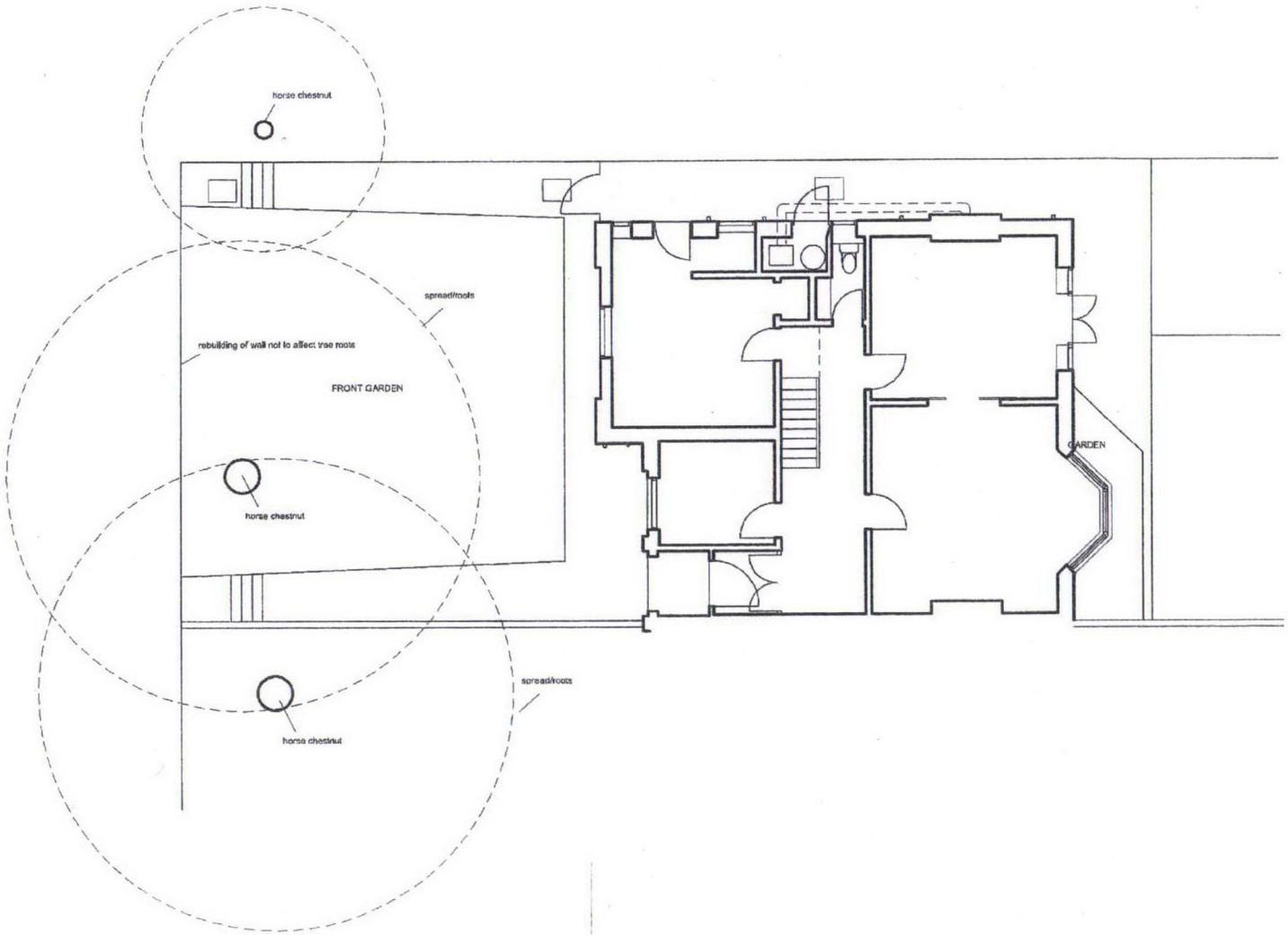


Figure B2


239 Haverstock Hill
Proposed sections
Scale 1:100 @ A3
EXTENSION
fence
STUDY
GARDEN
FRONT GARDEN
existing brick wall rebuilt with new black painted metal railing
BINS
EXTENSION
existing brick wall rebuilt with new black painted metal railings
FRONT GARDEN
GARDEN
PARKING BAY
Figure B3

APPENDIX C

FIGURES

239 Haverstock Hill

Geology at outcrop

Scale unknown

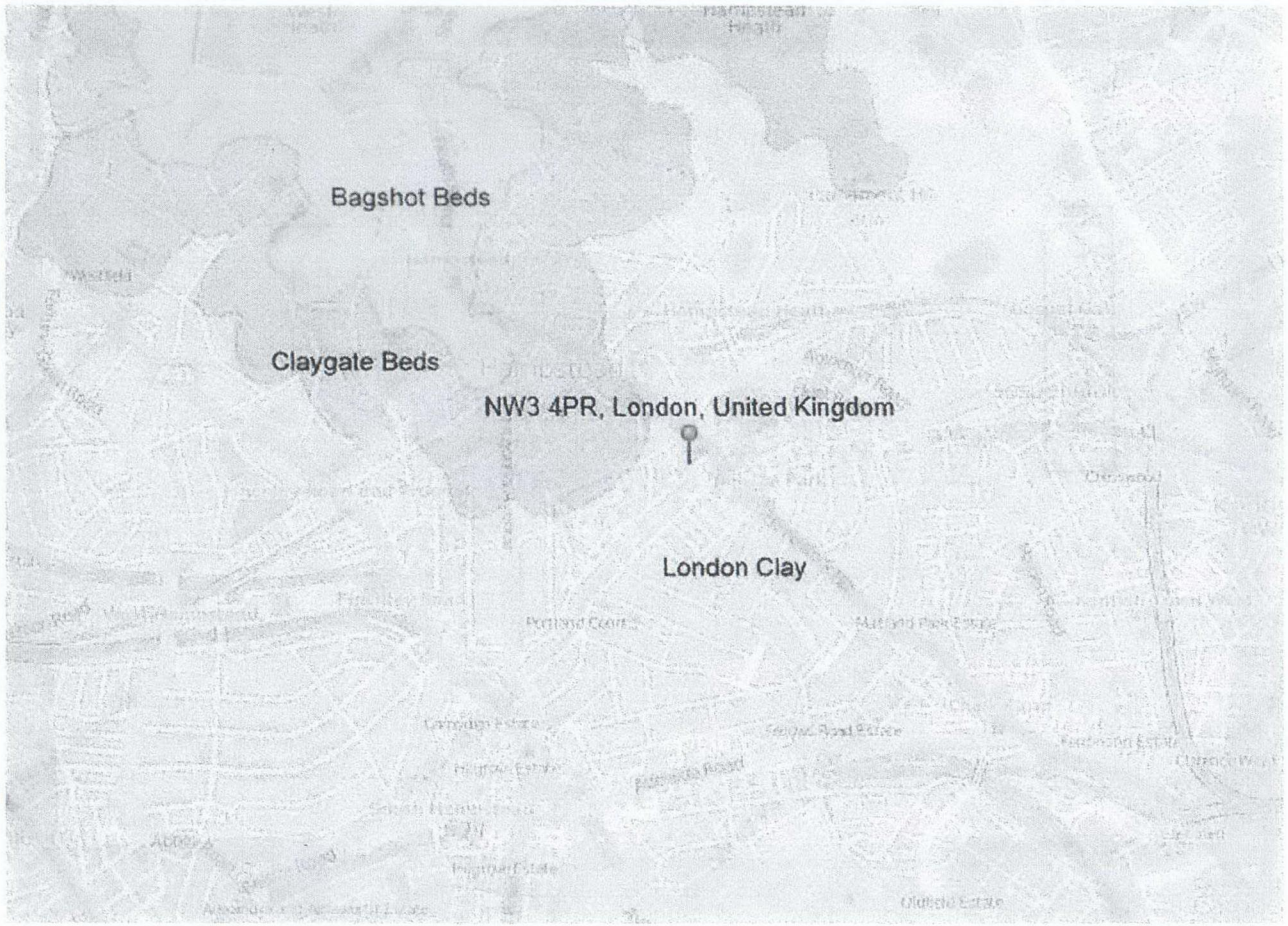
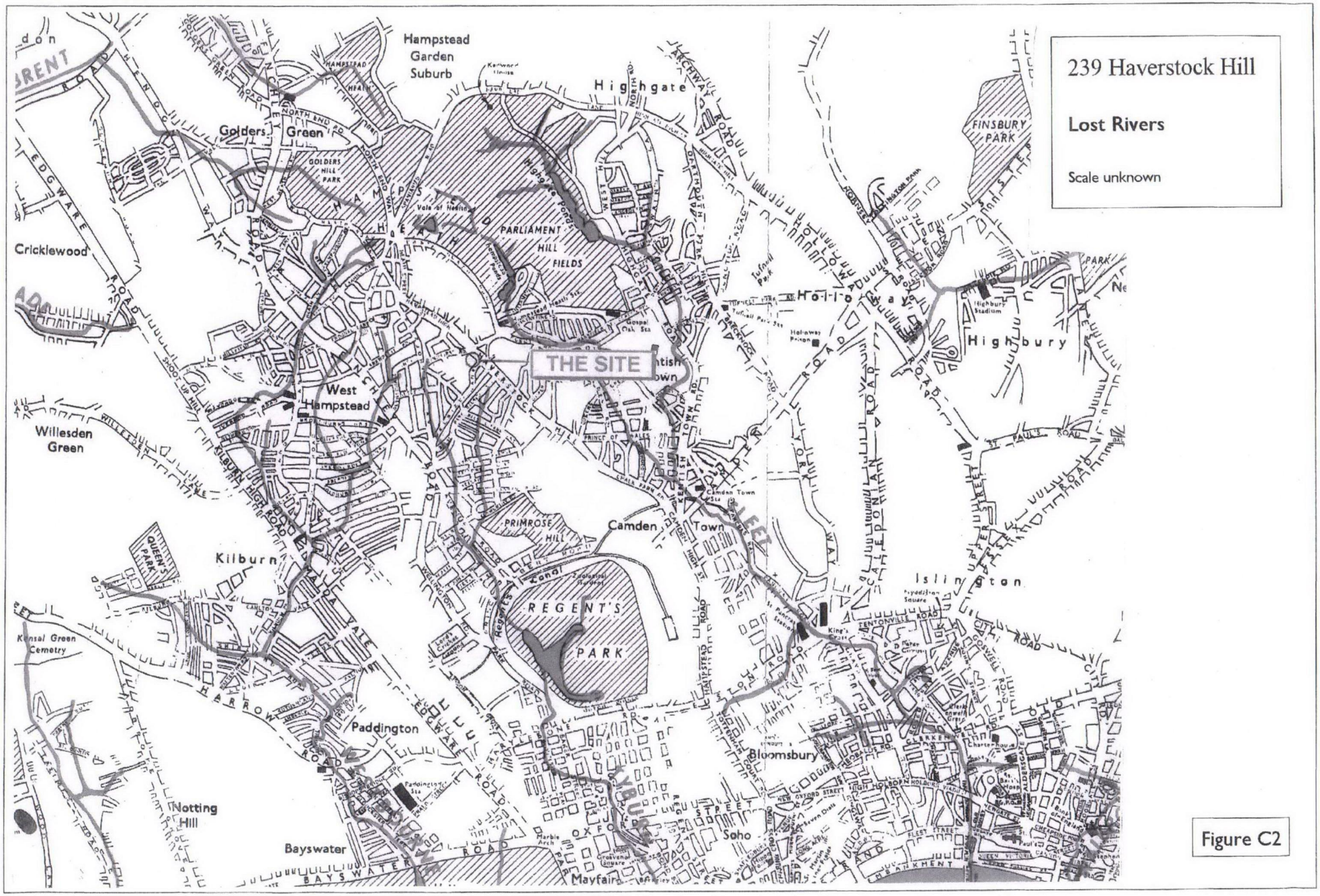


Figure C1


239 Haverstock Hill
Lost Rivers
Scale unknown
THE SITE
Hampstead Garden Suburb
Highgate
Golders Green
Cricklewood
West Hampstead
Willesden Green
Kilburn
Camden Town
Islington
Paddington
Bayswater
Notting Hill
Bloomsbury
Soho
Mayfair
Holloway
Highbury
PARLIAMENT HILL FIELDS
REGENT'S PARK
PRIMROSE HILL
FINSBURY PARK
Kensal Green Cemetery
Figure C2

239 Haverstock Hill

Location of rail tunnel

Scale unknown

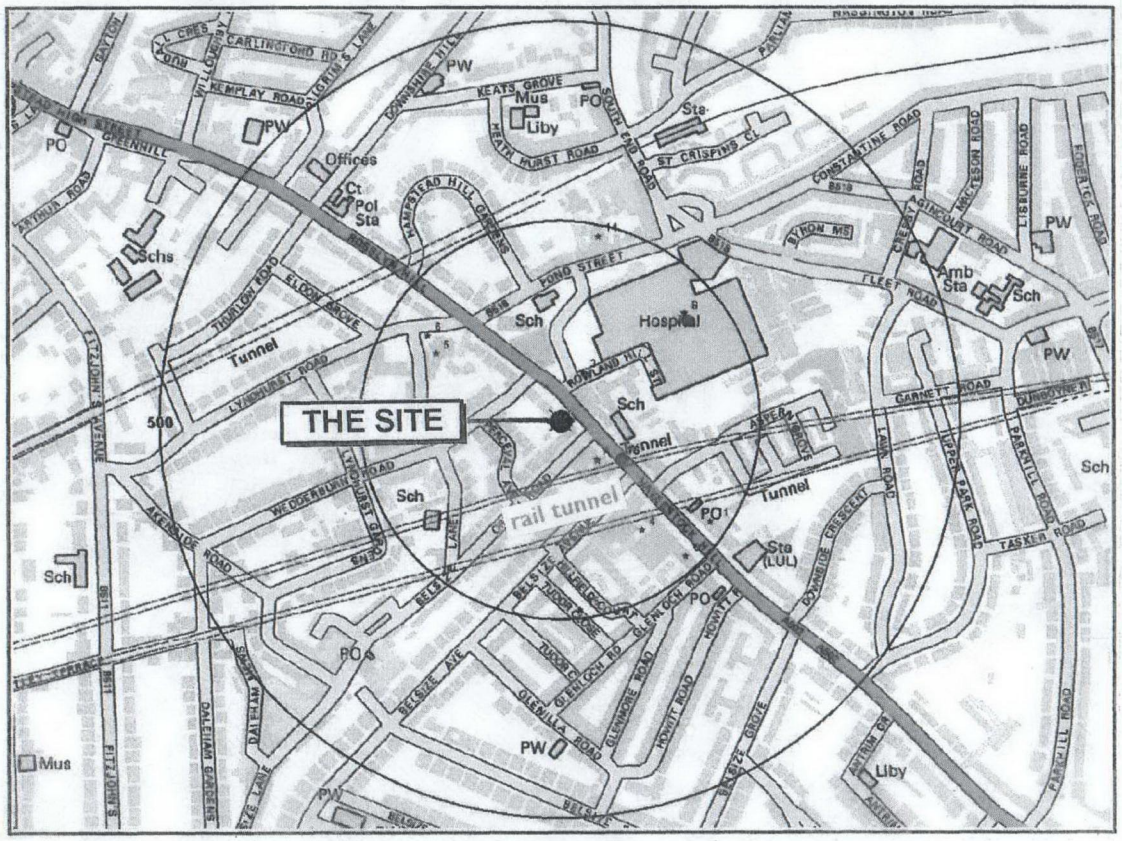
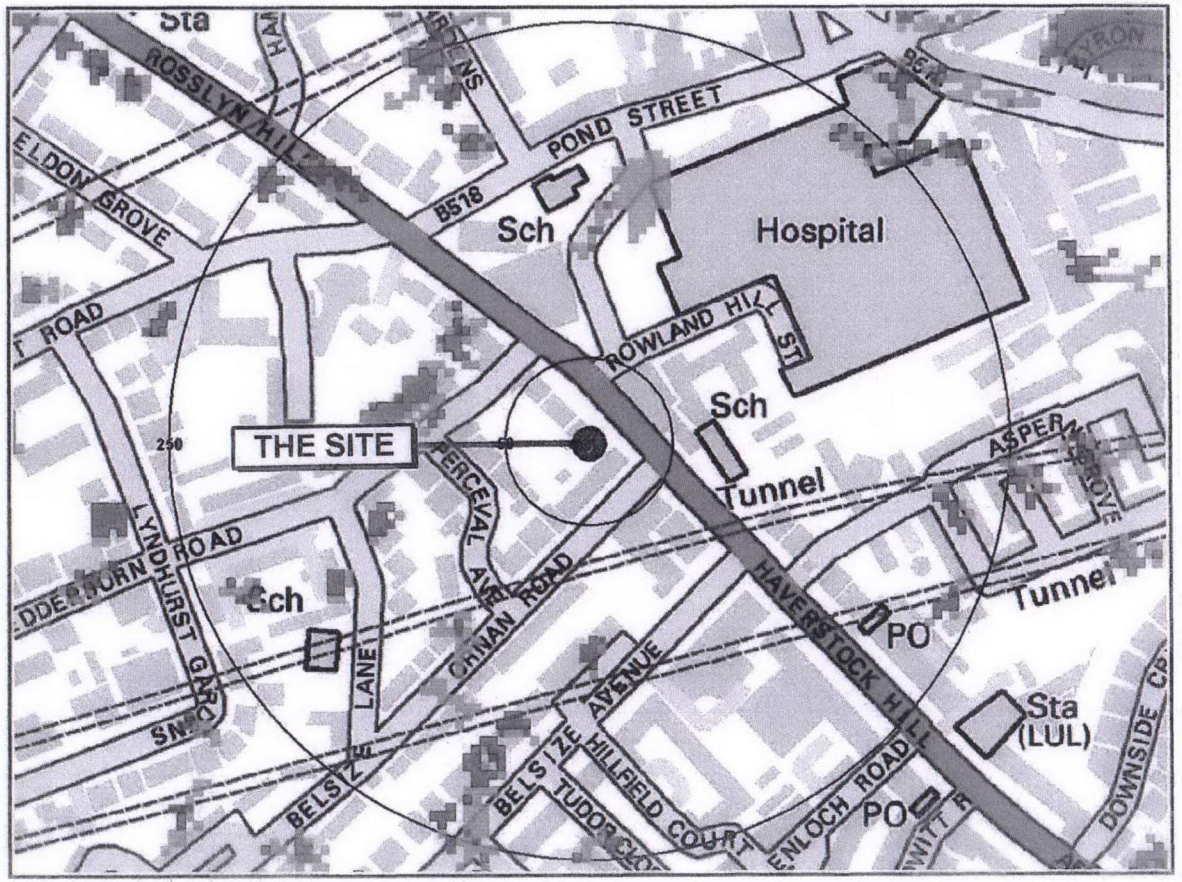


Figure C3

239 Haverstock Hill

Pluvial flood map

Scale unknown



Significant

High

Moderate

Low to Moderate

Low

Figure C4