Client:	Mr J. Markham
Agent	STAC Architecture
Site:	**17 Courthope Road, London, NW3 2LE**
Title:	**FLOOD RISK ASSESSMENT**
Report ref.:	3404_01
Prepared by:	Paul Godbold BSc MSc FGS
Date:	15 April 2025
Version	*FINAL*

BOLD Environmental Ltd has prepared this document in accordance with the instructions of STAC Architecture, on behalf of their client, Joel Markham, for their sole and specific use. Any other persons who use any information contained herein do so at their own risk.

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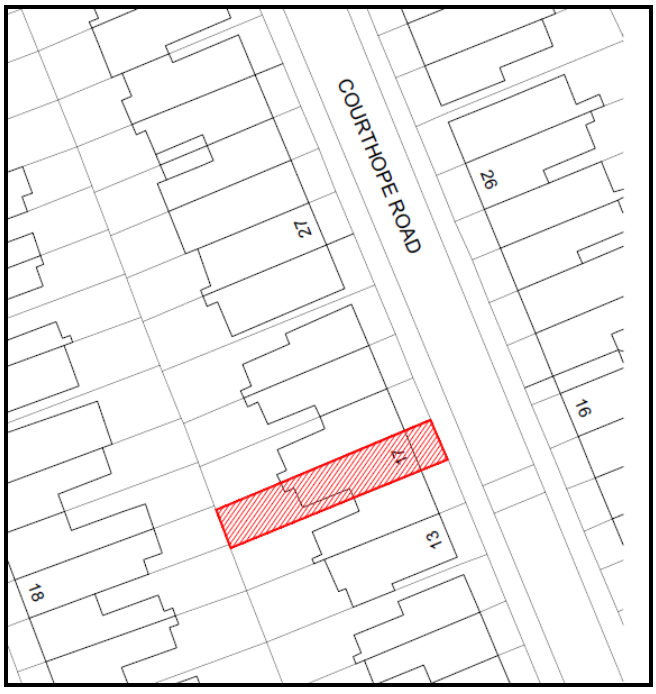
Suite 132, 3 Edgar Buildings, George Street, Bath, BA1 2FJ
Tel: 01225 667055
www.boldenvironmental.co.uk



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Contents

Appendices

Cover Image:

Site Location Image courtesy of STAC Architecture Limited (drawing ref 0350_D_06 rev P1).

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[1] EA = Environment Agency
[2] SFRA = Strategic Flood Risk Assessment

1 Introduction

BOLD Environmental has been commissioned by STAC Architecture, on behalf of their client, Mr J. Markham to undertake a Flood Risk Assessment (FRA) to accompany a development proposal at the site referred to as **'17 Courthope Road, London, NW3 2LE',** (hereafter referred to as 'the site'). The development comprises construction of a single storey basement to a Victorian residential dwelling. Detail regarding the proposed development is provided in Section 2.

1.1 Site-Specific Flood Risk Assessment (FRA)

In accordance with the National Planning Policy Framework (NPPF) and Environment Agency Guidance, a Site Specific Flood Risk Assessment (FRA) should be both proportionate to the degree of flood risk and appropriate to the scale, nature, and location of the proposed development or land use.

As the proposed development is for a residential land use, the Flood Risk Vulnerability Classification for the development has been determined as 'More Vulnerable' (as defined by the NPPF).

The Environment Agency flood risk setting for the site is determined as being within Flood Zone 1 and not within a Critical Drainage Area (CDA) as defined within the London Borough of Camden Surface Water Management Plan (SWMP) (2011). Flood Zone delineation is discussed further in Section 3.

In recognition that the site is located within Flood Zone 1, and less than 1 hectare in area, a **Level 1 Flood Risk Assessment (FRA): Screening Study** has been conducted.

The FRA presented within this report therefore follows the government guidance for Flood risk assessment: Flood Zones 1, 2, 3 and 3b'.(https://www.gov.uk/guidance/flood-risk-assessment-flood-zones-1-2-3-and-3b).

The aim of the FRA is to provide an appraisal of the potential flood risk posed to the site, and equally the potential impact that the proposed development may have on flood risk to land or property external to the site. The Screening Study will identify whether or not there are flooding or surface water management issues that require additional consideration, and consequently completion of a more detailed Flood Risk Assessment.

In completing the FRA, the following data sources were referenced:

- London Borough of Camden Strategic Flood Risk Assessment (SFRA) (2014)
- Camden Flood Risk Management Strategy 2022 – 2027 (consultation draft)
- The London Borough of Camden Flood Risk Management Strategy (2013)
- Surface Water Management Plan (SWMP) London Borough of Camden (2011)
- Preliminary Flood Risk Assessment London Borough of Camden (2011) Addendum (2017)

The Level 1 FRA: Screening Study did not include a specific flood risk Site Reconnaissance.

1.2 Site Setting

The subject site is located on the western side of Courthope Road, approximately 80m north of the junction with the B518 Mansfield Road, within the London Borough of Camden. The site is located approximately 200m south of Hampstead Heath and 750m west of Gospel Oak Overground Station. The rectangular shaped plot covers an area of approximately 0.026ha (260m^2); and is centred at National Grid Reference TQ 527931 185567.

The site comprises a brick built 3 storey terraced dwelling with a small single storey cellar; with gardens to the front and rear.

The site is located within a predominantly residential area.

A Site Location Map is provided within **Appendix A.**

1.3 Site Topography

A Topographic Survey of the site was unavailable at the time of preparing this report.

Published Ordnance Survey mapping indicates the site to be flat at an approximate elevation of 47mAOD. Locally ground elevations fall very gently to the south-east.

1.4 Existing Site Drainage

Site specific drainage plans were unavailable at the time of preparing this FRA.

It is assumed that both surface and foul drainage are connected to external Thames Water infrastructure.

1.5 Surface Water Bodies / Features

There are no surface water features or watercourses within the curtilage of the site.

The closest surface water feature is Hampstead No.1 Pond, located approximately 675m north-west of the site.

1.6 Geology and Ground Permeability

Published British Geological Survey (BGS) records indicate bedrock beneath the site to be London Clay Formation (comprising clay, silt and sand). No published Superficial Deposits are identified above bedrock, although weathered London Clay would be anticipated.

A Ground Investigation was undertaken at the site in 2024 with specific reference to the subject planning application. Observations from 2 boreholes determined Made Ground to approximately 0.7m below ground level (mbgl) over Superficial Head Deposits (clay / gravelly clay) to 2.0/2.3mbgl, over London Clay (silty clay). Groundwater data recorded by dataloggers installed within both boreholes between December 2024 and February 2025 recorded groundwater levels of between 5.75mbgl and 1.26mbgl. (Ground Investigation detail was sourced from a 'Basement Impact Assessment – Stage 4 Report' by Southern Testing [report ref: J15878-S4, March 2025]).

London Clay Formation is classified by the Environment Agency (EA) as Unproductive Strata.

The site is *not* located within an Environment Agency Source Protection Zone.

2 Development Proposal

At the time of preparing this this Flood Risk Assessment (FRA), the application site comprised a 3 storey Victorian terraced dwelling, with front and rear gardens. The proposed Development Plan comprised the following:

- Removal of the existing cellar.
- **Construction of a new basement level under the main house**, comprising a cinema / bedroom; en-suite / WC; utility / plant / storage room; separate plant room; and hallway access with internal stairs to the ground floor.
- Natural light would be provided to the basement level through introduction of an external bay window lightwell at the front of the property. (The lightwell void would extend 900mm out from the existing building).
- The development will not change the footprint of the existing building.
- The basement extension will only be accessible internally from the ground floor.

The following drawings (dated 28th March 2025) are presented within **Appendix B.**

- General Arrangement – Site Location, Block Plan, Cellar, Ground and First Floor Plans as Proposed (Drawing No. 0350D06P1).
- General Arrangement – Elevations and Sections A-A and B-B as Proposed' (Drawing No. 0345D07P1).

2.1 Vulnerability Classification of the Development

As the development is to provide a residential dwelling, the Flood Risk Vulnerability Classification is "More Vulnerable" (as defined by NPPF).

2.2 Proposed Finished Floor Levels

Finished Floor Levels (FFLs) are not indicated on the Development Plans. The basement level would have an internal height of 2.70m and is likely to extend a maximum of 3.4m below ground level[3]. FFLs are discussed within Section 4.2 Mitigation Measures.

2.3 Proposed Site Drainage

Drainage provision would be as follows:

- Waste water from the basement en-suite / WC would be directed to a sump at the basement level and subsequently pumped up into the main house gravity system and discharged to external Thames Water infrastructure.
- The basement would also have an internal tanking system linked to a perimeter floor drain and sump and pumped up to the main house drainage infrastructure.
- Surface water drainage from the lightwell would be collected by a central gully leading to a tank and pumped up to the gravity drain for the main house for external discharge.

[3] From the Basement Impact Assessment – Stage 4 Report (Southern Testing, March 2025).

3 Flood Hazard and Probability

3.1 Flood Zone Classification

Flood Zone classifications are defined within the National Planning Policy Framework (NPPF) as follows; and relate to the potential risk from flooding by river or sea:

Flood Zone 1 - land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%).

Flood Zone 2 - land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year.

Flood Zone 3 - land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year. Flood Zone 3 is further classified into Flood Zone 3a (high probability) and 3b (the functional floodplain, comprising land where water has to flow or be stored in times of flood).

Environment Agency flood zone mapping indicates the site to be entirely in Flood Zone 1.

EA Flood Zone mapping is presented within **Appendix C.**[4]

The Environment Agency / Natural Resources Wales 'Risk of Flooding from Rivers and the Sea (RoFRS) database' (https://environment.data.gov.uk/dataset/96ab4342-82c1-4095-87f1-0082e8d84ef1) generates an indication of river and coastal flood risk based on a 50m grid. The database considers the probability that any flood defences (if present) will overtop or breach, and the distance from the river or sea. **The RoFRS Flood Rating for the site indicates a 'Very Low Risk' of flooding across the entire site (less than 1 in 1,000 [0.1%] in any given year).**

3.2 Flood Defences

Flood defence details were referenced from the following EA on-line dataset: AIMS Spatial Flood Defences (inc. standardised attributes) (data.gov.uk). There are no flood defences within the vicinity of the subject site.

3.3 Historic Flooding.

Historic flood extent mapping has been referenced from the EA on-line dataset (Historic Flood Map) which indicates no historic fluvial events in proximity to the site. The London Borough of Camden (LBC) Strategic Flood Risk Assessment (SFRA) (2014) also references the EA Historic Flood Map. The SFRA also notes that all main rivers historically located within the LBC have now been culverted and incorporated into the Thames Water Utility Limited (TWUL) network.

The Camden Flood Risk Management Strategy 2022 – 2027 (consultation draft) identifies three historic flood events within the LBC in 1975, 2002, and 2021, all attributed to storm events giving rise to surface water and sewer flooding. There is no suggestion that the subject site was impacted during the aforementioned events.

[4] Open Government Licence

Following the event in 2021, in its role as Lead Local Flood Authority (LLFA), LBC conducted a Flood Investigation Report into the scale an impact of the flooding. Spatial records of households impacted by flooding was mapped to identify 'Flood Hotspots' as indicated on the map extract within **Appendix D.**

The subject site is not located within a Flood Hotspot.

3.4 Surface Water (Pluvial) Flooding

Surface water (pluvial) flooding is rainfall generated overland flow prior to runoff entering a watercourse or sewer. Actual flooding may be a result of either overwhelming of sewerage and drainage systems during extreme events; or less extreme rainfall events over lower permeability ground. In such circumstances, overland flow and ponding may occur in topographic depressions.

The Environment Agency on-line Long Term Flood Risk mapping (https://www.gov.uk/check-long-term-flood-risk) provides surface water flood risk mapping extents for the yearly chance of flooding for both the present day and the future timeframe 2040 – 2060; together with the potential depth of flooding. The potential surface water flood risk for the site is as follows:

- **The present day yearly chance of surface water flooding is considered to be 'Low'** across the site and the adjacent Courthope Road.
- **The yearly chance of flooding between 2040 and 2060 is also considered to be 'Low'** and shows the same flood extent.

The rating of 'Low' represents between a 0.1% and 1% chance of a flood each year.

- T**here is a 'Very Low' chance of flooding to depths in excess of 0.2m across the site and adjacent Courthope Road** for both the present day and the future time period of 2040 to 2060.

The rating of 'Very Low' represents a less than 0.1% chance of a flood each year.

Extracts from the EA Surface Water Flood Mapping database are provided in **Appendix E.**[5]

Overall, the site is considered to be at 'Low' risk of potential Surface Water Flooding.

Surface water flood risk is addressed within Section 4.2 Mitigation Measures.

3.5 Sewer Flooding

The London Borough of Camden SFRA (2014) references Thames Water Limited's DG5 Register, which covers the number of historic incidents of flooding based on a 4 digit postcode. The site is not in an area identified as having been impacted by sewer flooding.

There is no indication that Sewer Flooding is an issue in the vicinity of the site.

3.6 Groundwater Flooding

The Environment Agency Long Term Risk of Flooding website (https://check-long-term-flood-risk.service.gov.uk/ground-water) states that flooding from groundwater is unlikely within the area of the subject site.

[5] Open Government Licence

The Camden SFRA (2014) references the 'Increased Potential for Elevated Groundwater' dataset[6] from the Camden Surface Water Management Plan (SWMP). The subject site is not within an area considered to have potential for elevated groundwater. The SFRA mapping also includes the location of Environment Agency recorded groundwater flood incidents; of which there are none in close proximity to the site. The mapping does however indicate a London Borough of Camden recorded groundwater flood incident along Shirlock Road, the adjacent road west from the subject site. No specific details are provided other than to confirm only 1 property was impacted. A map extract from the SFRA Increased Potential for Elevated Groundwater' map is included as **Appendix F.**

Based on the groundwater levels recorded within on-site boreholes, the total depth of the basement extension will extend to 3.4mbgl (3400mm), which is marginally below the local groundwater table which has been recorded at between 1.26mbgl and 5.75mbgl. It is therefore considered unlikely that the development would significantly alter the local groundwater flow or impact the potential for groundwater flooding.

Overall, based on available information, the site is considered at 'Low Risk' of potential Groundwater Flooding.

3.7 Flooding from Artificial Sources

The EA Long Term Risk of Flooding website (https://check-long-term-flood-risk.service.gov.uk/map?easting=527934&northing=185568&map=Reservoirs) confirms the site is within an area that would be impacted by Reservoir Flooding when river levels are normal. The reservoir considered to be a potential source of flooding at the subject site is the Hampstead No.1 Pond located approximately 650m north-west of the site. The pond is an earth banked pond which is managed by the City of London Corporation. A map extract is presented in **Appendix G.**[7]

The Camden Flood Risk Management Strategy 2022 – 2027 (consultation draft) references the Hamstead Heath Reservoir Dam Restoration Project which focused on the mitigation of potential uncontrolled failure from overtopping of the earth bunds that support the Hampstead ponds. The Flood Risk Management Strategy states that "*The works were designed to virtually eliminate the risk of dam breach due to uncontrolled overtopping, for all flood events up to and including the Probable Maximum Flood (PMF) which is the highest possible category (above 0.1% AEP event).*" The project was completed in October 2016.

The risk of flooding from reservoir failure of the Hampstead No.1 Pond is considered 'Very Unlikely'.

3.8 Critical Drainage Areas

Critical Drainage Areas (CDAs) are 'discrete geographical areas where multiple and interlinked sources of flood risk (surface water, groundwater, sewer, main river and/or tidal) cause flooding in one or more Local Flood Risk Zones (LFRZ) during severe weather, which can impact people property or local infrastructure'.

[6] The data for which was derived from the BGS Groundwater Susceptibility Maps, EA Groundwater Hazard Mapping, DEFRA Groundwater Emergence Mapping and JBA Consulting Groundwater Flood Maps.

[7] Open Government Licence

The Local Plan (map 6) indicates the delineation of Local Flood Risk Zones (and historically flooded streets) within the London Borough of Camden. The subject site is not within a LFRZ and is not a historically flooded street.

The Camden Surface Water Management Plan (SWMP) confirms the subject site is not within a CDA.

3.9 Climate Change

Climate Change will potentially increase both the frequency and intensity of localised storms, which could heighten localised drainage problems. In general, the impacts of climate change should be assessed over the lifetime of a proposed development; and calculated in accordance with the National Planning Policy Framework (NPPF).

On 20th July 2021, the Environment Agency published Climate Change Allowance changes for the assessment of flood risk. The new CCAs for use in flood risk assessment are based on 'Management Catchments' (*replacing the former use of larger river basin districts*). The updated text in the NPPF states that: "All plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property."

Climate Change Allowances have been incorporated into the data referenced within Section 3 of this assessment.

4 Summary and Conclusion

4.1 FRA Summary Points

- Environment Agency flood zone mapping indicates that **'17 Courthope Road, London, NW3 2LE'** ('the site') is located within **Flood Zone 1**.
- In recognition of the flood risk setting, a **Level 1 Flood Risk Assessment (FRA): Screening Study** was conducted.
- **The RoFRS Flood Rating for the site indicates a 'Very Low Risk' of flooding across the entire site (less than 1 in 1,000 [0.1%] in any given year).**
- There are no surface water features or watercourses within the curtilage of the site. Hampstead No.1 Pond is approximately 675m north-west of the site.
- **Historical Flooding:** There is no record of historical flooding at the site or within the immediate vicinity.
- Topographic elevations: Published Ordnance Survey mapping indicates the site to be flat at an approximate elevation of 47mAOD. Locally ground elevations fall very gently to the south-east.
- Published British Geological Survey (BGS) records indicate that bedrock beneath the site is the London Clay Formation (comprising clay and silt), an Unproductive Aquifer. There are no published Superficial Deposits above the bedrock.
- **The site is considered at a 'Low' risk of potential Surface Water Flooding** (the rating of 'Low' represents between a 0.1% and 1% chance of a flood each year).

  T**here is a 'Very Low' chance of flooding to depths in excess of 20cm across the site** for both the present day and the future time period of 2040 to 2060 ('Very Low' represents a less than 0.1% chance of a flood each year).
- **The site is considered at 'Low Risk' of Groundwater Flooding.**
- **The risk of flooding from reservoir failure is considered 'Very Unlikely'.**
- The site is not within a CDA; LFRZ or a 'Flood Hotspot'.
- **Proposed Development:** At the time of preparing this Flood Risk Assessment (FRA) the proposed development comprised:
  - Removal of the existing cellar.
  - **Construction of a new basement level under the main house**, comprising a cinema / bedroom; en-suite / WC; utility / plant / storage room; separate plant room; and hallway access with internal stairs to the ground floor.
  - The proposal included an external lightwell, but no external access door.
  - The construction is wholly beneath the existing building footprint.

4.2 Mitigation Measures

In considering flood Mitigation Measures appropriate to the site and the proposed development; the following key flood risk factors have been taken into consideration:

- The site is within Flood Zone 1 at no risk of fluvial flooding.
- The site is considered to be at 'Low Risk' of Surface Water (Pluvial) Flooding.
- The site is at a 'Low Risk' of Groundwater Flooding.
- The site has not been impacted by historical flooding.
- The risk of reservoir flooding is 'Very Unlikely'.

It is noted that the development does not increase off-site surface water flood risk as the developed footprint of the building will remain unchanged.

4.2.1 Finished Floor Levels

A Finished Floor Level (FFL) for the basement floor has not been included on development plans. The basement height would be 2.70m, with the overall excavation extending to 3.40mbgl.

The development proposal does not include any proposed change to the FFL of the ground floor of the building. Based on the flood risk setting for the site, a specific FFL for the basement is not considered a relevant mitigation measure.

4.2.2 Flood Resilience Measures

- **Basement construction methods should be selected to prevent the potential for groundwater ingress, as the proposed basement excavation will be partially below the recorded on-site groundwater elevation.**
- **Manage potential surface water ingress into the external lightwell void:** The EA Long Term Risk of Flooding dataset indicates a potential for surface water flooding at the site and the adjacent Courthope Road. A potential surface water flood depth of up to 0.2m is considered a 'Very Low' risk at this site (where 'Very Low' represents a less than 0.1% chance of a flood each year). To address this potential risk the following recommendations are made:
  - Construct an impermeable upstand around the perimeter of the lightwell to a minimum of 0.1m; and
  - Construct a drainage gully within the base of the lightwell to transfer water to a temporary storage tank for subsequent pumping up to the external off-site storm drain. (*It is noted that this measure is included within the design proposal as outlined within Section 2.3 'Proposed Site Drainage'*).

No further specific flood resilience measures are recommended based on the flood risk setting for the site.

4.2.3 Surface Water Management

All foul and surface water generated at the basement level will be directed to temporary storage (within the basement) before being pumped up into the existing gravity drainage provision from the main house and subsequently discharged into external infrastructure.

4.2.4 Flood Warnings and Alerts

Not applicable. The subject site is not within an Environment Agency Flood Warning Area.

4.2.5 Access and Evacuation

Not applicable. The site is not considered to be at any significant risk of flooding.

4.3 Concluding Comments

- When considering all potential sources of flooding; the overall flood risk setting for the subject site is considered to be 'Low'
- The potential risk from Surface Water flooding is considered 'Low'. Flood resilience measures are recommended to address the potential risk.
- The potential risk from Groundwater Flooding is 'Low'. Flood resilience measures are required to address the fact that the basement excavation will be partially below the recorded on-site groundwater elevation.
- This FRA should be reviewed if Development Plans are changed.

5 Closure

The conclusions and recommendations made in this report are limited to those that can be made on the basis of the research carried out. The results of the research should be viewed in the context of the work that has been carried out and no liability can be accepted for matters outside the stated scope of the research. Any comments made on the basis of information obtained from third parties are given in good faith on the assumption that the information is accurate. No independent validation of third party information has been made by BOLD Environmental Ltd.

The 'vicinity' of the site for the purposes of the report, is defined as locations situated within an approximate 250m radius of the site, although certain sources of contamination and/or sensitive targets further than 250m of site have also been included. Advice provided within this report is based on current guidelines available at the time of writing. This report is subject to amendment in light of additional information becoming available or statutory consultee review, including the Environment Agency and Local Council.

This report is written in the context of an agreed scope of work between BOLD Environmental Ltd and the Client and should only be used in this specific context. Re-interpretation of this report in whole or part may become necessary if additional information becomes available or practices or legislation changes.

BOLD Environmental Ltd does not provide legal advice; the advice of the Client's legal advisors may also be required. BOLD Environmental Ltd Terms and Conditions apply.

6 References

Department for Levelling Up, Housing & Communities and Ministry of Housing, Communities and Local Government (2016) Planning practice guidance (updated June 2021).

GOV.UK Flood risk assessment: Flood Zones 1, 2, 3 and 3b.

Managing Flood Risk in Camden: Camden's Flood Risk Management Strategy 2022 – 2027 (consultation draft).

Ministry of Housing, Communities and Local Government (2012) National Planning Policy Framework (updated July 2021). Flood Risk and Coastal Change (August 2022).

Preliminary Flood Risk Assessment London Borough of Camden (2011) Addendum (2017).

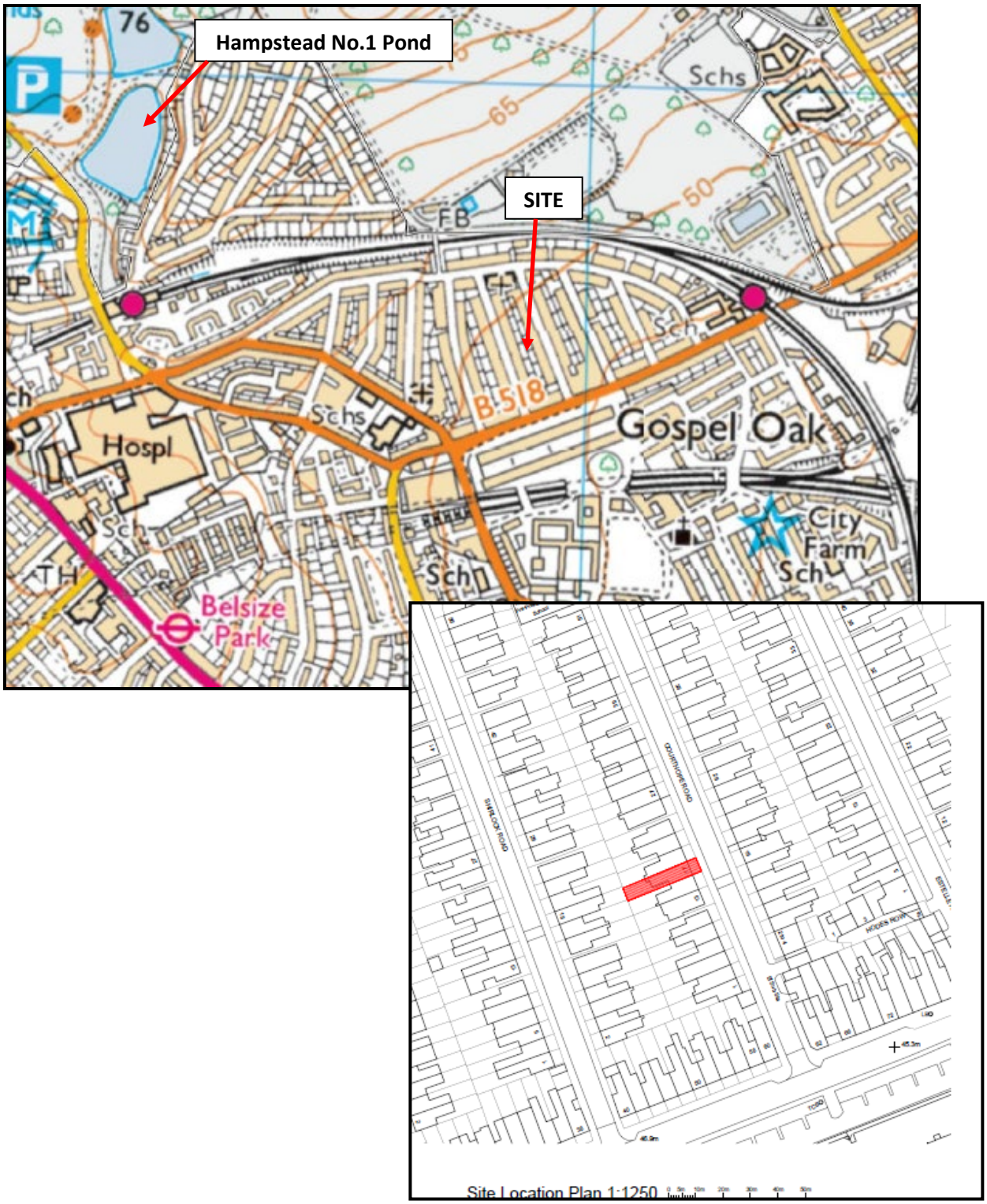
Southern Testing (2025) Basement Impact Assessment – Stage 4 Report, ref: J15878-S4 (March 2025).

Surface Water Management Plan (SWMP) London Borough of Camden (2011).

URS (2014) London Brough of Camden Strategic Flood Risk Assessment (SFRA) (July 2014).

APPENDIX A Site Location Map

SITE LOCATION: **17 COURTHOPE ROAD, LONDON, NW3 2LE**



THE SITE = 17 Courthope Road, London, NW3 2LE

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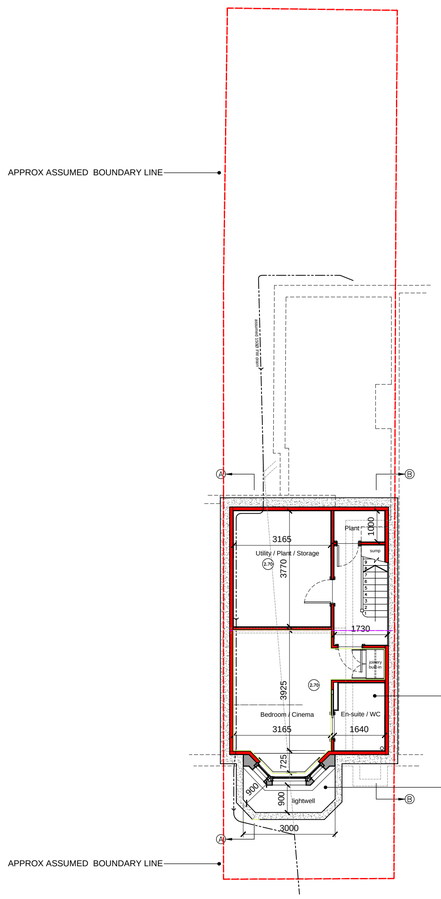
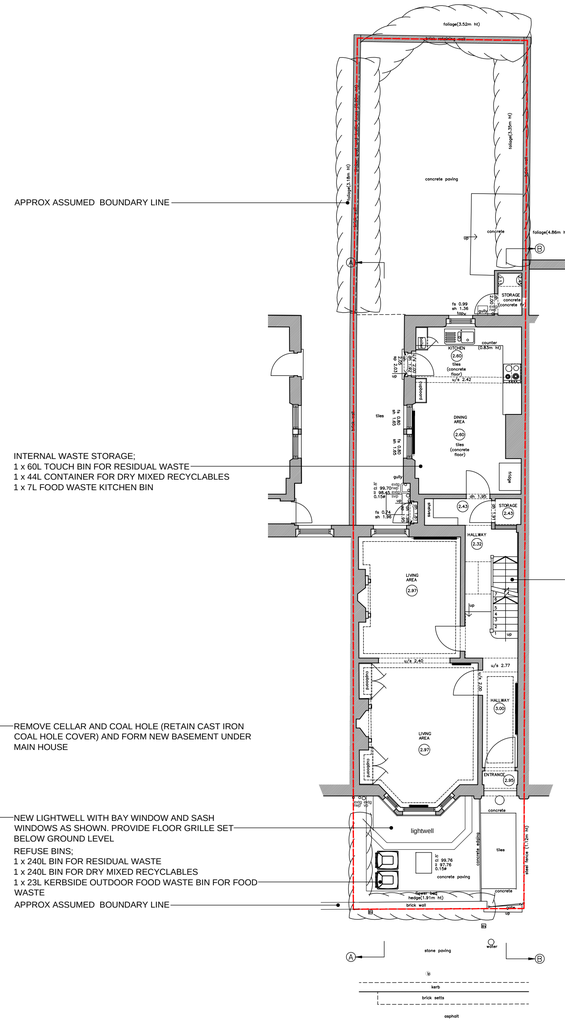
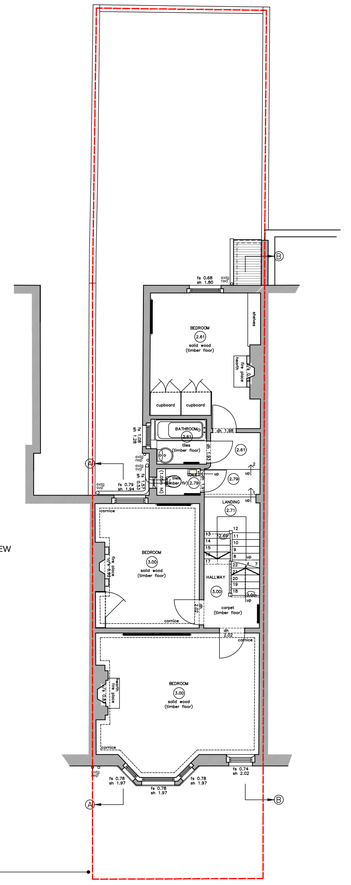
APPENDIX B Development Plans



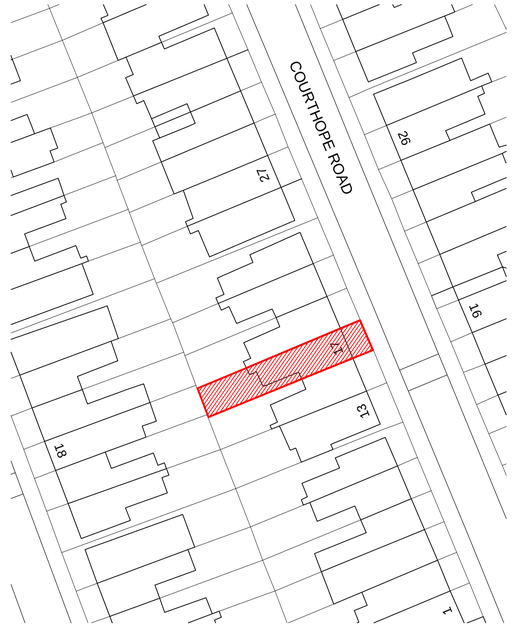
Cellar Floor Plan



Ground Floor Plan



First Floor Plan



Plans North

Scale Bar for Plans & Elevations
0 0.5m 1m 2m 3m 4m 5m

Site Plans North

STAC Architecture Limited
www.stac-architecture.com
info@stac-architecture.com
SNAITH+THRUSH ARCHITECT COLLABORATION

Client
Mr & Mrs Markham

Project
Basement Extension
17 Courthope Road, London. NW3 2LE

General Notes:
All dimensions to be checked on site prior to commencement of any works, and/or preparation of any shop drawings.
Sizes of and dimensions to any structural elements are indicative only. See structural engineers drawings for actual sizes / dimensions.
Sizes of and dimensions to any service elements are indicative only. See service engineers drawings for actual sizes and dimensions
[redacted]
This drawing is to be read in conjunction with all other architects drawings, specifications and all other consultants' information.
All proprietary systems shown on this drawing are to be installed strictly in accordance with the manufacturers / suppliers recommended details.
Any discrepancies between information shown on this drawing and any other contract information or manufacturers / suppliers recommendations is to be brought to the attention of the architect.

Drawing Notes:

Status	Revision	Date
P1	ISSUED FOR PLANNING	28.03.25

Drawing Status: FOR PLANNING
Drawing: GENERAL ARRANGEMENT
SITE LOCATION, BLOCK PLAN, CELLAR, GROUND & FIRST FLOOR PLANS AS PROPOSED

Drawn	Checked	Date	Scale
DS		Feb'25	as shown@A1

Project	Reference	Number	Revision
0350	D	06	P1

0 1m 2m 3m 4m 5m
0.5m

Scale Bar for Plans, Elevations & Sections

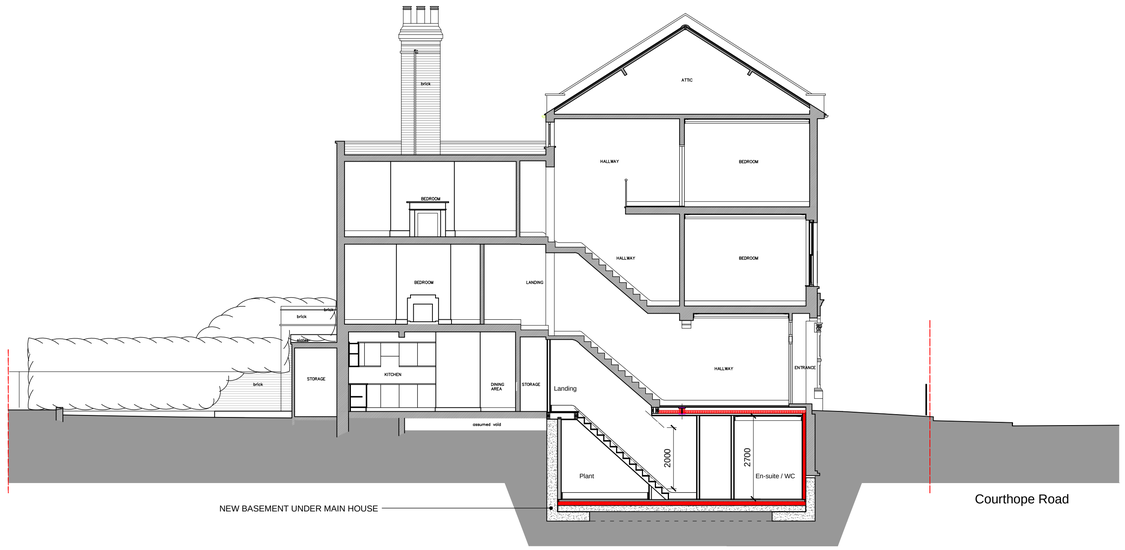
MATERIALS KEY

1. BROWN CONCRETE ROOF TILES
2. NATURAL BLUE/ GREY SLATE
3. LONDON STOCK BRICKWORK
4. WHITE PAINTED STONE DETAILING
5. TIMBER DOUBLE GLAZED SASH WINDOW WITH WHITE PAINTED STONE CILLS
6. TIMBER DOOR
7. TIMBER FASCIA AND BLACK uPVC GUTTERS AND DOWNPIPES
8. RENDER, PAINTED

Front Elevation

Front Lightwell Section

Section A-A



Section B-B

STAC Architecture Limited
www.stac-architecture.com
info@stac-architecture.com
SNAITH+THRUSH ARCHITECT COLLABORATION

Client
Mr & Mrs Markham

Project
Basement Extension
17 Courthope Road, London. NW3 2LE

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Sizes of and dimensions to any service elements are indicative only. See service engineers drawings for actual sizes and dimensions

[redacted]

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Drawing Notes:

Status	Revision	Date
P1	ISSUED FOR PLANNING	28.03.25

Drawing Status
FOR PLANNING

Drawing
GENERAL ARRANGEMENT
ELEVATIONS AND SECTIONS A-A & B-B AS PROPOSED

Drawn	Checked	Date	Scale
DS		Feb'25	1:100@A1

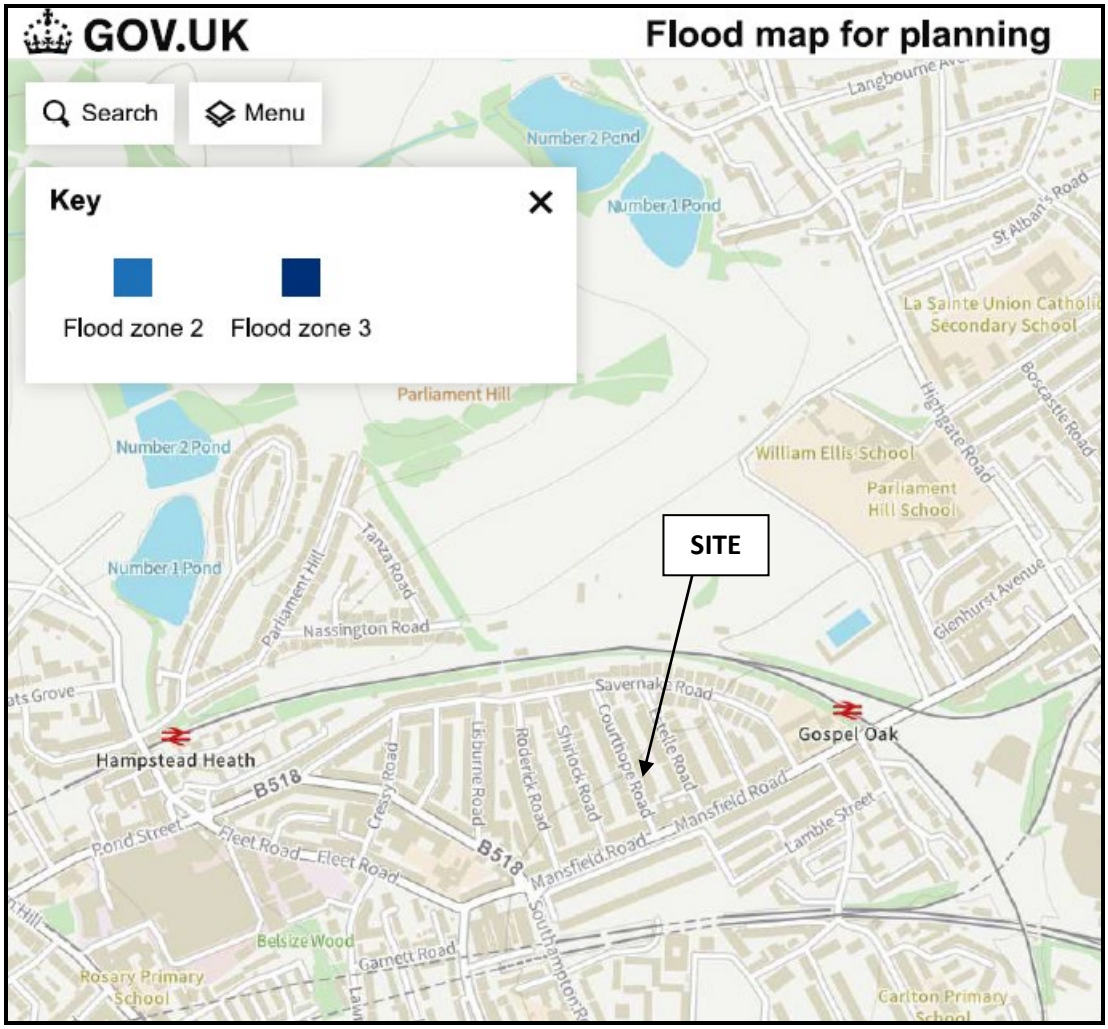
Project	Reference	Number	Revision
0350	D	07	P1

APPENDIX C Flood Zone Mapping (EA map extract)

FLOOD MAP FOR PLANNING

Environment Agency flood zone mapping indicates the site to be entirely in Flood Zone 1. [1]

The Environment Agency / Natural Resources Wales 'Risk of Flooding from Rivers and the Sea (RoFRS) database' (https://environment.data.gov.uk/dataset/96ab4342-82c1-4095-87f1-0082e8d84ef1) generates an indication of river and coastal flood risk based on a 50m grid. The database considers the probability that any flood defences (if present) will overtop or breach, and the distance from the river or sea. **The RoFRS Flood Rating for the site indicates a 'Very Low Risk' of flooding across the entire site (less than 1 in 1,000 [0.1%] in any given year).**



THE SITE = 17 Courthope Road, London, NW3 2LE

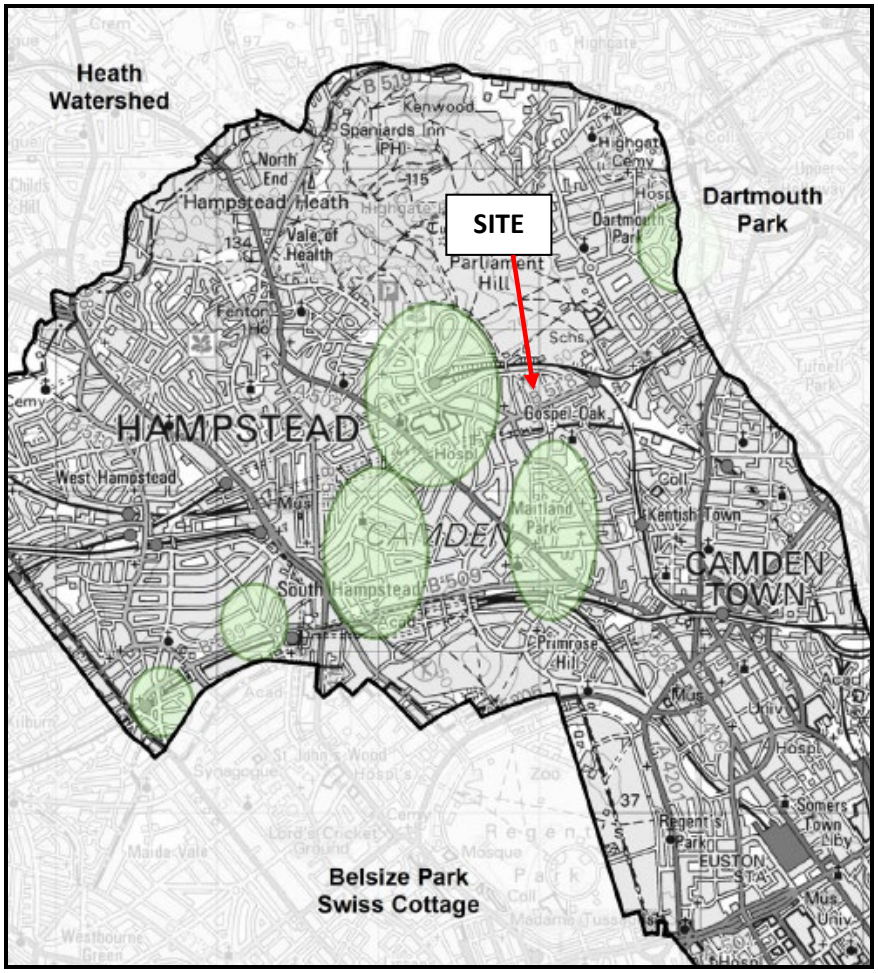
[1] Open Government Licence

APPENDIX D Historic Flooding

HISTORIC FLOODING

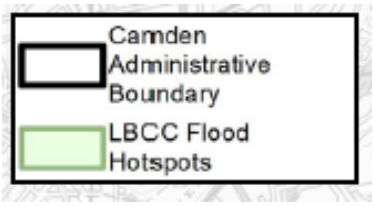
The Camden Flood Risk Management Strategy 2022 – 2027 (consultation draft) identifies three historic flood events within the LBC in 1975, 2002, and 2021 all attributed to storm events giving rise to surface water and sewer flooding. There is no suggestion that the subject site was impacted during the aforementioned events.

Following the event in 2021, in its role as Lead Local Flood Authority (LLFA), LBC conducted a Flood Investigation Report into the scale an impact of the flooding. Spatial records of households impacted by flooding was mapped to identify **Flood Hotspots** as indicated on the map extract below. The subject site is not located within a Flood Hotspot.



THE SITE = 17 Courthope Road, London, NW3 2LE

Key:



Source: Camden Flood Risk Management Strategy 2022 – 2027 (consultation draft)

APPENDIX E Surface Water (Pluvial) Flooding (EA map extracts)

EA SURFACE WATER FLOOD RISK

The Environment Agency on-line Long Term Flood Risk mapping (https://flood-warning-information.service.gov.uk/long-term-flood-risk/) provides surface water flood risk mapping extents for the yearly chance of flooding for both the present day and the future timeframe 2040 – 2060; together with the potential depth of flooding. The potential surface water flood risk for the subject site is as follows:

- **The present day yearly chance of surface water flooding is considered to be 'Low'** across the site and the adjacent Courthope Road.

- **The yearly chance of flooding between 2040 and 2060 is also considered to be 'Low'** and shows the same flood extent.

The rating of 'Low' represents between a 0.1% and 1% chance of a flood each year.

- T**here is a 'Very Low' chance of flooding to depths in excess of 0.2m across the site and adjacent Courthope Road** for both the present day and the future time period of 2040 to 2060.

The rating of 'Very Low' represents a less than 0.1% chance of a flood each year.

Extracts from the EA Surface Water Flood Mapping database are provided on the following pages:

The Present Day Yearly Chance of Surface Water Flooding:

Surface water map

Yearly chance of flooding

- (●) Flood area (extent)
  - High chance
  - Medium chance
  - Low chance

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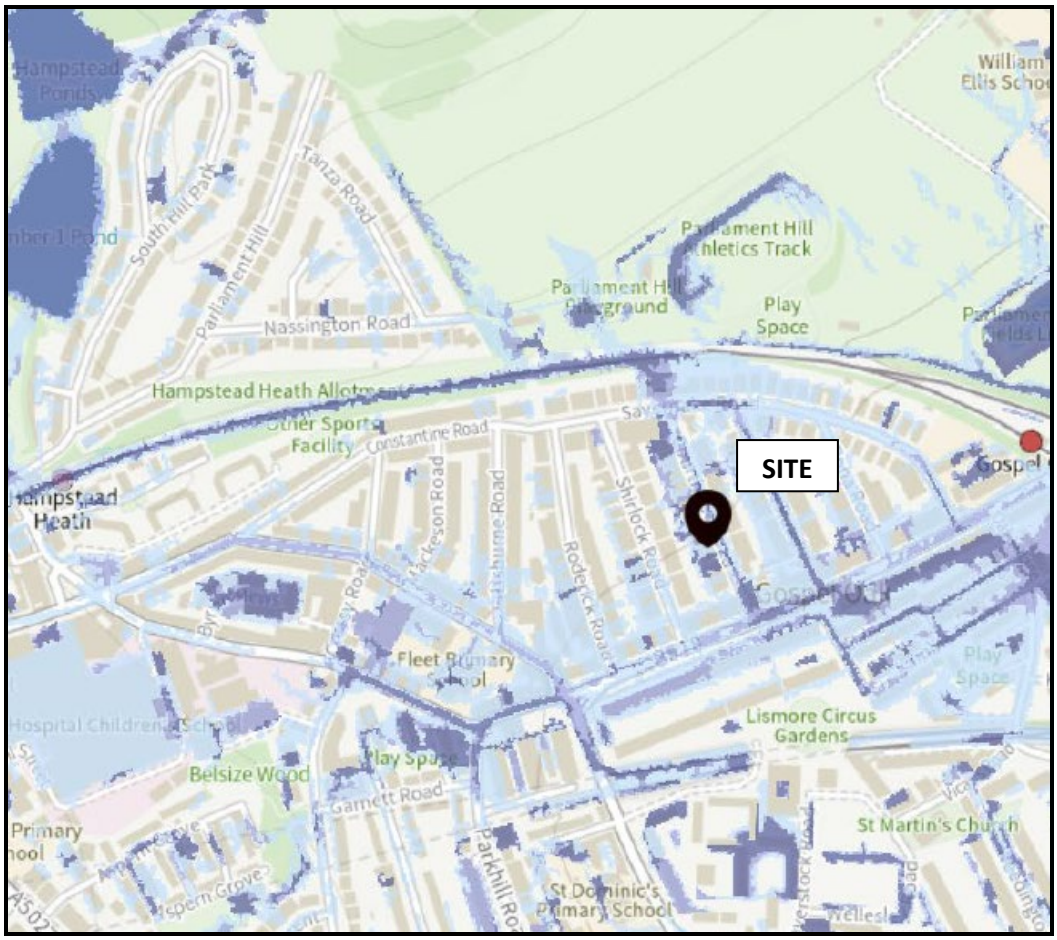
The Yearly Chance of Flooding between 2040 and 2060:



Yearly chance of flooding between 2040 and 2060

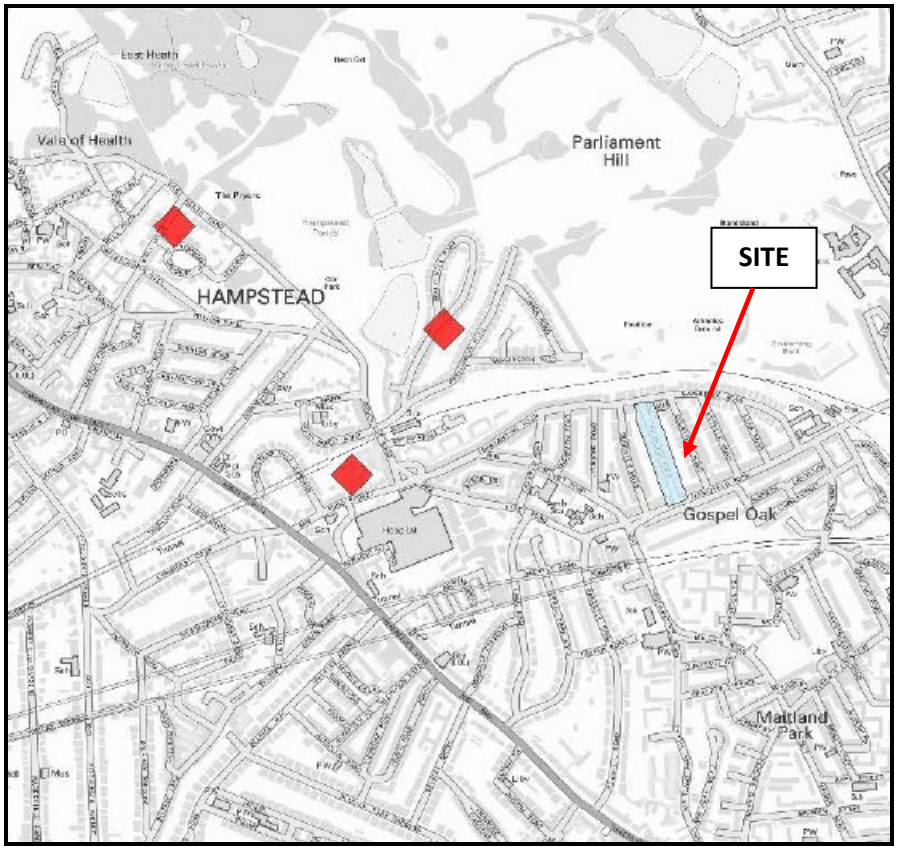
- Flood area (extent)
- High chance
- Medium chance
- Low chance

THE SITE = 17 Courthope Road, London, NW3 2LE

APPENDIX F Groundwater Flooding (SFRA map extract)

GROUNDWATER FLOODING

The Camden SFRA (2014) references the 'Increased Potential for Elevated Groundwater' dataset[1] from the Camden Surface Water Management Plan (SWMP). The subject site is not within an area considered to have potential for elevated groundwater. The SFRA mapping also includes the location of Environment Agency recorded groundwater flood incidents; of which there are none in close proximity to the site. The mapping does however indicate a London Borough of Camden (LBC) recorded groundwater flood incident along Shirlock Road, the adjacent road west from the subject site. No specific details are provided other than only 1 property was impacted. A map extract from the SFRA Increased Potential for Elevated Groundwater' map is included below:



THE SITE = 17 Courthope Road, London, NW3 2LE

Key:

Environment Agency groundwater flood incidents

1
6
7
8

London Borough of Camden Historic Groundwater Flood Records.

No. of properties affected.

Increased Susceptibility to Elevated Groundwater

[1] The data for which was derived from the BGS Groundwater Susceptibility Maps, EA Groundwater Hazard Mapping, DEFRA Groundwater Emergence Mapping and JBA Consulting Groundwater Flood Maps.

APPENDIX G Flooding from Artificial Sources (EA map extract)

RESERVOIR FLOODING

The EA Long Term Risk of Flooding website (https://check-long-term-flood-risk.service.gov.uk/map?easting=527934&northing=185568&map=Reservoirs) confirms the site is within an area that would be impacted by Reservoir Flooding when river levels are normal. The reservoir considered to be a potential source of flooding is the Hampstead No.1 Pond located approximately 650m north-west of the site.

A map extract is presented below:

THE SITE = 17 Courthope Road, London, NW3 2LE

Key:

Extent

When river levels are normal

When there is also flooding from rivers