

17 Dartmouth Park Avenue, NW5

Basement Impact Assessment – Scoping Report

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Authors:

Project Name:	17 Dartmouth Park Avenue, NW5
Author:	Fred Miles MEng (Hons) CEng MStructE
Checked:	Conor O’Sullivan BEng (Hons) CEng MIEI

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1.0 Non-Technical Summary

This document has been prepared by Float Structures to support the planning application for the development at 17 Dartmouth Park Avenue, London, NW5 1JL. The report has been carried out with respect to the refurbishment and reconfiguration of the existing property, including the addition of a new lightwell at the front of the existing building, as well as lowering some areas of the lower-ground floor slab. The report includes information required to comply with the relevant parts of London Borough of Camden (LBC) Planning Guidance relating to subterranean development, as advised during pre-planning application liaison.

The existing site contains a detached late-Victorian, four-storey home, of which the lower ground floor is partially subterranean, with the site sloping downwards from the front to the rear. The site is accessed from Dartmouth Park Avenue through a small entrance gate at the front, with the front bounded by a lower-level brickwork garden wall. The existing building is set back approximately 6m from the front of the site boundary. The building is traditionally built with loadbearing masonry external walls, timber suspended floors and roof, and internal walls in timber and masonry. The foundations are stepped brick footings over clinker, with the front walls acting as retaining walls for the higher external levels to the front of the building. There have been minor alterations made in recent history, including the removal of an internal spine wall at lower-ground and ground floor.

The majority of the proposals involve alterations to the superstructure, such as removing or relocating internal loadbearing walls and adding new extensions at the side and rear of the building. It’s proposed to introduce new double-height spaces throughout the property which will require re-support of the existing floor structures. A new feature stair is proposed in the central hallway. In the rear garden, a new out-building is proposed to the rear.

The proposals also include some alterations to the substructure. A new lightwell to match the depth of the existing lower-ground floor is proposed along half of the front of the building, while the levels of the existing northern access side passage will be adjusted to tie in with the lightwell. Internally, the existing lower-ground floor slab will be partially lowered in the front half of the building, although as per the architectural drawings this has been offset from the existing foundations of the front wall to avoid underpinning directly. The new lightwell and floor slabs are to be constructed in tradition reinforced concrete, with the walls constructed in an underpin sequence.

This scoping report includes the following:

- Desk Study
- Screening
- Scoping
- Conclusions & Recommendations

Float Structures have been appointed as sub-consultant to the architect, Unknown Works, to provide structural engineering consultancy services for the design stages pre- and post-planning, with the intention that Float Structures would also be retained to undertake site inspections at regular intervals on behalf of the client during construction of the structural works.

A review of the British Geological Survey maps indicate the site is underlain by the London Clay Formation, comprising clay, silt and sand. Nearby record borehole logs have been reviewed and support the map information.

No risks have been identified in relation to land/slope stability, nor are there any significant hydrological or hydrogeological impacts. The site has a risk of flooding from reservoirs in the area, a low risk of flooding from surface water and a very low risk of flooding from rivers and sea. Flooding from groundwater is unlikely. The proposed development does not change the flooding characteristics of the site, and therefore these risks remain unchanged.

This report has assessed the stability of both this building and the neighbouring structures. Due to the scale of the proposed works, distance from nearby buildings and through the adoption of good construction practice and a suitable temporary works sequence, the impact on neighbouring structures is expected to be ‘Negligible’ to ‘Very slight’ in accordance with the Burland Scale. We have recommended the use of a structural monitoring strategy in order to monitor and control the impact of the works on the neighbouring structures.



Rear Elevation of 17 Dartmouth Park Avenue

2.0 Introduction

This document has been prepared by Float Structures to support the planning application for the development of 17 Dartmouth Park Avenue, London, NW5 1JL.

The purpose of this assessment is to consider the effects of the proposed lower ground works on the local hydrology, geology and hydrogeology, as well as the potential impacts to neighbours and the wider environment, and to determine if further investigation or assessment is required in order to safely and responsibly construct the proposals.

The site is located at National Grid Reference TQ 28846 86321 and indicated in the figure over.

The approach for this scoping report follows current planning guidance for basements and lightwells adopted by LBC, including:

- Guidance for Subterranean Development (November 2010) – Ove Arup & Partners
- Camden Planning Guidance (CPG): Basements (January 2021)
- Camden Local Plan 2017: Policy A5 Basements and Policy CC3 Water and flooding.

In accordance with the scale and nature of the proposals, and in response to advice received during pre-planning application liaison, this assessment comprises the following elements:

- Desk Study
- Screening
- Scoping
- Conclusions & Recommendations

The report is not intended for, and should not be relied upon by, any third party, and no responsibility is undertaken to any third party.

2.1 Authors

The directors at Float Structures are experienced chartered structural engineers who have worked on basement projects in the London area for over ten years at several award-winning engineering firms. Past-projects range from multi-storey hotel mega-basements in central London to single-storey residential basements. The firm's structural design ethos is to use creative and considered engineering and analysis alongside rigorous checking and quality assurance to address the challenges of basement construction.

The author of this report is Fred Miles MEng (Hons) CEng MStructE. It has been further reviewed by Conor O'Sullivan BEng (Hons) CEng MIEI. Both are directors of Float Structures Ltd. and are chartered engineers with appropriate experience in the design of basements.

2.2 Sources of Information

The following baseline data has been referenced to complete this assessment in relation to the proposed development:

- Visual site inspection on 19/12/2022 and 03/02/2023, including inspection of trial pits at ground and lower-ground floor. Refer to Section 3.1.1 and Appendix A.
- Existing and proposed drawings, produced by Unknown Works
- Historical mapping information was found from the British History at www.british-history.ac.uk
- Geological mapping information from the British Geological Survey at www.bgs.ac.uk
- Floor risk mapping information from www.gov.uk
- Unexploded Ordnance (UXO) maps are from www.bombsight.org
- TFL Property Asset Register Public Web Map
- Camden Geological, Hydrogeological and Hydrological Study

3.0 Description of Proposals



17 Dartmouth Park Avenue, NW5. Google Satellite View



Site Location (bounded in red)

3.1 Existing and Proposed Development

The site location is 17 Dartmouth Park Avenue, NW5 1JL, within the Highgate Ward of the London Borough of Camden. The site is bounded by neighbouring properties on Dartmouth Park Avenue to the South and North, and neighbouring properties on Croftdown Road to the West of the site, i.e. the rear of the garden. The site is accessed from Dartmouth Park Avenue. The existing building is not listed. However, it is within the Dartmouth Park Conservation Area.

3.1.1 Condition of Existing Structure and Site

The site is within a wider hillside setting and lies approximately 60m above sea level. The overall slope angle of the site is less than 7 degrees, with local increases to approximately 9 degrees across the extent of the existing property. Refer to Appendix A for an explanatory section drawing. In general, the site levels are consistent with the surrounding topography rising towards the north-east.

The existing building is a detached late-Victorian, four-storey home, of which the lower ground floor is partially subterranean. The building is traditionally built with loadbearing masonry external walls, timber suspended floors and roof, and internal walls in timber and masonry. The foundations are stepped brick footings over clinker, with the front walls acting as retaining walls for the higher external levels to the front of the building. There have been minor alterations made in recent history, including the removal of an internal spine wall at lower-ground and ground floor.

The site is bounded by a low-level brick garden wall at the front of the property, and a brick boundary wall approximately 1.5m–2m high at each side. While the boundary walls were generally noted to be in good condition, the front wall was noted to be leaning towards the road, likely due to the vegetation immediately behind the wall. The existing building is set back approximately 6m from the front of the site boundary.

A trial pit investigation has been undertaken which has confirmed the existing building foundations are constructed on firm clay, generally founded 800-2000mm below the existing lower-ground finished floor levels. The foundation of the front wall appears to be founded higher, approximately 250mm below the existing lower-ground finished floor level. Refer to Appendix A for the trial pit investigation record.

Full details of the existing internal arrangement are shown in the architectural drawings.

3.1.2 Proposed Works

The majority of the proposals involve alterations to the superstructure, such as removing or relocating internal loadbearing walls and adding new extensions at the side and rear of the building. It's proposed to introduce new double-height spaces throughout the property which will require re-support of the existing floor structures. A new feature stair is proposed in the central hallway. In the rear garden, a new out-building is proposed to the rear.

The proposals also include some alterations to the substructure. A new lightwell to match the depth of the existing lower-ground floor is proposed along half of the front of the building, while the levels of the existing northern access side passage will be adjusted to tie in with the lightwell. Internally, the existing lower-ground floor slab will be partially lowered in the front half of the building, although as per the architectural drawings this has been offset from the existing foundations of the front wall to avoid underpinning directly. The new lightwell and floor slabs are to be constructed in tradition reinforced concrete, with the walls constructed in an underpin sequence.

3.0 Description of Proposals

3.1.3 Impact on Adjacent Structures & Services

The property shares party fence walls with 15 and 21 Dartmouth Park Avenue to the sides, and a boundary fence with 74 Croftdown Road to the rear.

A length of the boundary with 21 Dartmouth Park Avenue comprises a party wall, where the original party fence wall was replaced with a modern cavity wall constructed as a party wall and enclosed upon to construct a side-infill extension. It is understood that the party wall was constructed on a new concrete strip foundation, the underside of which is located below the existing lower ground floor level of 17 Dartmouth Park Avenue.

The proposed excavation works will be adjacent to the boundary with 21 Dartmouth Park Avenue, with the lightwell approximately 2m from the boundary. It is anticipated that all lightwell excavations will be undertaken sequentially in an underpin sequence to control ground movements, and therefore the impact on neighbouring structures is expected to be 'Negligible' to 'Very slight' in accordance with the Burland Scale.

Re-profiling of the levels to the north side of the building is not expected to result in excavations below the foundations of the relatively modern party structures on the boundary with 21 Dartmouth Park Avenue, and therefore the impact on these structures is expected to be 'Negligible' in accordance with the Burland Scale.

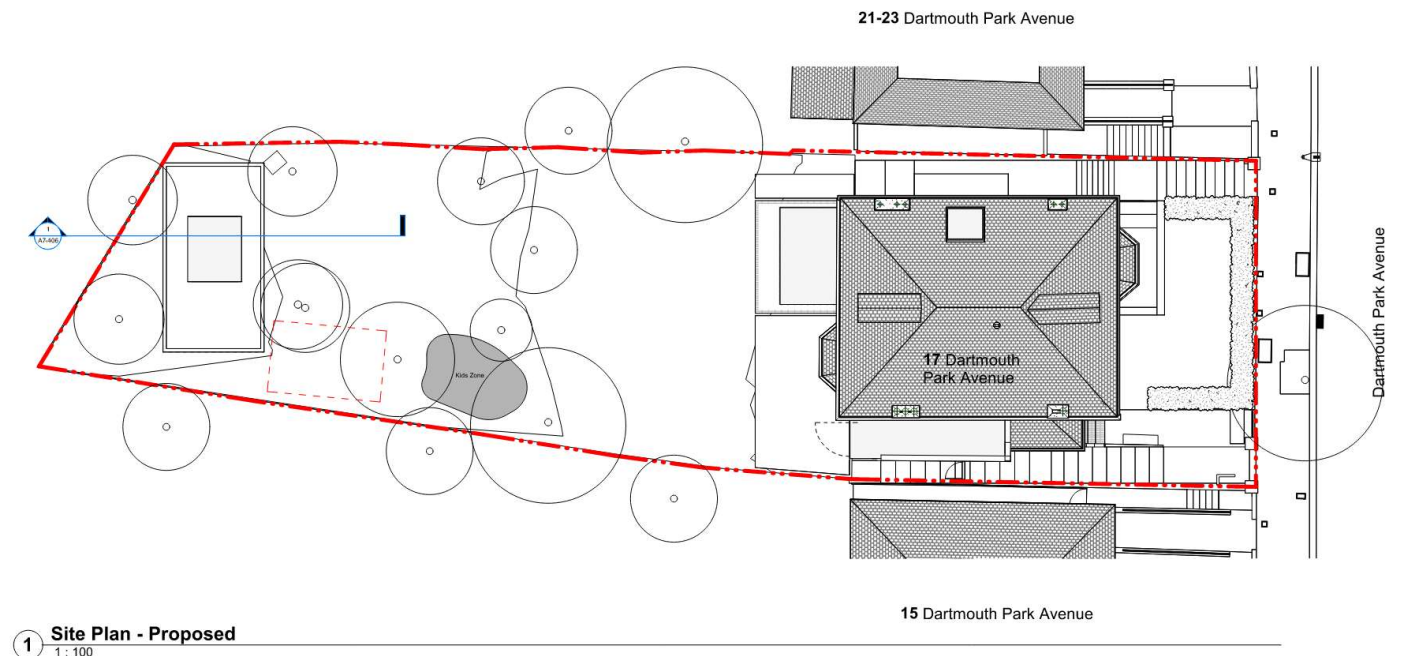
We would expect the works to trigger the Party Wall etc. Act 1996 (PWA). The appointed party wall surveyor should be consulted in this regard.

The TFL register confirmed that there is no infrastructure adjacent to or below the site. There are no known mains services or utilities within the site boundary, but detailed searches into the locations of any mains services will be carried out in due course. In addition to local asset searches, as per standard good practice for ground works, the contractor will be required to undertake ground penetrating radar scanning prior to commencing any excavations.

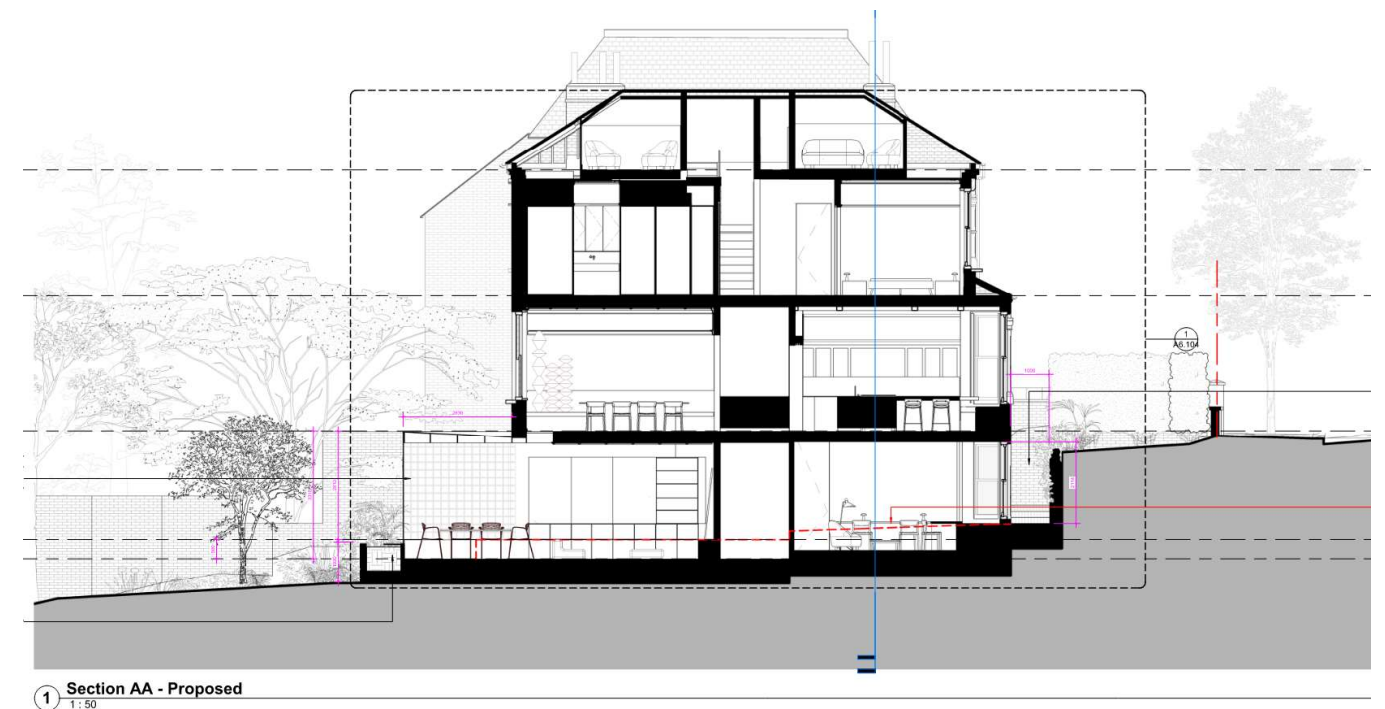
3.1.4 Outline Construction Methods

The proposed works will utilise the following construction techniques:

- Lightwell retaining walls formed in reinforced concrete constructed sequentially in an underpin sequence. Due to the relatively small size of the lightwell, the walls are designed to resist lateral forces through a combination of cantilever action from the base and spanning horizontally between perpendicular walls, with couplers installed to permit continuity of reinforcement.
- Reinforced concrete, ground-bearing slab for lowered floor slab construction. Where the slab steps up approximately 500mm to tie in with the existing slab levels adjacent to the external front wall, the change in level will be formed by folding the slab. This area will be constructed in an underpin sequence to control lateral ground movement beneath the existing foundations.
- Lowering of ground levels along the northern side of the building will be carried out sequentially as a precautionary measure, but as noted in 2.3.3 it is understood that the existing party wall foundations are founded below the proposed excavation levels.

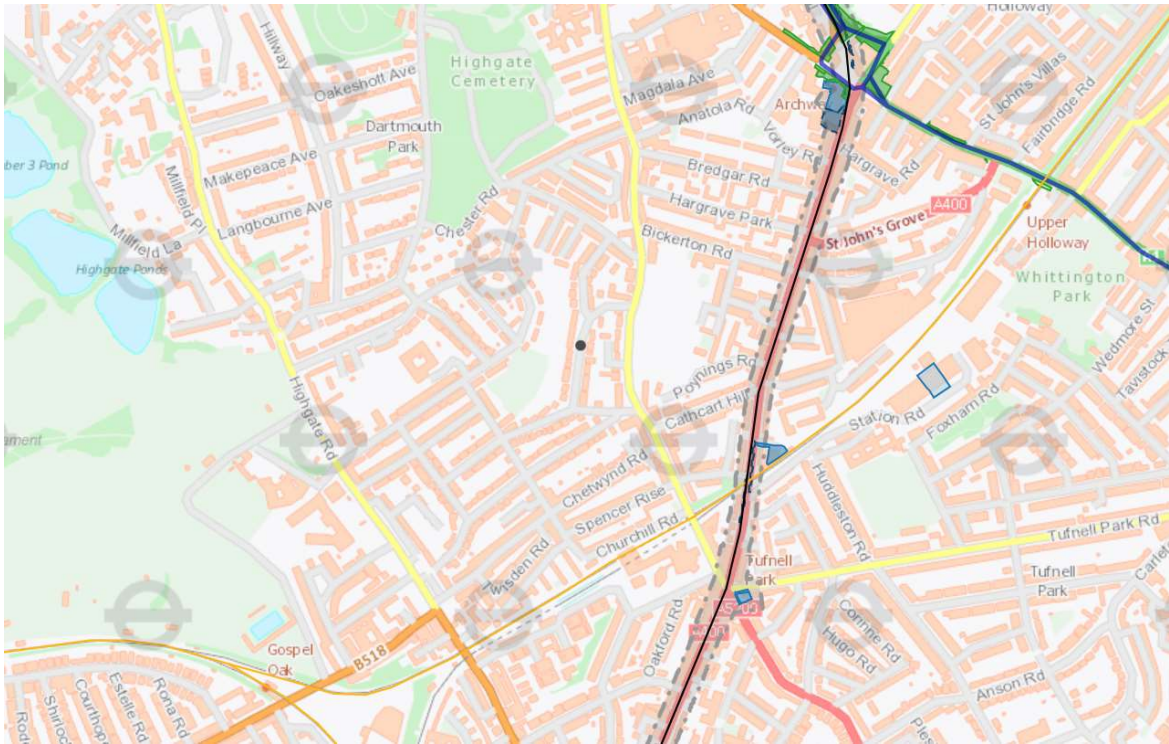


Proposed Site Plan

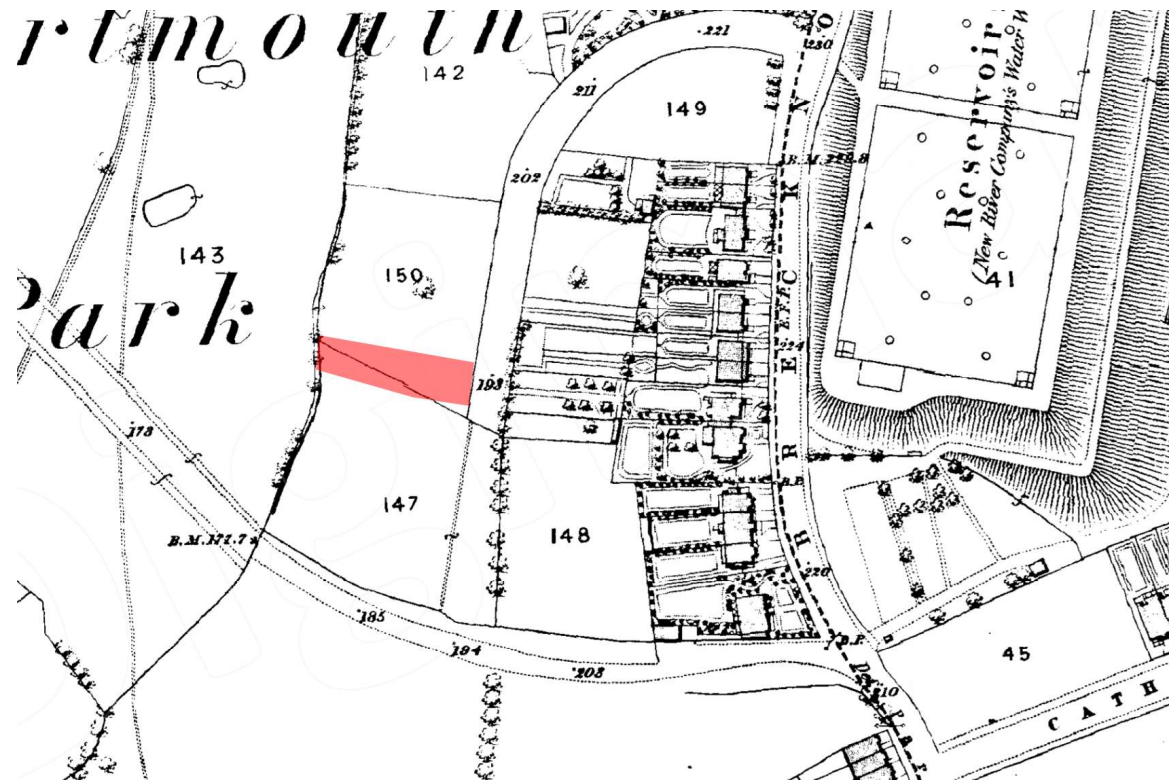


Proposed Section

4.0 Desk Study



TFL Asset Map, site approximately 350m from LUL tunnel



Ordnance Survey, Southampton, 1869-1880

In preparation for the screening and scoping assessments to be undertaken, a thorough understanding of the existing site and building has been developed to inform development of the design. This section provides a summary of the information that has been obtained.

4.1 Site Description

The site is located within the Highgate Ward of the London Borough of Camden, approximately 500m east of Hamstead Heath and 500m northwest of Tufnell Park London Underground station. The site is bounded by neighbouring properties on Dartmouth Park Avenue to the south and north, and properties on Croftdown Road to the west of the site. The site is accessed from Dartmouth Park Avenue. The existing building is not listed. However, it is within the Dartmouth Park Conservation Area.

A visual survey of the site was completed on 19th December 2022, with a subsequent visit on 3rd February 2023 to inspect intrusive investigations and trial pits that were undertaken to expose underlying structure in strategic locations. The site is roughly rectangular, measuring approximately 50m from east to west and 14m north to south. The site comprises a large rear garden which occupies over half of the site and a smaller front garden. Trees and soft planting are present throughout both gardens, with the rear garden housing several larger trees.

The site slopes down from front to back, with an overall slope of approximately 7 degrees, with local increases to approximately 9 degrees across the extent of the existing property.

Minor internal alterations were noted in the property, with some walls removed at ground and lower-ground floor level. The lower-ground floor slab at the rear of the property was noted to appear more recently constructed and at a slightly lower level than the front of the property, and so it's anticipated that this formed part of the alterations.

4.2 Site History

A review of the website www.british-history.ac.uk shows that 17 Dartmouth Park Avenue originally lay across two sites, located off an access road from Brecknock Road (now Dartmouth Park Hill). It appears to have been constructed between 1880 and 1890, first appearing in the 1890 Ordnance Survey. Historical ordnance survey maps suggest that the site was farmland prior to this.

The UXO maps, from www.bombsight.org, indicate that the site was not impacted by World War 2 bombing. Refer to Appendix A for details.

4.3 Geology

From a review of the British Geological Survey maps, the soil in the area is understood to be London Clay immediately beneath the usual made ground or topsoil, which is quite common for the area. Borehole records in the vicinity confirm this understanding.

The site is also located in an area where there are numerous preceding basement developments from which an initial understanding of the ground conditions and geology has been developed, and this would indicate the site is suitable for the proposed excavations.

Trial pits undertaken on site have exposed firm clay directly beneath all wall foundations investigated.

4.0 Desk Study

4.4 Hydrogeology

The precedent ground investigations from nearby projects that are referred to above did not generally detect groundwater, either during initial drilling of boreholes or at subsequent monitoring visits.

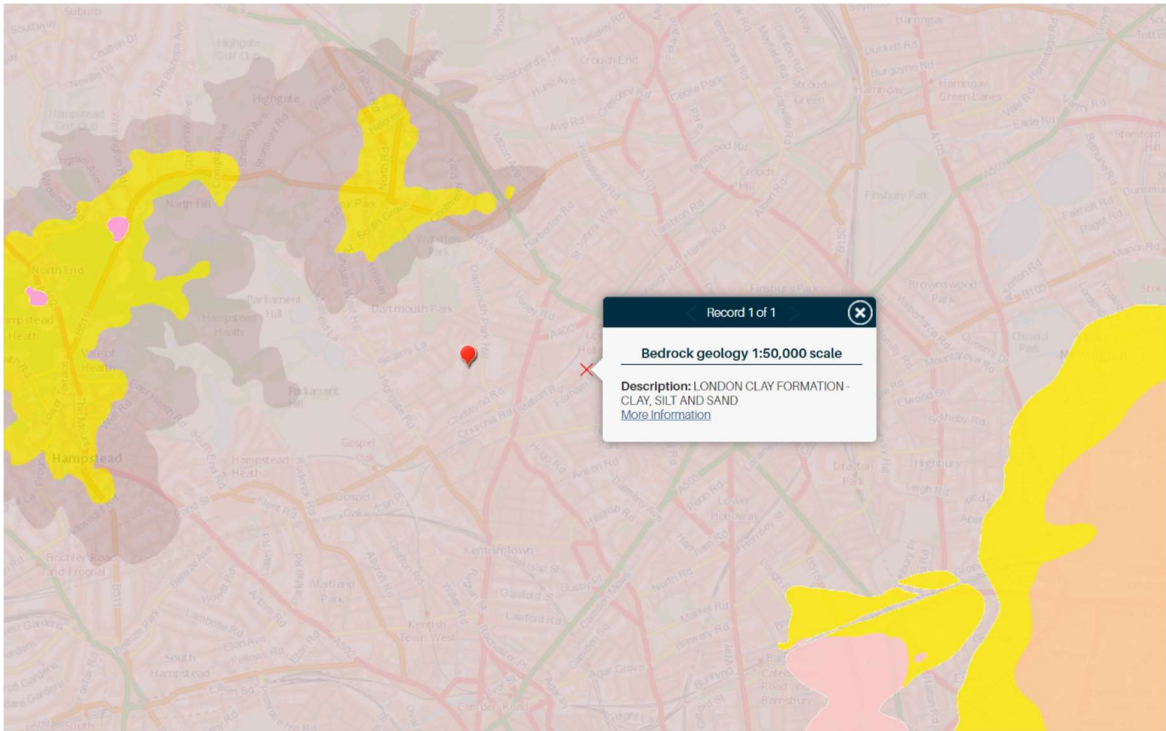
Given the proposed excavations will not extend beyond the external ground level of the existing rear patio, and that there’s no record of any flooding of the lower-ground floor, it is assumed that no groundwater will be encountered during construction works or in the permanent case for this location.

4.5 Hydrology & Flood Risk

The site location has been checked for risk of flooding using the Environment Agency maps and has been confirmed as an area within Flood Zone 1, which means there is a low probability of flooding from rivers and the sea.

The site has a risk of flooding from reservoirs in the area, a low risk of flooding from surface water and a very low risk of flooding from rivers and sea. Flooding from groundwater is unlikely. Due to the existing lower-ground floor, the proposed development does not change the flooding characteristics of the site, and therefore these risks remain unchanged.

The site is located in excess of 1km from the historic routes of both the River Fleet and its tributaries, and therefore will not influence, or be influenced by, these hydrological features.



BGS Maps Bedrock Record



Extent of flooding from surface water

High Medium Low Very Low Location you selected

Flood Risk Map – Surface Water Flood Risk

5.0 Screening

As per LBC planning guidance, a screening process has been undertaken and the findings are described below.

5.1 Groundwater

Question	Response	Details
1a. Is the site located directly above an aquifer?	No	The site is underlain by London Clay Formation, which as an Unproductive Strata, will have negligible significance for water supply or river base flow.
1b. Will the proposed basement extend beneath the water table surface?	No	By inspection areas of the existing lower ground floor already extend to the same depth as this newly proposed element. They were not subject to issues surrounding the water table or groundwater during construction.
2. Is the site within 100m of a watercourse, well (used / disused) or potential spring line?	No	Site location reviewed on Figures 11 & 12 of Camden GHHS. Not within 100m.
3. Is the site within the catchment of the pond chains on Hampstead Heath?	No	Site location reviewed on Figure 14 of Camden GHHS. Not within catchment area.
4. Will the proposed basement development result in a change in the proportion of hard surfaced / paved areas?	Yes	A small increase in hard surfacing to the front of the property will occur by creating the lightwell. This is considered acceptable.
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)?	Yes	The hard surfacing of the lightwell area will drain to the existing combined sewer, representing a 3-4% increase in discharge, which is considered acceptable. Note that the figure above does not account for any surface water drainage from existing hard landscaping, which would further reduce the percentage. Soakaways are not typically suitable for clay soils.
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.	Site location reviewed on Figures 12 of Camden GHHS. No ponds or springs in the local area.

5.2 Slope Stability

Question	Response	Details
1. Does the existing site include slopes, natural or man-made greater than 7 degrees (approximately 1 in 8)?	Yes.	Review of measured site topography survey spot levels indicates overall slope angle of the site is less than 7 degrees, with local increases to approximately 9 degrees across the extent of the existing property. However, the proposed excavations do not materially alter the site slope, or the structural interventions to that slope. There will be no impact to slope stability.
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.	Refer to architectural proposals.
3. Does the development neighbour land, including railway cuttings and the like, with a slope greater than 7 degrees (approximately 1 in 8)?	Yes	Adjacent sites of 15 & 21 Dartmouth Park Avenue contain slopes with local increases to approximately 9 degrees. However, the direction of these slopes is similar to the site of 17 Dartmouth Park Avenue and the proposed excavations do not materially alter the site slope, or the structural interventions to that slope. There will be no impact to slope stability.
4. Is the site within a wider hillside setting in which the general slope is greater than 7 degrees (approximately 1 in 8)?	Yes	Site location reviewed on Figure 16 of Camden GHHS. However, the proposed excavations do not materially alter the site slope, or the structural interventions to that slope. There will be no impact to slope stability.
5. Is the London Clay the shallowest strata at the site?	Yes.	Search undertaken of BGS geological maps.
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 felled as part of the development.
7. Is there a history of seasonal shrink-swell subsidence in the local area and/or evidence of such effects at the site?	No.	The existing building shows no sign of historic or current defects due to shrinkage effects of the London Clay soils. The local area is not considered to have a greater history of such effects than elsewhere in areas of London Clay.

5.0 Screening

8. Is the site within 100m of a watercourse or a potential spring line?	No	Site location reviewed on Figures 11 & 12 of Camden GHHS. Not within 100m.
9. Is the site within an area of previously worked ground?	No.	Historical ordnance survey maps suggest that the site was farmland prior to construction of the existing building.
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	The site is underlain by London Clay Formation, which as an Unproductive Strata, will have negligible significance for water supply or river base flow. Proposed excavations are not expected to be sufficiently deep to encounter groundwater.
11. Is the site within 50m of the Hampstead Heath Ponds?	No.	Site location reviewed on Figure 14 of Camden GHHS. Not within 50m.
12. Is the site within 5m of a highway or pedestrian right of way?	Yes.	The front boundary of the site adjoins the footpath of Dartmouth Park Avenue.
13. Will the proposed basement significantly increase the differential depth of foundations relative to neighbouring properties?	No.	Depth of proposed foundations is similar to that of existing building, which in turn are similar to those of 15 and 21 Dartmouth Park Avenue.
14. Is the site over (or within the exclusion zone of) any tunnels, e.g. railway lines?	No.	TFL Asset search undertaken. Refer to map extract in Section 2.3.3.

5.3 Surface Water and Flooding

Question	Response	Details
1. Is the site within the catchment of the ponds chains on Hampstead Heath?	No	Site location reviewed on Figure 14 of Camden GHHS. Not within 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.	Surface water drainage from the lightwell will increase flows by 3-4% compared to the existing building, which is considered acceptable. Note that the figure above does not account for any surface water drainage from existing hard landscaping, which would further reduce the percentage.
3. Will the proposed basement development result in a change in the proportion of hard surfaced / paved external areas?	Yes	A small increase in hard surfacing to the front of the property will occur by creating the lightwell. This is considered acceptable.

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 additional lightwell volume will not materially change surface or groundwater flows.
5. Will the proposed basement result in changes to the quality of surface water being received by adjacent properties or downstream watercourses?	No.	The additional lightwell volume will not materially change surface or groundwater flows.
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 addition of the proposed lightwell will not change the site characteristics with respect to flooding.

5.4 Non-Technical Summary of Screening Process

The screening process has confirmed that:

- The site does not lay in the vicinity of any nearby watercourses or productive aquifers, nor does it pose any risk to them or the general groundwater.
- The proposals will not have a material impact on surface water run off or similar, nor will it have any impact on below ground drainage.
- The existing site slopes from east to west, and there are no proposed plans to change this. As such, we would not expect any issues with regards slope stability.
- The risk of flooding is low, or negligible, and the proposals do not change the existing site characteristics.
- The proposed works are not likely to affect the neighbouring properties nor any underground services or infrastructure.

Other than those noted below, all potential concerns considered within the screening process have been demonstrated to be not applicable or not significant when considered in the context of the proposed development.

Outstanding risks to be considered in scoping:

- Impact of trees on works, or vice versa.
- Below ground services & utilities

6.0 Scoping

The Scoping process addresses any outstanding risks that have been identified as requiring mitigation in the Screening process by developing an assessment methodology for each risk, along with a wider discussion of how any impacts may be mitigated in full or reduced to an acceptable level.

As noted in the preceding section, the screening process has generally demonstrated that potential risks due to subterranean development are either not applicable or are not significant for works of the scale and type proposed. Any outstanding risks are addressed below.

6.1 Potential Impact of Tree Removal on New and Existing Structures

Due to the nature of the clay soils on site, if trees or shrubs are proposed to be removed as part of the proposals, even if scheduled for replacement, this could lead to short- to medium-term changes in soil moisture content and consequentially in soil volume. The impact of this can include excessive foundation settlement, resulting in cracking to existing buildings and structures.

An arboricultural report has been commissioned to confirm the type, location and health of all trees and shrubs on site. The results of this report will be used to inform development of the landscape proposals. Where trees are proposed for removal, whether for maintenance or design reasons, the potential impacts to the surrounding existing buildings and structures will be assessed and where necessary the landscape proposals will be adjusted to mitigate the risk of foundation settlement.

All new structures forming part of the proposals will be designed in accordance with NHBC guidance to mitigate changes in soil volume.

6.2 Potential Impact of New Substructure on Existing Trees

Where new foundations or substructure are proposed in the vicinity of existing trees, it is important to ensure that the works will not damage or cut the tree roots, which can lead to instability and collapse of the trees.

An arboricultural report has been commissioned and confirmed that the new lightwell to the front of the building will not encroach on the root protection zone of the tree located to the front of the property in Dartmouth Park Avenue.

6.2 Below Ground Services & Utilities

Based on surveys carried out to date, there are no known buried services or utilities located on the site. This will be corroborated during the next design stage by the acquisition of record information from the statutory authorities relevant to the local area.

In addition to these preliminary actions, the contractor will be required to undertake ground penetrating radar scanning prior to commencing any excavations on site.

7.0 Scoping Stage Conclusions & Recommendations

In accordance with London Borough of Camden planning policy, this Basement Impact Assessment – Scoping Report has considered the potential risks to the site and surrounding environment that result from subterranean construction with respect to hydrology, hydrogeology and land stability. The intent of this process is to:

- Maintain the structural stability of the building and neighbouring properties.
- Avoid adversely affecting drainage and run off or causing other damage to the water environment.
- Avoid cumulative impacts upon structural stability or the water environment in the local area.

Where risks are shown to exist, this scoping report has identified the necessary further assessment or investigation to mitigate the risks to a level appropriate to the scale and context of the project specific proposals.

7.1 Conclusions

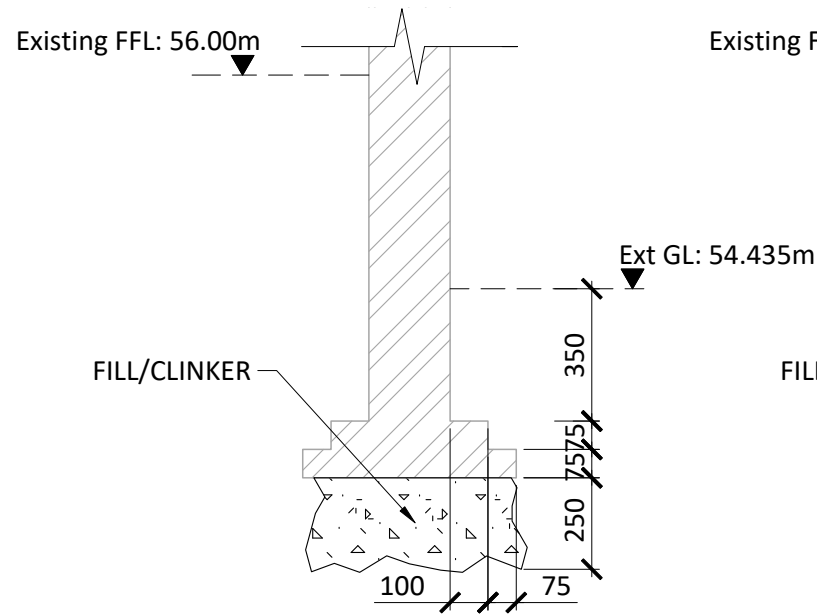
The proposed lightwell represents a relatively modest extension to an existing subterranean structure, and thus any potential impacts are considered as localised and will not adversely affect the existing building or surrounding environment when constructed in accordance with the principles identified in this report.

Similarly, no significant risk has been identified in relation to lowering of the existing lower-ground floor slab, or of the external levels to the north of the building due to the levels of the existing foundations, which will not be undermined.

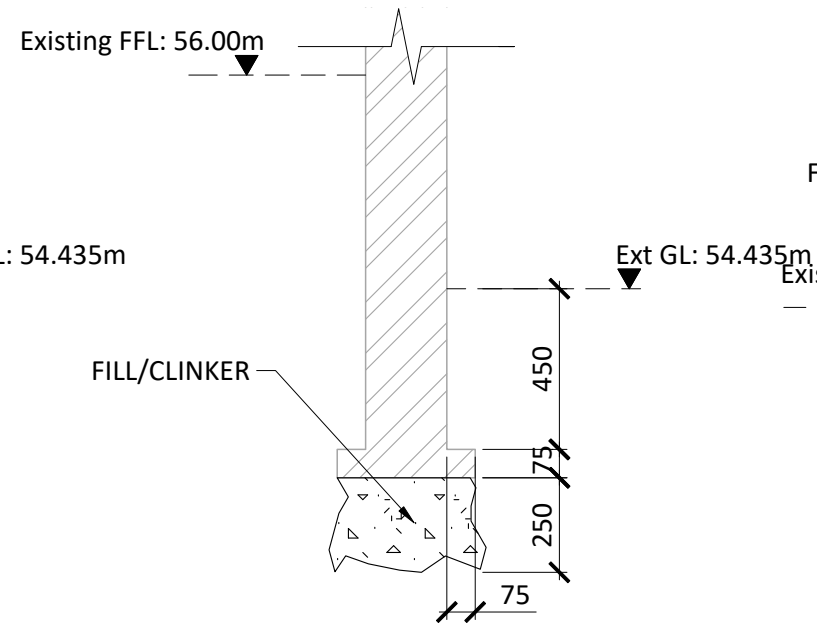
Generally, potential risks identified in the screening process have been discounted or are not considered to be significant. Therefore no further investigation or assessment is considered necessary beyond the proposals outlined in Section 6.

7.2 Recommendations

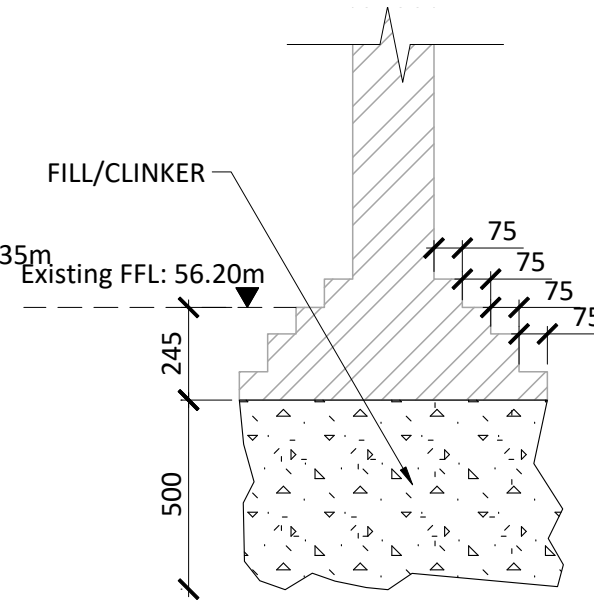
The additional surveys or actions identified by the scoping process, in this case statutory authority searches, should be implemented as soon as practicably possible and the results used to inform design development during the next stage.



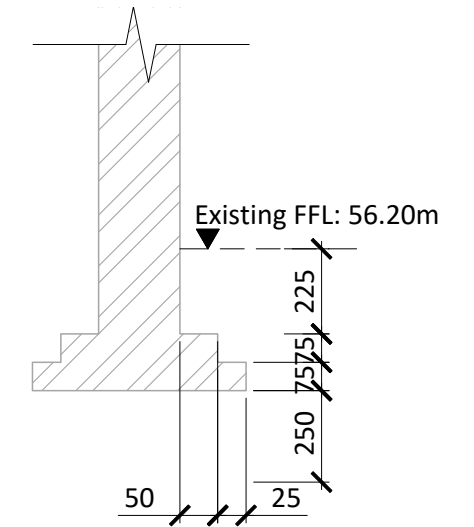
TP1
A
**REAR WALL
FOUNDATION**
1:20



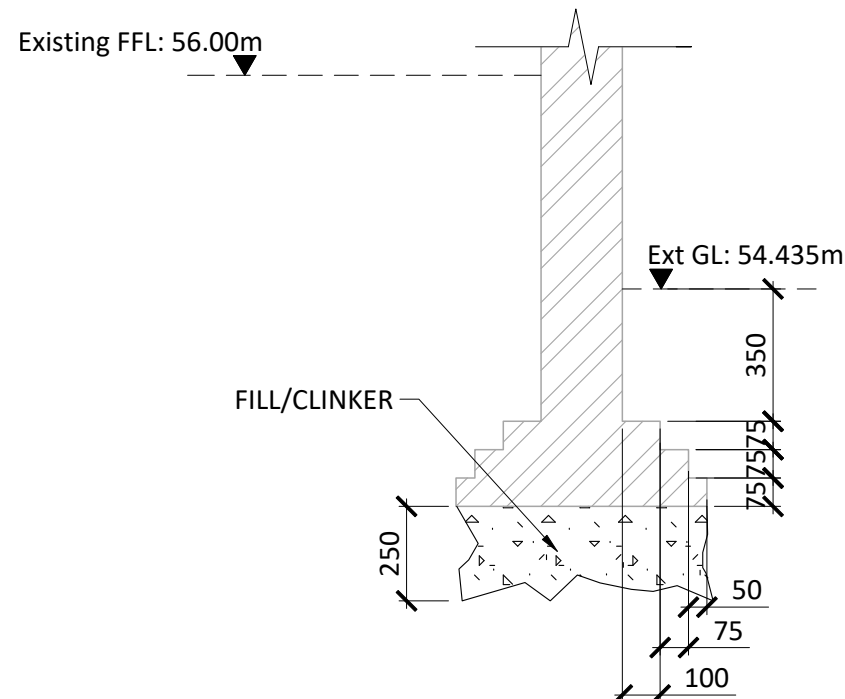
TP1
B
**BAY WINDOW
FOUNDATION**
1:20



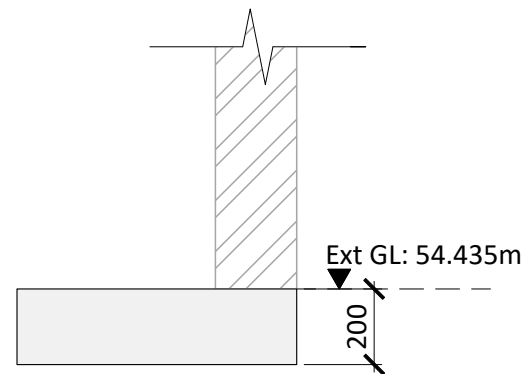
TP2
A
**FRONT WALL
FOUNDATION**
1:20



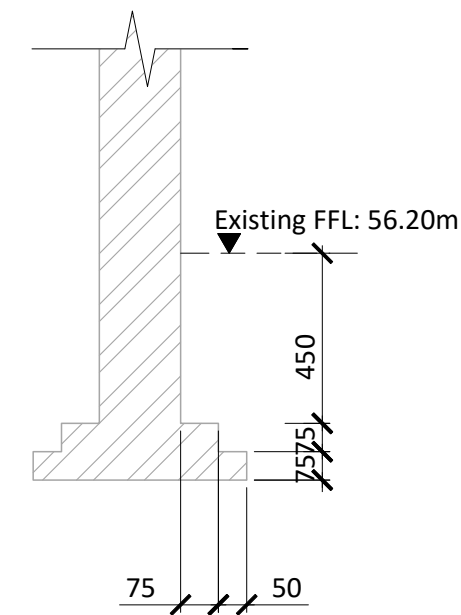
TP2
B
**SPINE WALL
FOUNDATION**
1:20



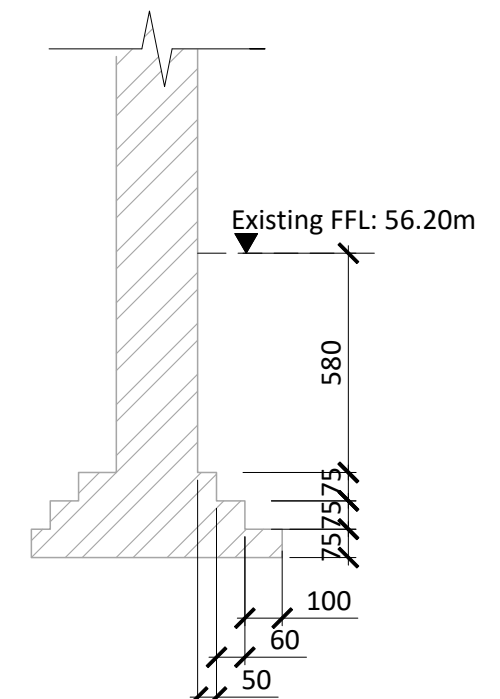
TP3
A
**FLANK WALL
FOUNDATION**
1:20



TP3
B
**EXTENSION WALL
FOUNDATION**
1:20



TP4
A
**CROSS WALL
FOUNDATION**
1:20



TP4
B
**FLANK/SPINE WALL
FOUNDATION**
1:20

