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FLOOD RISK OVERVIEW

NEW PRESBYTERY FOR VINCENTIAN FATHERS AT 2 FLOWER LANE, MILL HILL, LONDON, NW7 2JB

Ref: 14860
Date: May 2021

Introduction

1. This Document has been prepared to accompany a planning application which is being submitted on behalf of the Congregation of the Mission (Vincentian Fathers) to the London Borough of Barnet (LBB).
2. The following development is proposed at Presbytery, 2 Flower Lane, Mill Hill, London, NW7 2JB (the Site):

“Demolition of the existing Presbytery and construction of a new replacement Presbytery, a single storey extension to the existing church, works to the car park and associated site works.”

3. This document sets out the relevant flood risk policy, provides a site description; outlines potential sources of flooding; and assesses these in the context of the development proposed.

Policy Overview

4. The contents of this FRA are based on the advice set out in the National Planning Policy Framework (NPPF) published in February 2019 and the Planning Practice Guidance (PPG), published March 2014.
5. National Planning Policy Framework Paragraph 164 footnote 50 of the NPPF states: *“A site-specific flood risk assessment should be provided for all developments in Flood Zones 2 and 3. In Flood Zone 1, an assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the Environment Agency as having critical drainage problems; land identified in a strategic flood risk assessment as being at increased flood risk in future; or land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use.”*
6. The flood zones are defined as:

- Flood Zone 1 – Land assessed as having a less than 1 in 1,000 (<0.1%) annual probability of flooding from fluvial sources;
- Flood Zone 2 – Land assessed as having between a 1 in a 100 and 1 in 1,000 (1% to 0.1%) annual probability of flooding from fluvial sources;
- Flood Zone 3a – Land assessed as having a 1 in 100 or greater (>1%) annual probability of flooding from fluvial sources, or at least 0.5% annual probability of tidal flooding;
- Flood Zone 3b – Land where water has to flow or be stored in times of flood.

7. Paragraph 155 discusses the suitability of development location, particularly with regards to future risks induced by climate change:

“Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere”.

8. Paragraph 156 of the National Planning Policy Framework (NPPF) sets out how:

“Strategic policies should be informed by a strategic flood risk assessment, and should manage flood risk from all sources. They should consider cumulative impacts in, or affecting, local areas susceptible to flooding, and take account of advice from the Environment Agency and other relevant flood risk management authorities, such as lead local flood authorities and internal drainage boards”.

9. The Environment Agency Flood Map for Planning shows the site to be located in Flood Zone 1, meaning that the site is in an area with low probability of flooding from rivers and seas.
10. The West London Boroughs of Barnet, Brent, Ealing, Harrow, Hillingdon and Hounslow have commissioned the production of a joint Strategic Flood Risk Assessment (SFRA), the West London SFRA. The maps associated with the West London SFRA show that the site is not subject to surface water flooding or groundwater, sewer and artificial flooding. The maps also show that the site is 160 m to the south of a culverted watercourse.
11. The LBB Local Flood Risk Management Strategy October 2017 advises that there are 33 Critical Drainage Areas (CDAs) in the LBB. The site lies within the Mill Hill Circus CDA (Group 2 – 026). The main source of flood risk in this CDA is overland flow between culverted Sections of the drainage network in the Mill Hill Circus area. The flow is following the old open watercourse valley parallel to Lawrence Street and along the Broadway to the south of Mill Hill Circus. Three Local Flood Risk Zones (LFRZs) have been designated within this CDA, they follow the overland flow paths on either side to the Mill

Hill Circus roundabout and highlight the areas at most significant risk of surface water flooding. The Mill Hill Circus CDA is detailed below.

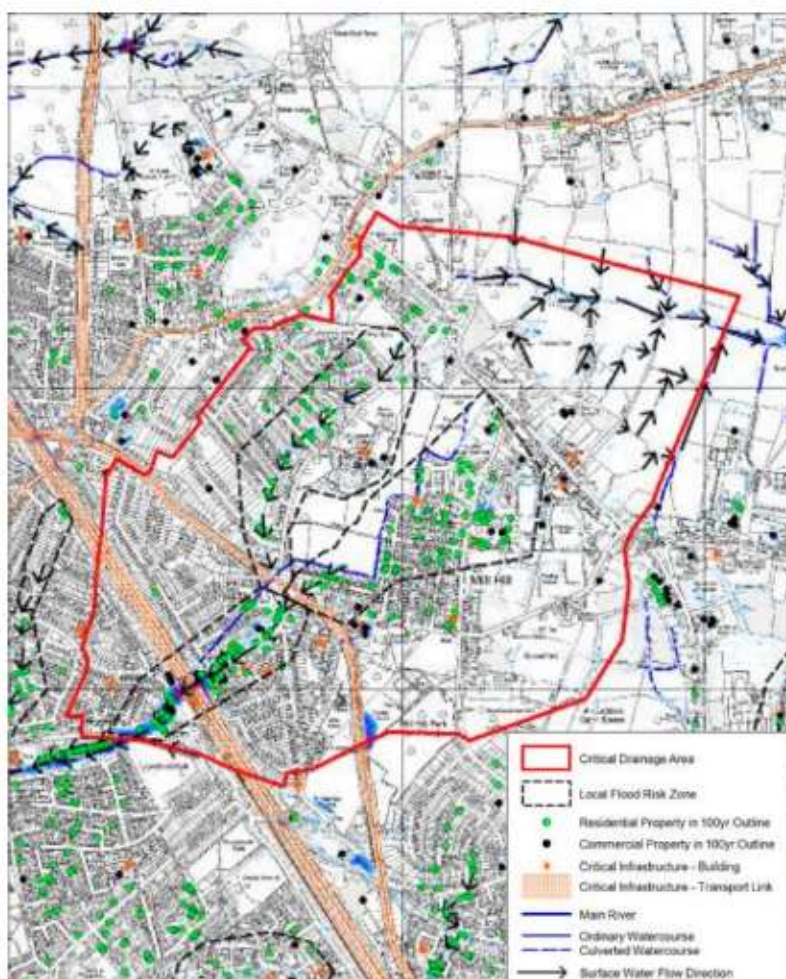


Figure E1-26 Mill Hill Circus CDA

Site Description

12. The planning application relates to the Presbytery and the adjacent car park, which totals 1,400 sqm and is located to the south of the Church of the Sacred Heart and Mary Immaculate. The Church fronts both The Broadway and Flower Lane, within Mill Hill. The car park primarily serves the church, although two spaces are used by the Presbytery residents.
13. The existing Presbytery, which is accessed via Flower Lane, comprises of a two storey building with a pitched roof and dormer windows providing accommodation at second floor level. The remainder of the Site comprises of vehicle parking for 34 vehicles and soft landscaping within the presbytery courtyard.

14. The enclosed Site Location Plan at **Appendix 1** confirms the extent of land that the proposed development relates to (red outline) and the other land within the full wider church site (blue outline). The main church building is excluded from the application site.
15. The scheme proposes the demolition of the existing Presbytery and construction of a new replacement Presbytery. This will be on a similar footprint to the existing building, albeit larger.
16. In addition, a single storey small extension of 42sqm is proposed to the existing church, together with works to reconfigure the layout of the car park and other associated site works.
17. The design of the development provides in the taller element of the building two full size floors, ground and first floor, and then accommodation in the roof at second floor. The southern part of the development then steps down to one and two storeys.
18. A small basement is also proposed, which will sit under a small part of the building. This will be used as a plant and utility room, there will be no living or sleeping accommodation in this part of the building. All sleeping accommodation will be at first and second floor.
19. To the north of the site is a culverted watercourse. This is located approximately 160 m from the site. There are no other watercourses or waterbodies in the vicinity of the site.
20. The site is in Flood Zone 1 and the EA Flood Map for Planning has been enclosed in **Appendix 2**.

Site Levels

21. A topographic survey is enclosed at **Appendix 3**. The existing site levels vary through the site sloping from a high point at flower lane towards a low point within the car park. The existing finished floor level of the existing presbytery is +69.490 AOD which is 330mm above the adjacent external FFL.
22. The proposed finish floor level of the completed development will be +69.150 AOD at ground floor of the Presbytery, +66.150 AOD at the basement of the Presbytery and +69.140 AOD at the church extension. A section plan at **Appendix 4** further illustrates the site levels.
23. The site contains some areas of vegetation and planting but is mainly hardstanding. Of the area within the application red line (i.e excluding the church) 1,075 sqm of the 1,400 sqm site comprises of hardstanding.
24. The proposed development will provide 970 sqm of hardstanding, of this 145 sqm will be permeable paving.
25. London Clay is understood to underlay the site.

Existing and Proposed Drainage

26. The existing and proposed drainage strategy is set out in the drainage report that accompanies this planning application, prepared by Harley Haddow. This Document should be read in conjunction with the Harley Haddow report.

Potential Sources of Flooding

27. The Environment Agency Flood Map for Planning confirms that the site is within Flood Zone 1. This means that the land has a less than 1 in 1,000 annual probability of **river or sea flooding**.
28. The Environment Agency Flood Maps also shows the risk of **surface water flooding**. Surface water flooding refers to flooding caused when the intensity of rainfall, particularly in urban areas, can create runoff which temporarily overwhelms the capacity of the local drainage systems or does not infiltrate into the ground. The water ponds on the ground and flows towards low-lying land. This source of flood risk is also known as ‘pluvial’. The site is shown to be a ‘very low’ risk of surface water flooding. An extract from the Long-Term Flood Map is provided below. A low-risk scenario indicates a probability of surface water flooding between 1 in 100 and 1 in 1000 each year (i.e. the least frequent but worst - case scenario).



The Environment Agency Flood Maps also shows the risk of flooding from **reservoirs**. The site is not identified as at risk from reservoir flooding.

The LBB has identified that the site is located within the Mill Hill **Circus Critical Drainage Area (CDA)**. The main source of flood risk in this CDA is understood to be overland flow between culverted sections of the drainage network in the Mill Hill Circus area.

29. **Sewer flooding** would occur if the capacity of the sewer was overwhelmed and a nearby manhole surcharged. This could occur after a long period of heavy rainfall, or if there was a blockage in the sewer. The Drainage Strategy advises that there is an existing 375mm foul sewers running down both The Broadway and Flower Lane flowing roughly from north to south. There is an existing 900mm surface water sewer running from north to south down The Broadway. The risk from sewer flooding is considered to be low.
30. In summary, the main source of flood risk at the site is associated with its location in a CDA and the risk of overland flow between culverted sections of the drainage area.

Assessment of the Proposed Development with regard to Flood Risk

31. The proposed development will provide 970 sqm of hardstanding, of this 145 sqm will be permeable paving. This is a reduction in the quantum of hardstanding at the site in comparison to the existing by 105 sqm.
32. Furthermore, the development will introduce a sustainable drainage strategy, to reduce discharge rates across the site by at least 50% from existing.
33. The drainage strategy proposed a 39 sqm sedum grass roof is proposed, permeable paving is proposed in 145 sqm of the car park. In addition, there will be cellular storage beneath part of the car park.
34. The finish floor levels of the ground floor of the presbytery will be +69.150, which is only 340mm below existing, to ensure a flush threshold. The finish floor level of the church extension will be +69.140.
35. A small basement is proposed to site beneath the presbytery building, this will provide space for plant and utilities. The proposed basement has access to an internal staircase providing access to the ground and upper floors. No sleeping accommodation will be provided in the basement. The finished floor level of the basement will be +66.150.

36. In summary, the proposed development will not worsen the risk of flooding at the site. Finished floor levels are proposed to remain similar to existing, with the exception of the small basement and the drainage rate is proposed to be significantly reduced.
37. The primary risk of flooding at the site relates to its location in a CDA. However, the development is not expected to impact upon or increase the risk of flooding in this CDA.
38. We consider that the development proposals comply with the guidance provided by the NPPF and local policies and that no reason exists to object to the proposals in terms of flood risk or drainage.



APPENDIX 1 – SITE LOCATION PLAN



Notes:

1. Do not scale from this drawing other than for planning purposes.
2. All dimensions to be verified prior to the commencement of any work or the production of any shop drawings.
3. Matthew Lloyd Architects (MLA) shall be notified in writing of any discrepancies.
4. Survey and boundaries indicative only.
5. Proposals are subject to utilities surveys and specialist consultants' input & coordination.
6. Any areas indicated are approximate and indicative only.
7. Where an item is covered by drawings in different scales the larger scale drawing is to be worked to.
8. Drawing to be read in conjunction with relevant consultant's drawings and specifications.
9. Where MLA services on a project do not include for site inspections and work surveys, MLA do not warrant that 'as built' issue drawings are a complete and accurate record of what has been built.

KEY

- APPLICATION BOUNDARY
- OWNERSHIP BOUNDARY

Revisions:

PLANNING

Client:



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Original Sheet Size **A3**

Date:	Scale:	Drawn by:
Apr-21	1:1250 @ A3	ASp
Project:		
VINCENTIAN PRESBYTERY MILL HILL		
Drawing title:		
EXISTING SITE LOCATION PLAN		
Reference:	Dep. No:	Rev:
VP	001	P01



APPENDIX 2 – ENVIRONMENT AGENCY FLOOD MAP FOR PLANNING

Flood map for planning

Your reference
2 Flower Lane

Location (easting/northing)
521586/192130

Created
21 May 2021 8:57

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

This means:

- you don't need to do a flood risk assessment if your development is smaller than 1 hectare and not affected by other sources of flooding
- you may need to do a flood risk assessment if your development is larger than 1 hectare or affected by other sources of flooding or in an area with critical drainage problems

Notes

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

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

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<https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

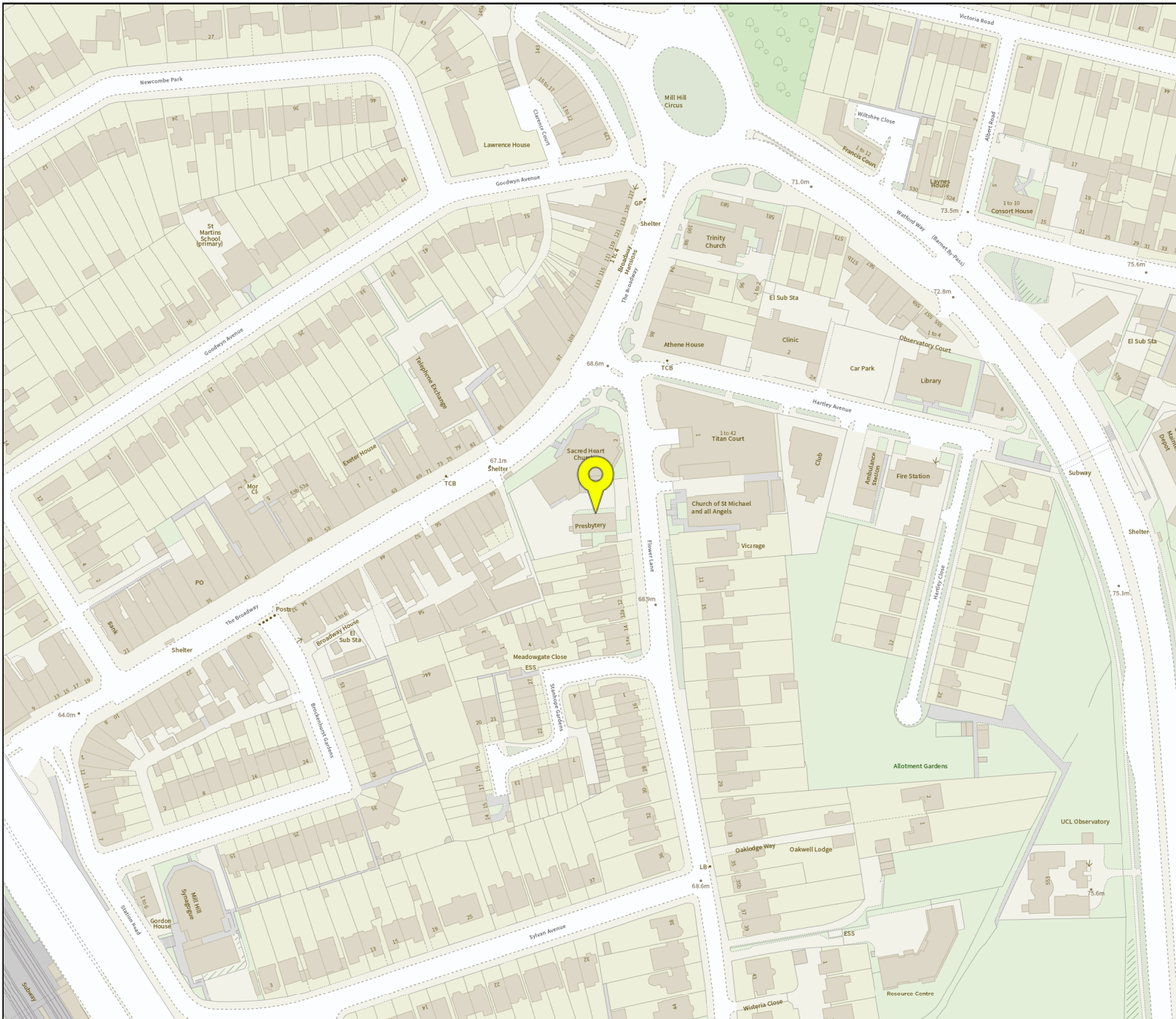
Flood map for planning









Your reference
2 Flower Lane

Location (easting/northing)
521586/192130

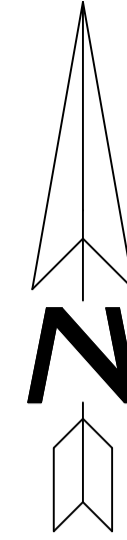
Scale
1:2500

Created
21 May 2021 8:57



-  Selected point
 -  Flood zone 3
 -  Flood zone 3: areas benefiting from flood defences
 -  Flood zone 2
 -  Flood zone 1
 -  Flood defence
 -  Main river
 -  Flood storage area
- 0 20 40 60m

APPENDIX 3 – TOPOGRAPHICAL SURVEY



DATUM NOTES
 GRID ORIGIN IS BASED UPON SURVEY STATION 7 FIXED TO THE PERENNIAL SURVEY NETWORK, USED BY LASER SURVEYS LIMITED GPS NETWORK. A SCALE FACTOR OF 1 APPLIES TO THIS DRAWING.
 ALL MEASURED DISTANCES ON THE GROUND WITHOUT GPS WILL BE THE SAME AS THOSE MEASURED ON THIS DRAWING.
 LEVELS ARE RELATED TO -
 ORDNANCE SURVEY GPS ACTIVE NETWORK AND TRANSFORMED USING THE OSNAD14 DATUM MODEL.
 SITE BENCH MARK ESTABLISHED IS LOCATED AT -
 SURVEY STATION 7
 VALUE GIVEN AS 89.911m
 SURVEY CONTROL STATIONS SHOWN

ABBREVIATIONS (where applicable)

AV Air Valve	MH Manhole Cover
BL Brick	MK Marker
BS Bus Stop	MS Milestone
BT British Telecom	MT Meter
CB Control Box	MY Mercury
CB Close Boarded	OH Overhead
CL Cover Level	PAF Paving
CLK Chamlink	PB Post Box
CO Column	PM Pipe
Conc Concrete	PM Parking Meter
CP Catch Pit	PP Post and Rail
CPS Concrete Paving Slabs	PT Post
CATV Cable Television	PW Post and Wire
DC Drainage Channel	RE Rodding Eye
DP Drain Pipe	RET Retaining
EC Electricity Cover	RS Road Sign
ER Earthing Rod	RS Rolled Steel Joist
FB Flower Bed	SC Step Cook
FE Fence	SK Sockaway
FH Fire Hydrant	SP Signpost
FL Floor Level	ST Sill Trap
FP Flag Pole	SV Stop Valve
GP Gate Post	SVC Security Video Camera
GV Gas Valve	TCL Telephone Call Box
GT/G Gully	TK Tank
HT Height	TL Traffic Light
IC Inspection Cover	TP Telegraph Pole
IL Invert Level	UG Underground
IN Interceptor	UTL Unable To Trace Further
IR Iron Railings	UP Vent Pipe
KO Kerb Outlet	UWL Water Level
LB Litter Bin	WW Water Meter
LP Lamp Post	WO Wash Out

B Floor to Beam Height in cms
C Floor to Ceiling Height in cms
Cr Floor to Crown Height in cms
D Floor to Door Head Height in cms
IC Floor to False Ceiling Height in cms
FF False Floor Level
H Floor to Head Height in cms
S Floor to Sill Height in cms
Sp Floor to Spring Height in cms

NOTES

- Drainage pipe sizes (where shown) have been gauged from the surface for safety reasons and should be regarded as approximate only.
- Tree species (where shown) should be treated with caution and expert identification is advised.
- Although this is a digital survey the accuracy and amount of detail shown is only commensurate with the graphical scale of mapping as specified. Care should be exercised when working to larger scales.
- Visible features in the vicinity of the boundaries as shown above, may not represent the extent of legally conveyed easements.
- Whilst every effort has been made to achieve accuracy on this plan, CRITICAL clearance dimensions, levels and invert levels should be checked prior to design and construction.
- Kerb levels have been taken in the bottom of the channel.
- Areas of dense undergrowth cannot be surveyed in detail, these areas will be shown in outline only and marked as 'dense undergrowth' on the plan.

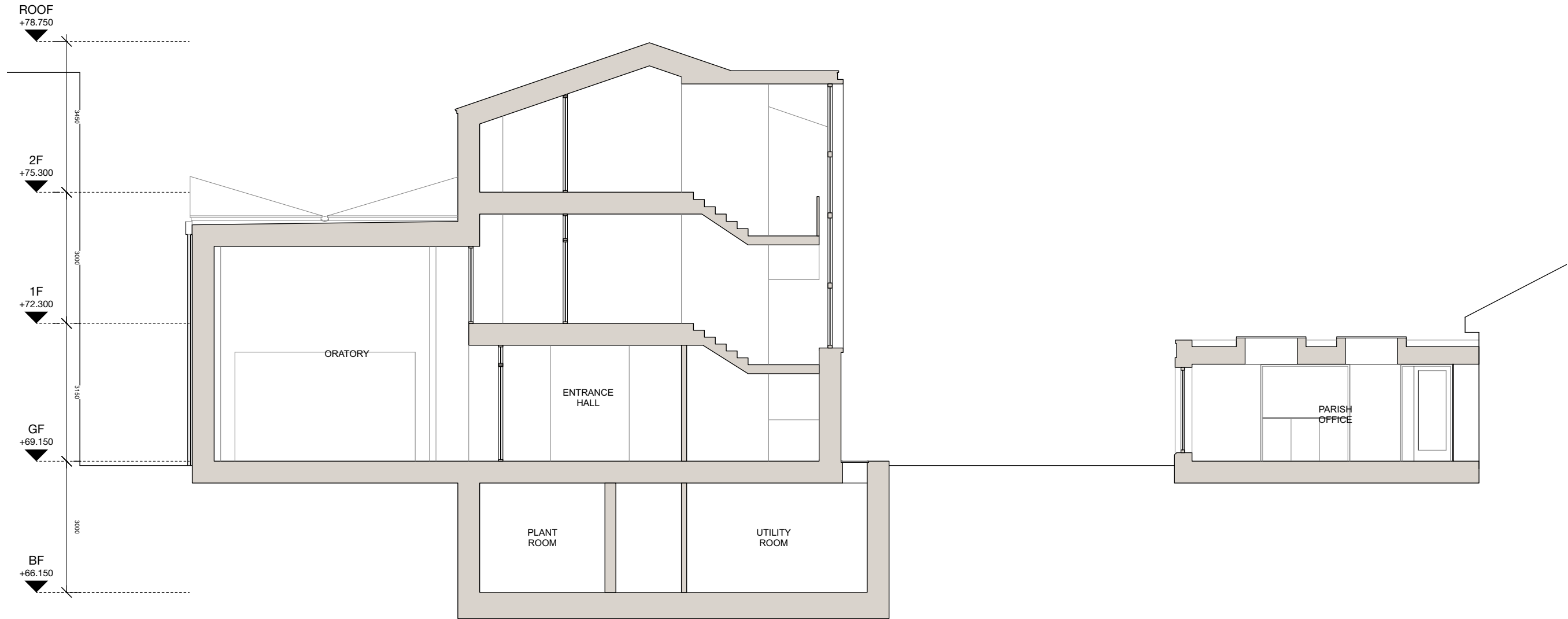
SHEET LAYOUT
 NOT TO SCALE

VINCENTIAN PRESBYTERY
2 FLOWER LANE
MILL HILL
LONDON
NW7 2JB
 TOPOGRAPHICAL SURVEY

SURVEYED FOR		LINDA DOVINEZ CONGREGATION OF THE MISSION PROVINCIAL OFFICE, SYBIL HILL BARNET DATE: 12/05/18	SURVEYOR		J.E DATE: NOVEMBER 2019
NO.	DATE	REVISION			
DRAWING NO		L 9487/1	REV	0	
SCALE		1 : 200 @A1			
SEE ALSO DWG NOS					
SHEET		1 of 6			
REF NO		L 9487			



APPENDIX 4 – SECTION OF PROPOSED DEVELOPMENT



Notes:

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Revisions:

PLANNING



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Original Sheet Size **A3**

Date:	Scale:	Drawn by:
May-21	1:100 @ A3	ASp
Project:		
VINCENZIANI PRESBYTERY MILL HILL		
Drawing title:		
PROPOSED SECTION D-D		
Reference:	Dep. No:	Rev.:
VP	223	P01

