

STRUCTURAL STATEMENT

ON

PROPOSED BASEMENT

AT

**2 COURTENAY AVENUE
LONDON
N6 4LP**

Project No: P5487

Version: 1.0

November 2022

1.00 INTRODUCTION

- 1.01 Michael Alexander Limited has been appointed on behalf of the owner of the property at 2 Courtenay Avenue, London N6 4LP, to advise on the structural implications of the proposed basement.
- 1.02 Michael Alexander has extensive experience of the design of basements in the vicinity of the site, in the London Borough of Haringey and in the neighbouring Boroughs.
- 1.03 This document has been prepared by John McSweeney BSc(Hons) CEng MICE MStructE, a Director of Michael Alexander and a Chartered Structural Engineer with more than 40 years' experience in the construction industry.
- 1.04 The property is located in the London Borough of Haringey and Planning Policy DM18 "Residential Basements and Lightwells" of Haringey's Development Management DPD 2017, requires information on proposed basements to be submitted with a Planning Application to demonstrate that the proposals will not have an adverse effect on the existing building nor on the surroundings.
- 1.05 In the absence of a specific Supplementary Guidance Note on basements (other than the Draft Haringey's Basement Development Guidance Note 2012), the general guidance of neighbouring Boroughs is referenced.
- 1.06 This document provides a brief summary of the site conditions and a structural statement on the proposed basement. It is not intended to be a full Basement Impact Assessment, which is not normally required for a small basement of this nature.
- 1.07 This document shall be read in conjunction with Wolff Architects Design and Access Statement and their Planning Application drawings.

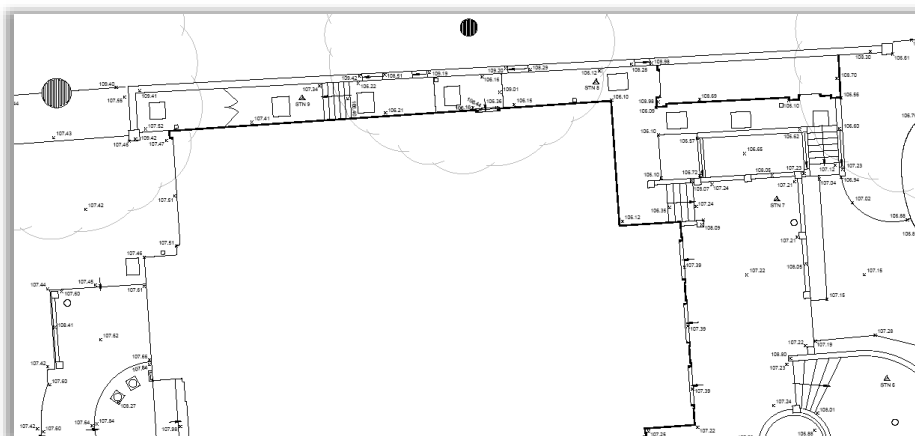
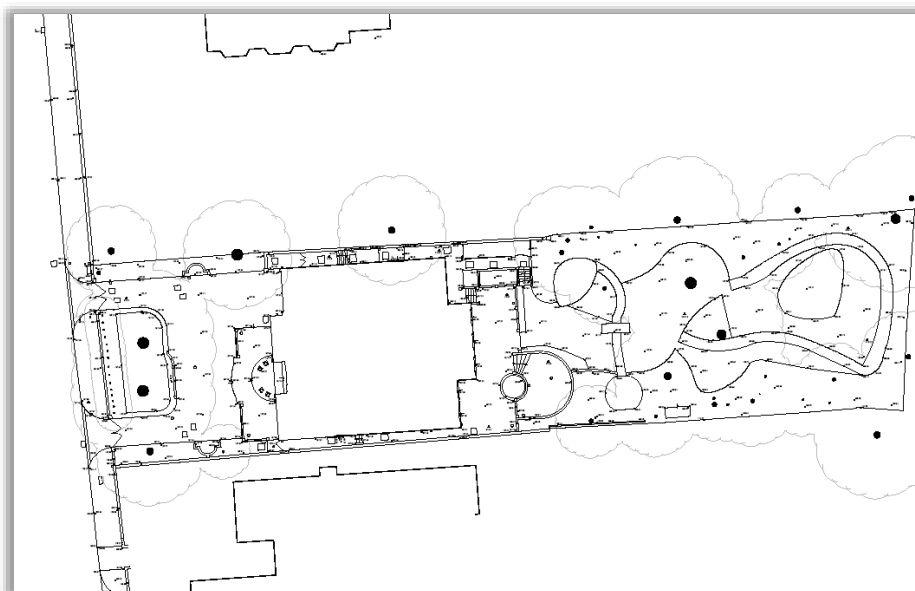
2.00 SITE AND PROPERTY DESCRIPTION

- 2.01 The property and the surrounding buildings are described in the Wolff Architects Design and Access Statement.
- 2.02 A detailed measured survey of the property has been carried out by Alan Rhodes Associates and this survey forms the basis of the Wolff Architects drawings.

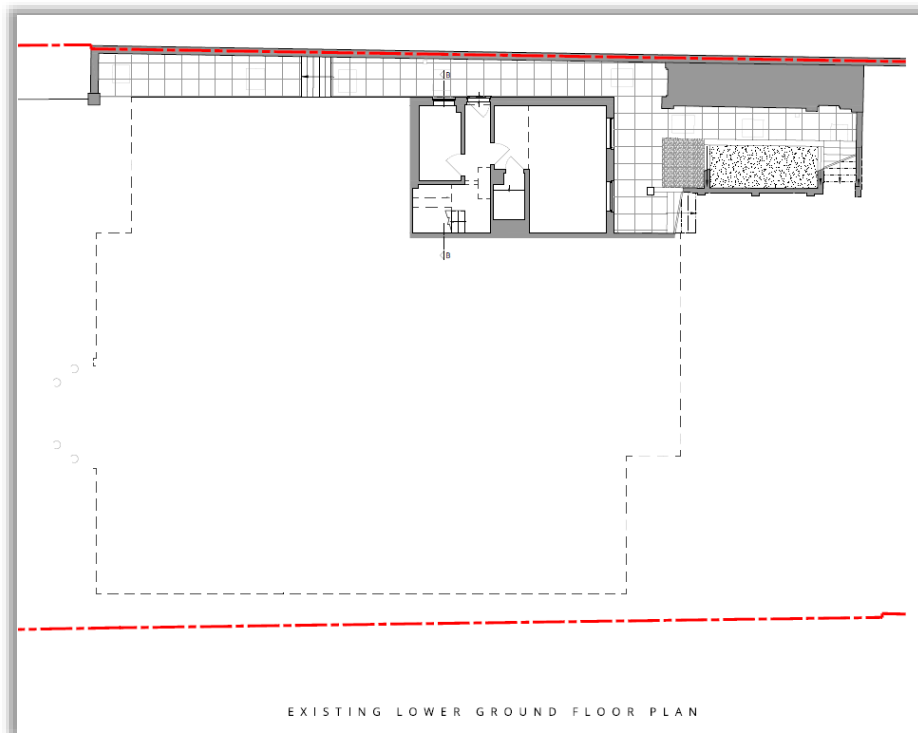


Aerial View

- 2.03 A detailed inspection of the property has been carried out; the surrounding properties have been viewed externally.
- 2.04 The subject property is substantial residential building, providing accommodation on ground, first and second floors, with an existing lower-ground floor (basement) situated under the north-east corner of the ground floor.
- 2.05 The building appears to be of an early 1990's construction, with a timber and steel-framed pitched roof and precast concrete upper floors, supported on loadbearing masonry walls. The lower ground floor is under an area of a reinforced concrete ground floor slab, which is supported on load-bearing masonry walls.
- 2.06 There is an existing detached brick outbuilding to the rear of the lower ground floor and adjacent to the north boundary.
- 2.07 There is a brick wall on the north boundary, which separates No.2 Courtenay Avenue from the garden of the The Rydings (the adjoining property).



Extracts from Alan Rhodes Site Survey



Existing Lower Ground Floor Plan



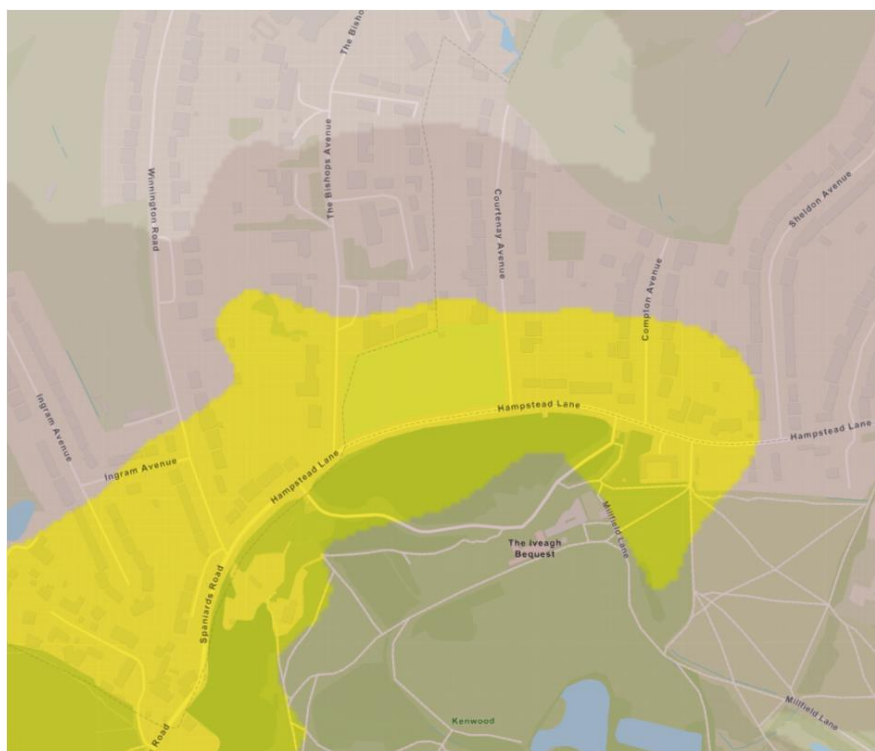
View of Rear of Building and Outbuilding



Views of Rear of Building and Outbuilding

3.00 GROUND CONDITIONS AND FLOODING

- 3.01 The British Geological Survey (BGS) Map of the area indicates that the site is underlain by the dense fine sands of the Bagshot Formation, overlying the Claygate Member over the London Clay Formation; the site is close to the boundary between the Bagshot Formation and the Claygate Member.

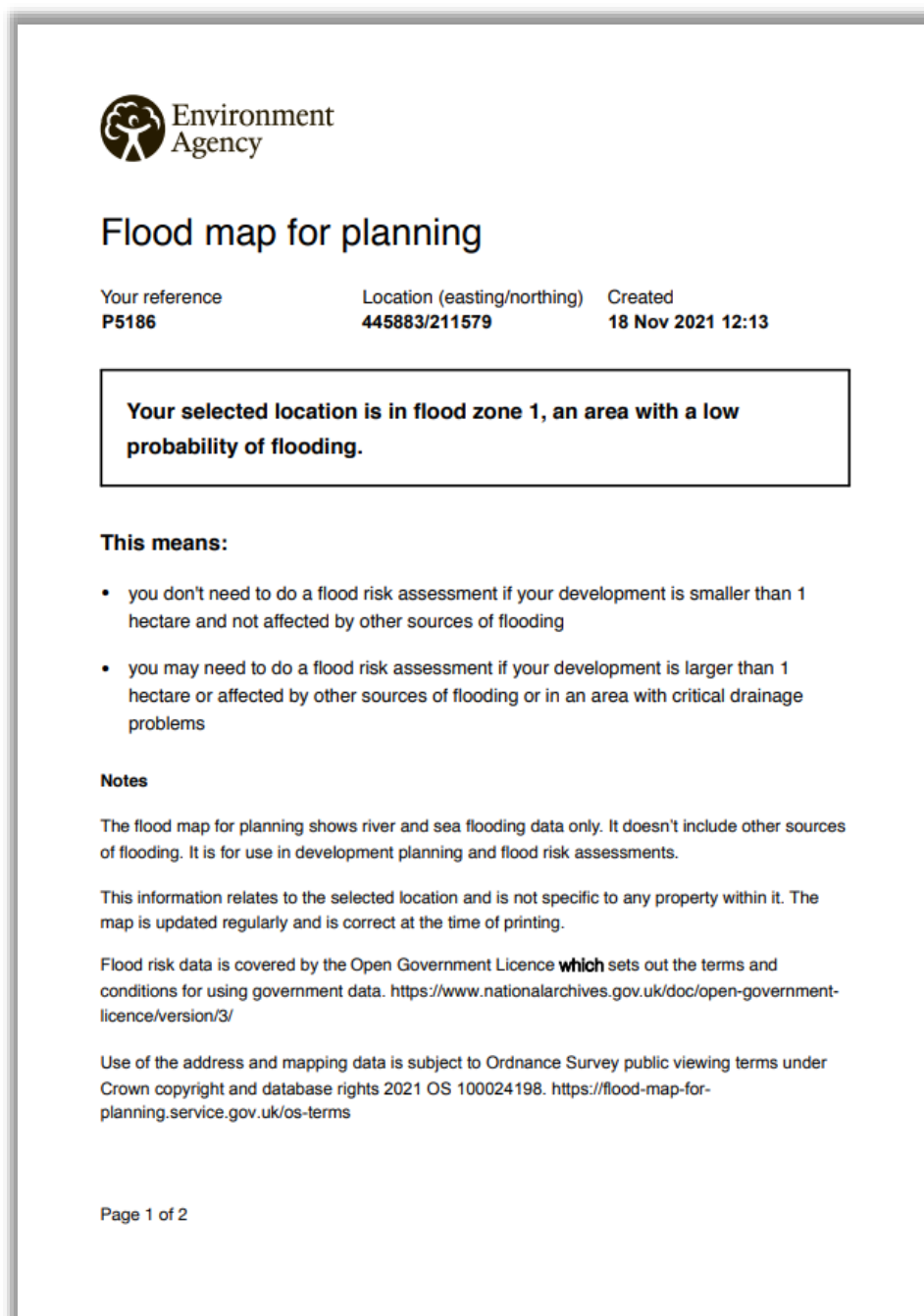


-  Bagshot Formation
-  Claygate Member
-  London Clay Formation

Geological Map (Extracts from British Geological Survey)

- 3.02 These ground conditions are consistent with those found on nearby sites, although a detailed ground investigation shall be carried out, in due course, to confirm the site-specific ground conditions.
- 3.03 The Bagshot Formation and Claygate Member are classified as Secondary Aquifers and the London Clay is an unproductive stratum with low permeability.
- 3.04 The nearest surface water feature is approximately 200 m to the north in Highgate Golf Course, which flows into the streams to the north of Courtenay Avenue and towards The Bishops Avenue.
- 3.05 The area of the proposed basement extension is covered by the existing building and impermeable hard standings.

- 3.06 There is a small ornamental pond adjacent to the outbuilding. There is no evidence of flooding in the property nor of any water penetration into the building.
- 3.07 The Environment Agency Flood map for planning indicates that the property is in Flood Zone 1, which is area with low probability of flooding.



The screenshot displays the Environment Agency's 'Flood map for planning' interface. At the top left is the Environment Agency logo. The title 'Flood map for planning' is centered. Below the title, a table provides details: 'Your reference' is P5186, 'Location (easting/northing)' is 445883/211579, and 'Created' is 18 Nov 2021 12:13. A prominent box states: 'Your selected location is in flood zone 1, an area with a low probability of flooding.' Under the heading 'This means:', a bulleted list explains that flood risk assessment is not required for developments smaller than 1 hectare, but may be needed for larger ones or those with critical drainage problems. A 'Notes' section follows, clarifying that the map shows only river and sea flooding data and is for development planning. It also mentions that the information is specific to the selected location and is updated regularly. Further down, it notes that flood risk data is covered by the Open Government Licence, which sets out the terms and conditions for using government data, with a link to the licence version 3. The final note states that the address and mapping data are subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2021 OS 100024198, with a link to the terms. The page is identified as 'Page 1 of 2' at the bottom left.

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
P5186	445883/211579	18 Nov 2021 12:13

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

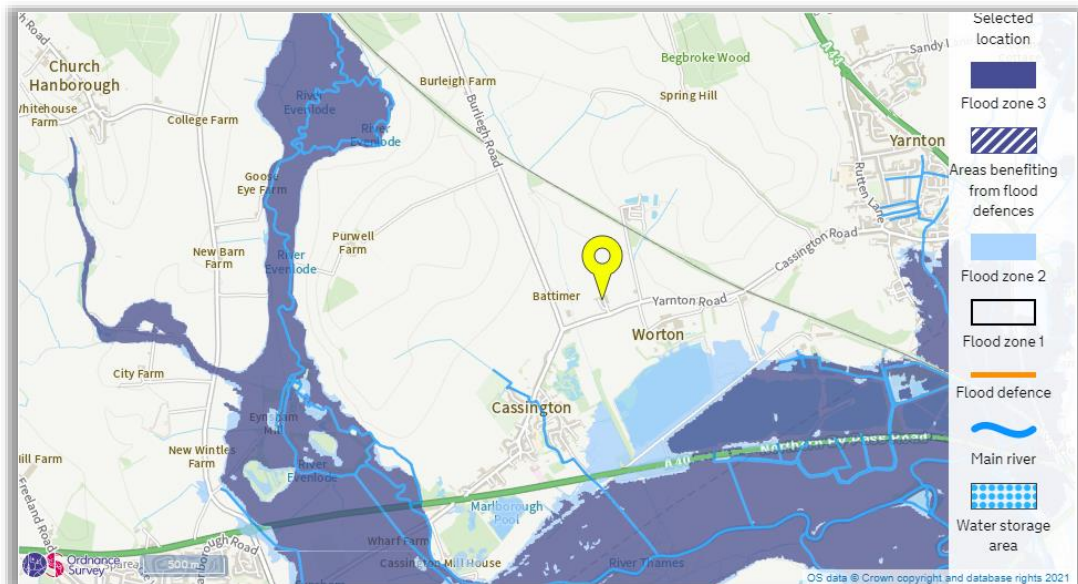
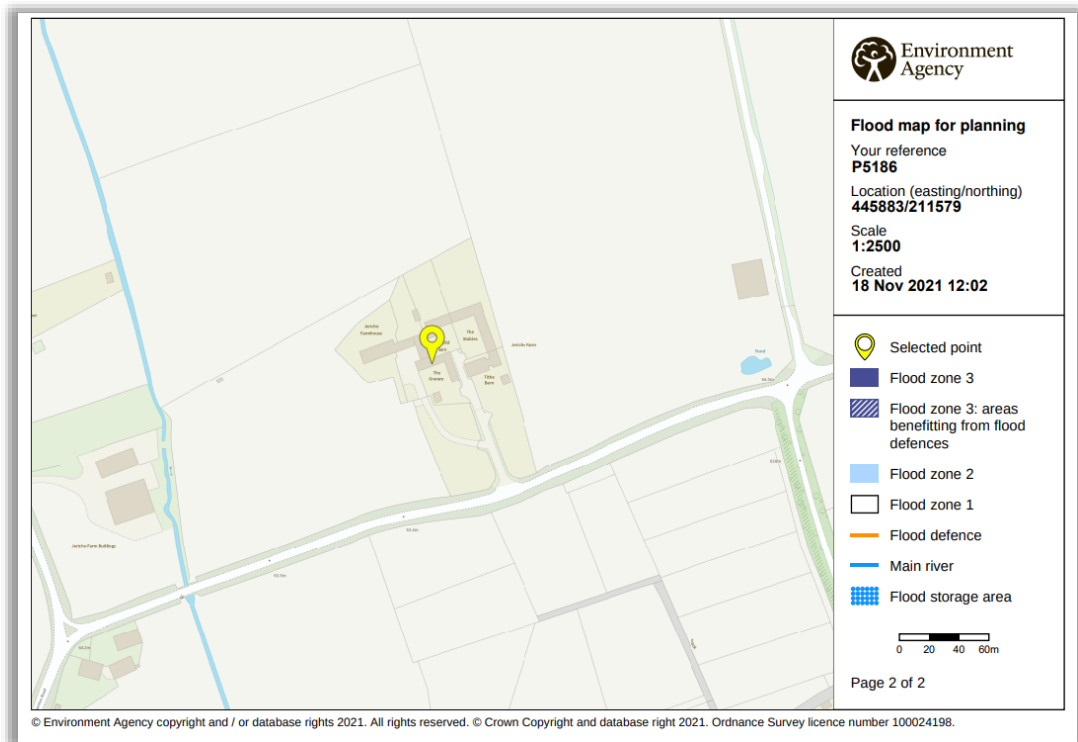
The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

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.

Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2021 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>

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Environment Agency Flood Maps

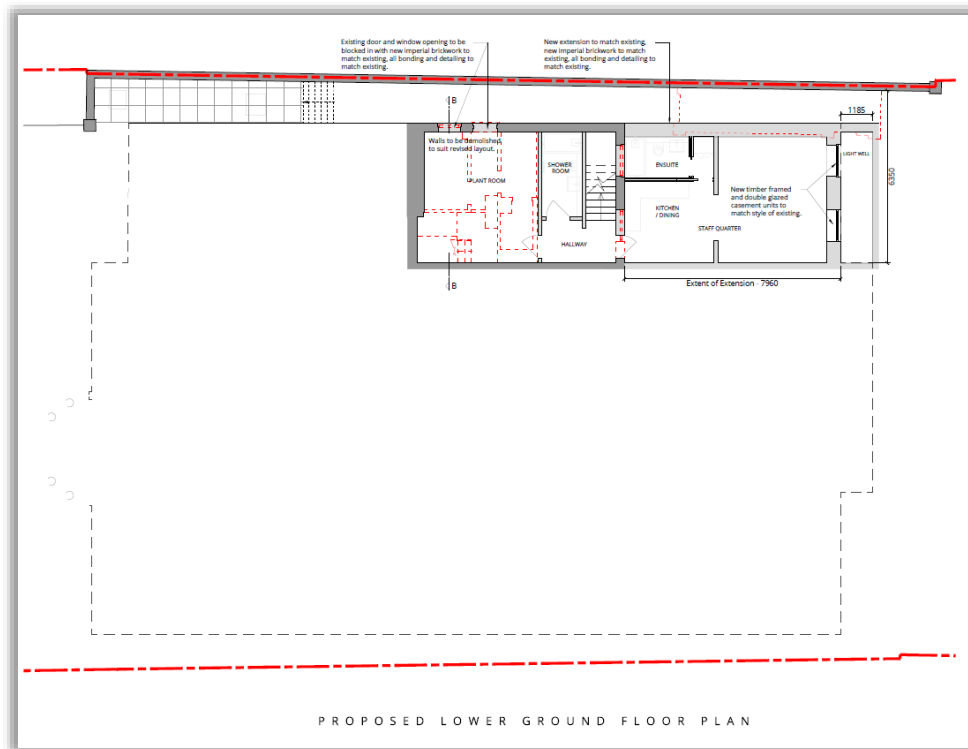
(Contains public sector information licensed under the Open Government Licence v3.0)

4.00 TREES

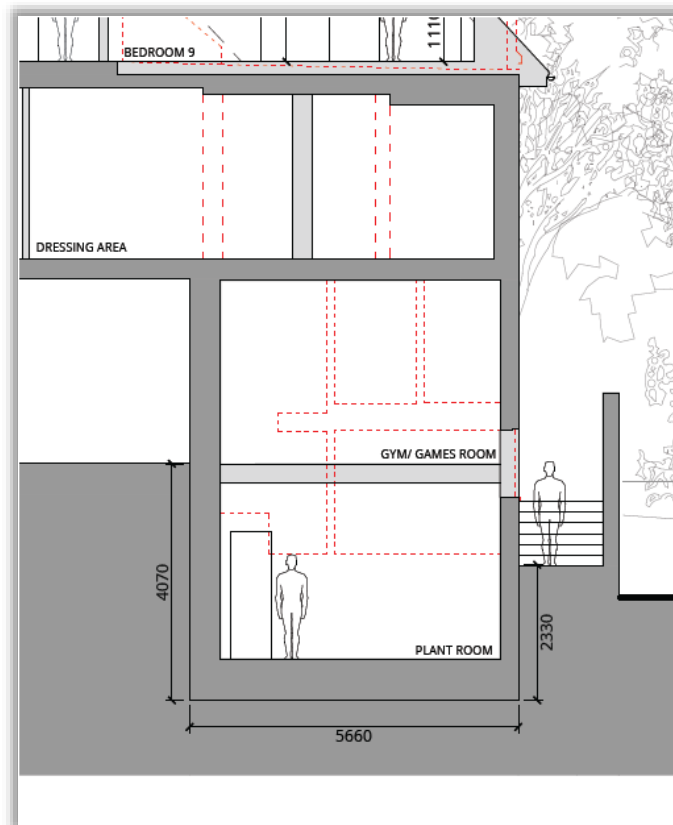
- 4.01 An Arboricultural Impact Assessment Report has been prepared for the site by Landmark Trees.
- 4.02 The report includes details of all trees in the property, and those in the adjoining property, which are close to the proposed basement. The report also includes recommendations to facilitate the proposed development.
- 4.03 The foundations of the existing basement, the outbuilding and the garden boundary wall are within the Root Protection Area (RPA) of trees T4 (Oak), T5 (Birch) and T6 (Hazel); there is no apparent evidence of any damage to the existing structures resulting from the presence of the trees.

5.00 PROPOSED BASEMENT

- 5.01 The Wolff Architects drawings show the extent of the proposed basement, which shall be constructed in the north-east corner of the building. The basement will not extend beyond the rear wall of the existing outbuilding and less than 2.5 m below the existing lower ground floor level.
- 5.02 The design and construction of the basement shall be in accordance with current Building Regulations, British Standards and Codes of Practice, Health and Safety requirements and good building practice.
- 5.03 The basement shall be constructed by an experienced specialist basement contractor, utilising well established construction techniques.
- 5.04 The permanent structure shall be constructed with a reinforced concrete (RC) basement slab, RC liner walls and RC ground floor slab. The structure shall be designed to fully support the existing building and the surrounding ground and structures.
- 5.05 The foundations for the proposed basement shall extend to a depth below the zone of influence of the trees and designed in accordance with the recommendations of NHBC Guidance Part 4 Foundations: Chapter 4.2 – Building near trees.
- 5.06 The basement shall also be designed in accordance with the recommendations provided in Ciria Publication C760 “Guidance on embedded retaining wall design” and shall be a watertight construction, include an internal drained cavity system, which will also extend across the basement floor.
- 5.07 Schedules of Condition shall be carried out prior to commencement of construction to record the details of the boundary wall, as appropriate. Movement monitoring of the adjacent structures shall be established, and readings taken at agreed intervals throughout construction.
- 5.08 The construction shall be inspected by Michael Alexander to ensure that the works are being carried out in accordance with the design requirements.
- 5.09 On the basis of the above, the construction of the proposed basement shall not have an adverse effect on the structural stability of the property nor of neighbouring properties. There shall be no increase in the flood risk to the property or nearby properties and there shall be no adverse effects on the local infrastructure.



Proposed Lower Ground Floor Plan



Proposed Lower Ground Floor Section