



**PROPOSED DEEPENING OF
EXISTING BASEMENT AND
CONSTRUCTION OF
ADJACENT RESIDENTIAL
ANNEX, 168 HIGHGATE
ROAD, LONDON, NW5 1QS**

FLOOD RISK ASSESSMENT

JULY 2015

REPORT REF: 1466/RE/07-15/01

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CONTRACT

Evans Rivers and Coastal Ltd has been commissioned by Etive Pubs Ltd to carry out a Flood Risk Assessment for the proposed deepening of an existing basement and construction of adjacent residential annex at number 168 Highgate Road, London, NW5 1QS.

QUALITY ASSURANCE, ENVIRONMENT AND HEALTH AND SAFETY

Evans Rivers and Coastal Ltd operates a Quality Assurance, Environmental, and Health and Safety Policy.

This project comprises various stages including data collection; hydrological and hydrogeological assessments; surface water drainage designs; and reporting. Quality will be maintained throughout the project by producing specific methodologies for each work stage. Quality will also be maintained by initiating internal quality procedures including the validation of third party deliverables; creation of an audit trail to record any changes made; and document control using a database and correspondence log file system.

To adhere to the Environmental Policy, data will be obtained and issued in electronic format and alternatively by post. Paper use will also be minimised by communicating via email or telephone where possible. Documents and drawings will be transferred in electronic format where possible and all waste paper will be recycled. Meetings away from the office of Evans Rivers and Coastal Ltd will be minimised to prevent unnecessary travel, however for those meetings deemed essential, public transport will be used in preference to car journeys.

The project will follow the commitment and objectives outlined in the Health and Safety Policy operated by Evans Rivers and Coastal Ltd. All employees will be equipped with suitable personal protective equipment prior to any site visits and a risk assessment will be completed and checked before any site visit. Other factors which have been taken into consideration are the wider safety of the public whilst operating on site, and the importance of safety when working close to a water source and highway. Any designs resulting from this project and directly created by Evans Rivers and Coastal Ltd will also take into account safety measures within a "designers risk assessment".

Report carried out by:



.....
Rupert Evans, BSc (Hons), MSc, CEnv, C.WEM, MCIWEM, AIEMA

DISCLAIMER

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1. INTRODUCTION

1.1 Project Scope

1.1.1 Evans Rivers and Coastal Ltd has been commissioned by Etime Pubs Ltd to carry out a Flood Risk Assessment for the proposed deepening of an existing basement and construction of adjacent residential annex at number 168 Highgate Road, London, NW5 1QS.

1.1.2 Specifically, this assessment intends to:

- 1) Carry out an appraisal of flood risk from all sources such as fluvial/tidal, groundwater, surface water/sewers, artificial sources in accordance with NPPF and other documents such as the SFRA and SWMP;
- 2) Recommend mitigation measures where appropriate;
- 3) Report findings and recommendations.

1.1.3 This assessment is carried out in accordance with the requirements of the National Planning Policy Framework (NPPF) and associated Technical Guidance, both dated March 2012. Other documents which have been consulted include:

- DEFRA/EA document entitled *Framework and guidance for assessing and managing flood risk for new development Phase 2 (FD2320/TR2)*, 2005;
- DEFRA/Jacobs 2006. *Groundwater flooding records collation, monitoring and risk assessment (ref HA5)*.
- National Planning Practice Guidance – Flood Risk and Coastal Change updated 6th March 2014.
- London Borough of Camden Preliminary Flood Risk Assessment (PFRA) Version 0.2 dated 2011.
- London Borough of Camden Strategic Flood Risk Assessment (SFRA) dated 2014.
- London Borough of Camden Surface Water Management Plan (SWMP) Version 1 dated 2011.
- London Borough of Camden flood risk management strategy (FRMS) dated 2013.
- London Borough of Camden, Camden geological, hydrogeological and hydrological study – Guidance for subterranean development carried out by Arup in 2010.

2. DATA COLLECTION

2.1 To assist with this report, the data collected included:

- Michael Alexander Consulting Engineers Basement Impact Assessment (BIA) dated July 2015.
- Geotechnical and Environmental Associates desk study and ground investigation report dated July 2015.
- 1:250,000 *Soil Map of South East England* (Sheet 6) published by Cranfield University and Soil Survey of England and Wales 1983.
- 1:625,000 *Hydrogeological Map of England and Wales*, published in 1977 by the Institute of Geological Sciences (now the British Geological Survey).
- Information and data from:
 - London Borough of Camden Preliminary Flood Risk Assessment (PFRA) Version 0.2 dated 2011.
 - London Borough of Camden Strategic Flood Risk Assessment (SFRA) dated 2014.
 - London Borough of Camden Surface Water Management Plan (SWMP) Version 1 dated 2011.
 - London Borough of Camden Flood Risk Management Strategy (FRMS) dated 2013.
 - London Borough of Camden, Camden geological, hydrogeological and hydrological study – Guidance for subterranean development dated 2010.

2.2 All third party data used in this study has been checked and verified prior to use in accordance with Evans Rivers and Coastal Ltd Quality Assurance procedures.

3. SITE CHARACTERISTICS

3.1 Existing Site Characteristics and Location

- 3.1.1 The site is located at number 168 Highgate Road, London, NW5 1QS. The approximate Ordnance Survey (OS) grid reference for the site is 528435 186075 and the location of the site is shown on Figure 1.

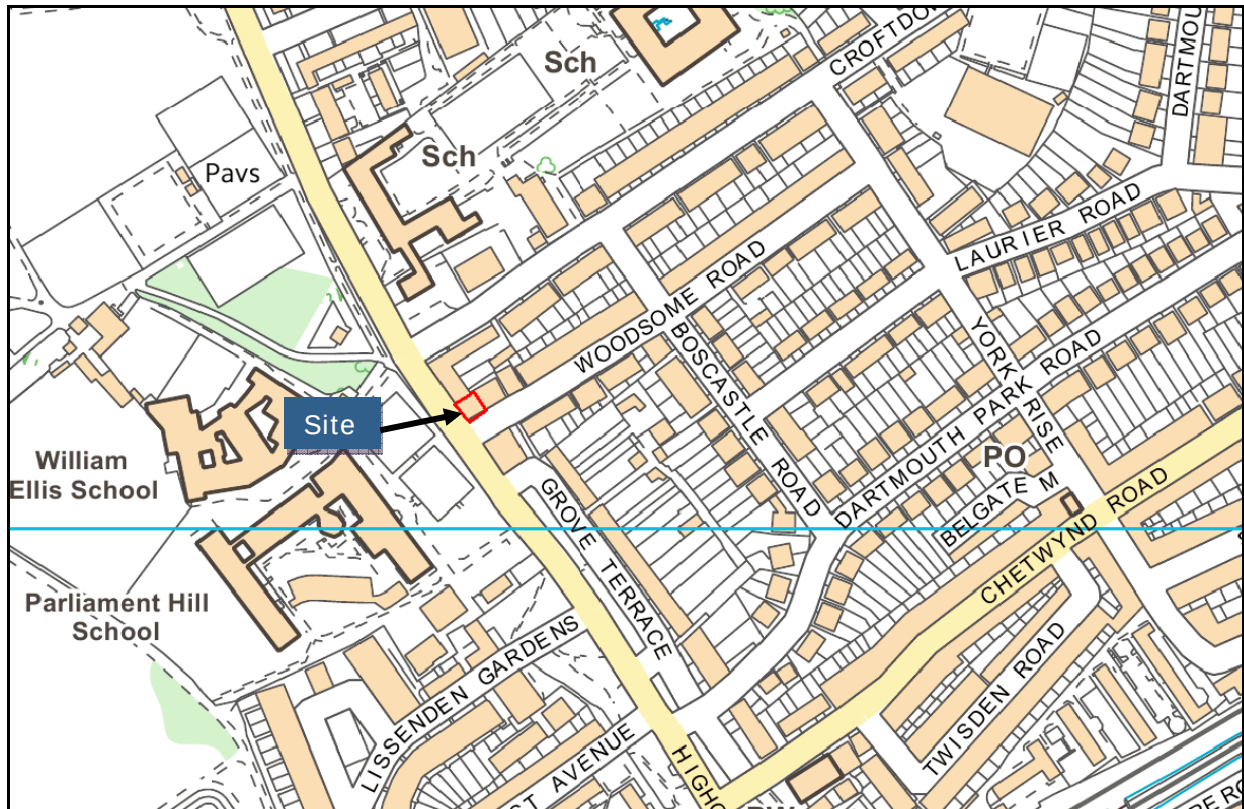


Figure 1: Site location plan (Source: Ordnance Survey, 2015)

- 3.1.2 The site is located within a residential area and comprises a three-storey (plus basement/cellar and attic) building used as a public house known as the Bull and Last on the ground floor with accommodation across upper floors. There is also an adjacent single-storey extension and courtyard.
- 3.1.3 The site is bounded by residential dwellings adjacent to its north western and north eastern frontages. The site is accessed via Highgate Road adjacent to the south western frontage of the site and Woodsome Road located adjacent to the south eastern frontage of the site.
- 3.1.4 The existing site layout can be seen on Drawing Numbers BALP_PA_001 and BALP_PA_002.

3.2 Site Proposals

- 3.2.1 The proposed development comprises the deepening of the existing basement under the footprint of the existing building by approximately 0.6m and extending the basement into the courtyard to a level of 2.75m bgl.

3.2.2 Additionally, a new three-storey residential annex will be constructed across the part of the site currently occupied by a single-storey extension and existing courtyard and will also include the extended basement level.

3.2.3 The site proposals can be seen on Drawing Numbers BALP_PA_005 and BALP_PA_006.

4. SOURCES OF FLOODING

4.1 Fluvial / Tidal

- 4.1.1 The Environment Agency Flood Map (Figure 2) shows that the site is located within the NPPF Flood Zone 1, 'Low Probability' which comprises land as having less than a 1 in 1000 year annual probability of fluvial or tidal flooding (i.e. an event more severe than the extreme 1 in 1000 year event). NPPF states that all uses of land, including basements, are appropriate in this zone.

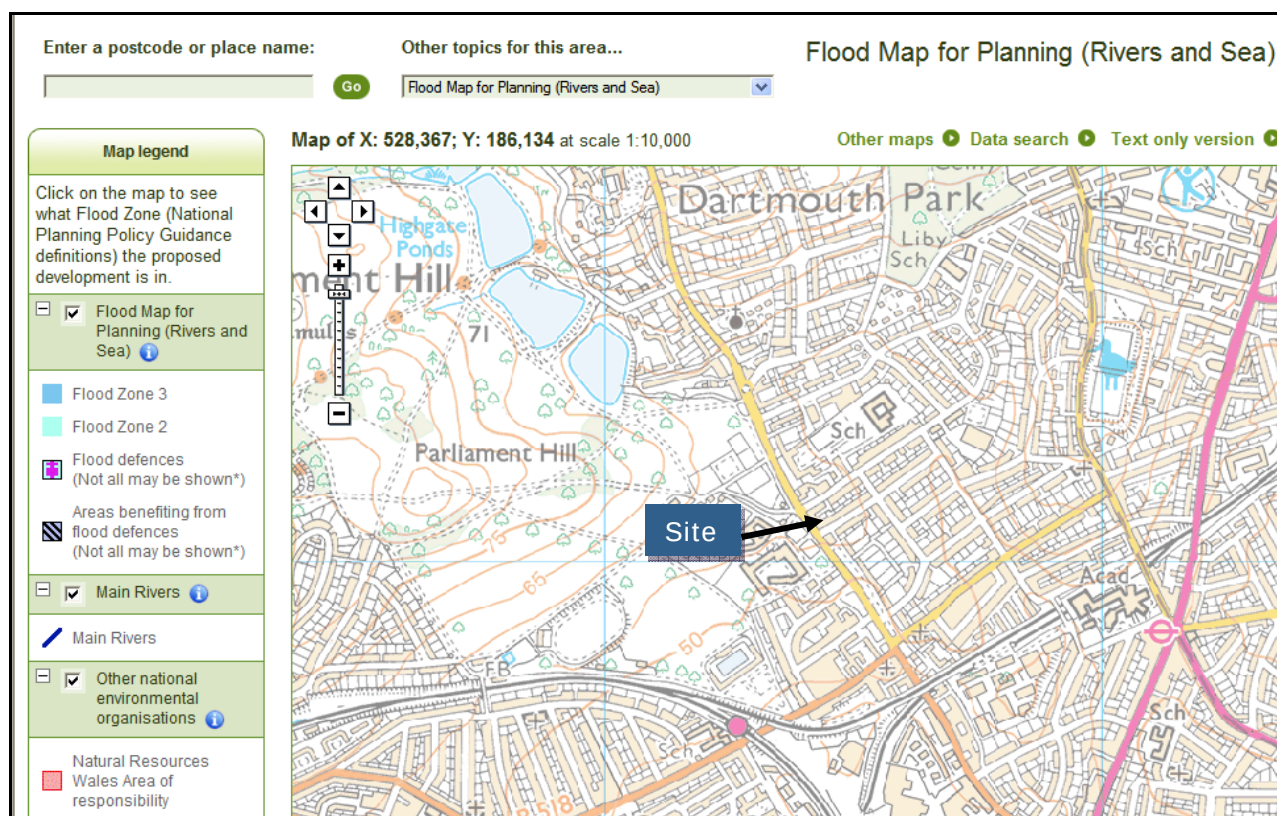


Figure 2: Environment Agency Flood Zone Map (Source: Environment Agency 2015)

- 4.1.2 The SFRA also states that there has been no historical flooding within the Borough from fluvial or tidal sources. Furthermore, the SWMP confirms that the Borough does not fall within the Environment Agency's flood zones and therefore is not at significant risk from fluvial or tidal flooding.
- 4.1.3 The SFRA and SWMP states that all main rivers historically located within the Borough are now culverted and incorporated into the sewer network. The SWMP discusses the River Fleet which is one of London's "lost rivers" and which historically originates from springs on Hampstead Heath and drains to the Thames through the Borough. The Fleet is entirely incorporated within the sewer network.
- 4.1.4 The SFRA continues to discuss the Borough's historic rivers and in addition to the Fleet, the Tyburn, Kilburn and Brent were also located in the area of Hampstead Heath. All of these "lost rivers" are also now incorporated into the local sewer system maintained by Thames Water. It is for these reasons that the Borough is located entirely within Flood Zone 1.

4.2 Critical Drainage Areas (CDA)

4.2.1 Despite the site being located within Flood Zone 1, it is understood from Figure 6 of the SFRA and Figure 3.1 of the SWMP, that the site is located within the Group3-001 (Parliament Hill) Critical Drainage Area (CDA).

4.2.2 The SWMP defines the CDA as:

“A discrete geographic area (usually a hydrological catchment) 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 during severe weather thereby affecting people, property or local infrastructure.”

4.3 Groundwater Flooding

4.3.1 In addition to the information provided in the SFRA and SWMP, in order to assess the potential for groundwater flooding, the Jacobs/DEFRA report entitled *Strategy for Flood and Coastal Erosion Risk Management: Groundwater Flooding Scoping Study*, published in May 2004, was consulted, together with the guidance offered within the document entitled *Groundwater flooding records collation, monitoring and risk assessment (ref HA5)*, commissioned by DEFRA and carried out by Jacobs in 2006.

4.3.2 According to Cobby et al (2009), groundwater flooding can be defined as flooding caused by the emergence of water originating from subsurface permeable strata. The greatest risks of groundwater flooding are considered to be from either:

- a rise of groundwater in unconfined permeable strata, such as Chalk, after prolonged periods of extreme rainfall;
- a rise of groundwater in unconsolidated, permeable superficial deposits, which are in hydraulic continuity with local river water levels and where the hydraulic gradient of the water table is low.

4.3.3 As described above, it is widely accepted that groundwater flooding generally occurs from both permeable strata (e.g. Chalk) and superficial deposits (e.g. sands and gravels). In particular, unconfined water-bearing deposits (i.e. those with permeable soils above them) are susceptible to a rise in groundwater during prolonged, extreme rainfall and during periods of high recharge throughout autumn and winter. Antecedent conditions, such as, above average groundwater levels prior to the rainfall event, are also a contributing factor to a variation in the water table.

4.3.4 Permeable superficial deposits can also hold quantities of groundwater, although these tend to be insignificant compared to the stored quantities within consolidated aquifers. Unconsolidated deposits such as sand and gravels are sufficiently permeable to store water; however such deposits which yield a low quantity of water are commonly termed a non-aquifer.

Soil and Geology at the Site

4.3.5 The Geotechnical and Environmental Associates desk study and ground investigation report dated July 2015 indicates that the soils beneath the site comprise a moderate to significant thickness of made ground overlying London Clay.

4.3.6 Groundwater was not recorded beneath the site to a depth of 5.2m below existing basement level.

Groundwater Flooding Potential at the Site

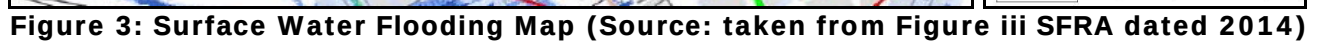
- 4.3.7 Figure 4e/Rev 1 of the SFRA shows that the site has not been affected in the past from groundwater flooding incidents and that the site is not located within an area of increased susceptibility to elevated groundwater. Figure 4a/Rev 1 of the SFRA also shows that the site is not located across an area with superficial (and more permeable) deposits beneath the surface.
- 4.3.8 The evidence suggests that due to the low permeable clay soils beneath the site and because the water table is sufficiently at depth, it is unlikely that the water table has the potential to inundate the basement level or breach the ground surface and flow into the building and basement via the ground floor.
- 4.3.9 The groundwater flooding risk to the property and basement is considered to be overall low.

4.4 Surface Water Flooding and Sewer Flooding

- 4.4.1 Surface water and sewer flooding across urban areas is often a result of high intensity storm events which exceed the capacity of the sewer thus causing it to surcharge and flood. Poorly maintained sewer networks and blockages can also exacerbate the potential for sewer flooding.

Surface Water Flooding

- 4.4.2 It has been established that the site lies within the Group3-001 Critical Drainage Area. The SWMP notes that the CDA is characterised by steep topography with high ground to the north and lower flatter ground to the south. This steep gradient causes relatively fast flows down York Rise towards the railway line. The SWMP also states that deep flooding occurs in “basins” created either by the natural topography or by railway and road embankments.
- 4.4.3 The SFRA discusses the two large surface water flooding events in the Borough, which occurred in 1975 and 2002 and caused widespread damage. It is understood that during these events the sewers reached maximum capacity and Figure 3iii/Rev 1 of the SFRA shows that both Highgate Road and Woodsome Road were affected during the 1975 event.
- 4.4.4 Figure 3iii/Rev 1 of the SFRA (Figure 3 in this report) also shows that the site and adjacent properties are not at risk from surface water flooding during events up to and including the 1 in 1000 year event. In fact, the site is located across an area with a less than 1 in 1000 year return period of surface water flooding.



4.4.8 It is considered that the site is not at risk of surface water flooding as indicated by the maps.

Sewer Flooding

- 4.4.9 The SFRA states that the majority of the Borough is served by a combined surface and foul water system which is designed to accommodate rainfall events of up to 1 in 30 years return period.
- 4.4.10 The combined sewer network outfalls into the River Thames during intense rainfall events when the sewer network reaches capacity. The evidence suggests that as the sewer capacity becomes exceeded this results in surcharging of the network prior to sufficient discharge into the Thames.
- 4.4.11 Figure 5a/Rev 1 and Figure 5b/Rev 1 of the SFRA indicates that the site is located across an area which has had no internal or external recorded sewer flooding incidents. Furthermore, the BIA includes a response from Thames Water indicating that there have been no incidents of flooding as a result of surcharging public sewers. It is considered that there is an overall low risk of sewer flooding at the site.
- 4.4.12 Despite this, it is considered that the basement should be fitted with a positive pumped device and non-return valve (e.g. <http://www.forgevalves.co.uk/>) so that it will be protected further from sewer flooding. Therefore, if the sewer in the road becomes completely full during a heavy storm, foul water does not backflow into the property.

4.5 Reservoirs, Canals And Other Artificial Sources

- 4.5.1 The failure of man-made infrastructure such as flood defences and other structures can result in unexpected flooding. Flooding from artificial sources such as reservoirs, canals and lakes can also occur suddenly and without warning, leading to high depths and velocities of flood water which pose a safety risk to people and property.
- 4.5.2 The site is located across land which is lower than the Highgate Ponds across Hapstead Heath, however, Figure 14 of the London Borough of Camden, Camden geological, hydrogeological and hydrological study – Guidance for subterranean development carried out by Arup in 2010, shows that the site is not located within the catchment of these ponds.
- 4.5.3 The Environment Agency's "Risk of flooding from reservoirs" map (Figure 4) shows that the site is not at risk of reservoir flooding and, in particular, not at risk from the pond chains across Hampstead Heath.

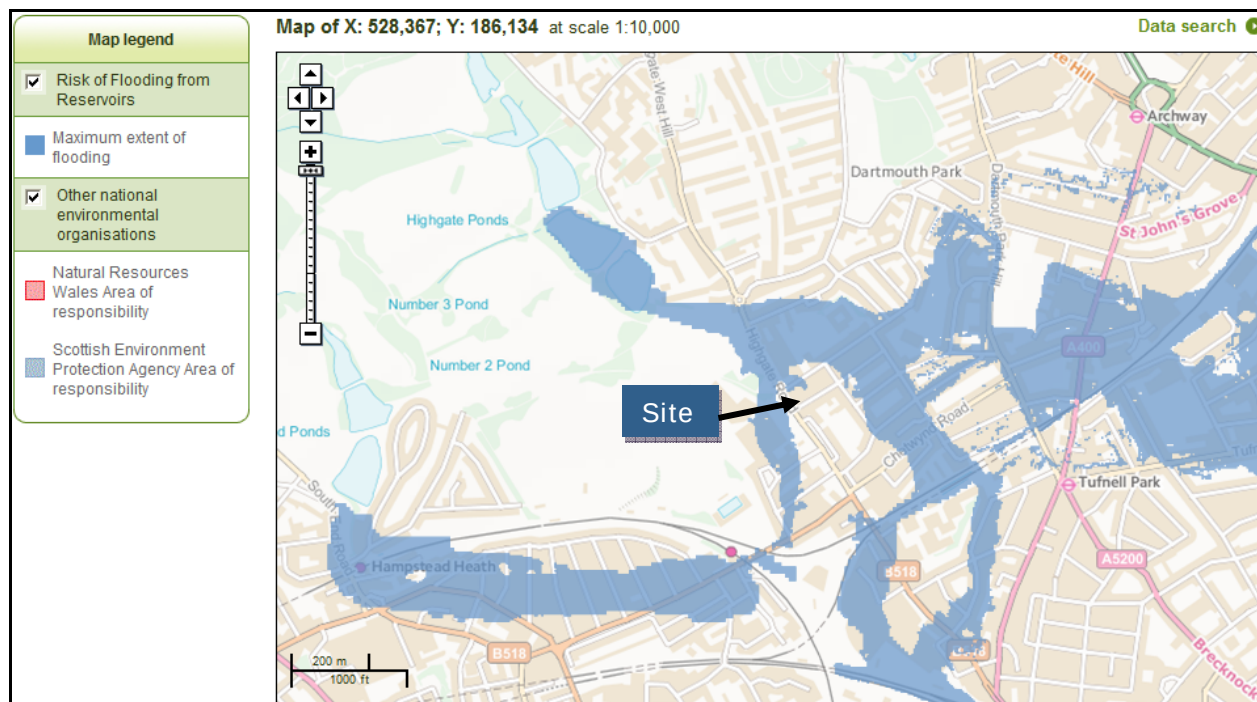


Figure 4: Environment Agency Risk of Flooding from Reservoirs (Source: Environment Agency 2015)

5. SURFACE WATER DRAINAGE

- 5.1 As stated in the BIA, surface water will continue its existing route into the combined Thames Water sewers.
- 5.2 The basement will largely be beneath the footprint of the existing building, however, despite the basement also extending below ground into the area currently occupied by the single-storey extension and courtyard, this area is currently covered by hardstanding and therefore there will be no increase in impermeable area as a result of the proposals.
- 5.3 Paragraph 2.66 of the CPG4 and Chapter 5 of the Camden geological, hydrogeological and hydrological study – Guidance for subterranean development dated 2010, states that for areas where the proposed basement extends beyond the footprint of the building, typically a thickness of at least 1m of soil should be placed on the “roof” of the basement to mitigate the reduction in infiltration capacity. This rule does not apply to the part of the basement built under the existing structure as the existing building would already preclude rainwater infiltration. The rule can therefore also be applied to parts of the basement constructed beneath existing hard surfaced areas adjacent to the building as these areas would be precluding rainwater infiltration pre-development.

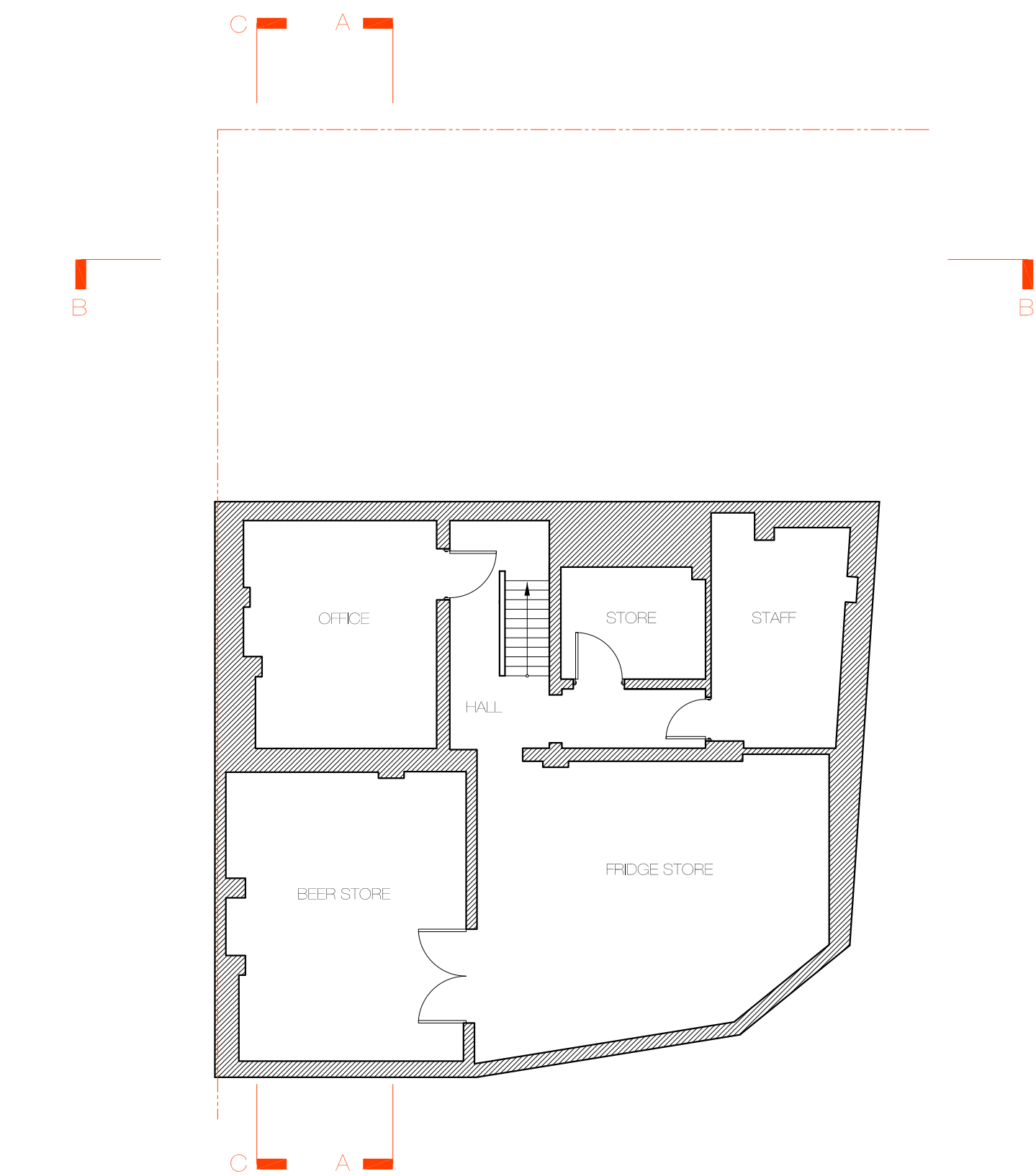
6. CONCLUSIONS

- A review of the relevant guidance documents and various types of data collected at the site has enabled a full assessment of the flood risks to be quantified.
- The site is located within the Flood Zone 1 therefore all uses of land are appropriate in this zone.
- This assessment has investigated the possibility of groundwater flooding and flooding from other sources at the site. It is considered that there will be low risk of groundwater flooding across the site. There is a low risk of flooding from other sources such as surface water, reservoirs and sewers. However, as a precaution; the risk from sewer flooding should be mitigated further by introducing a non-return valve.

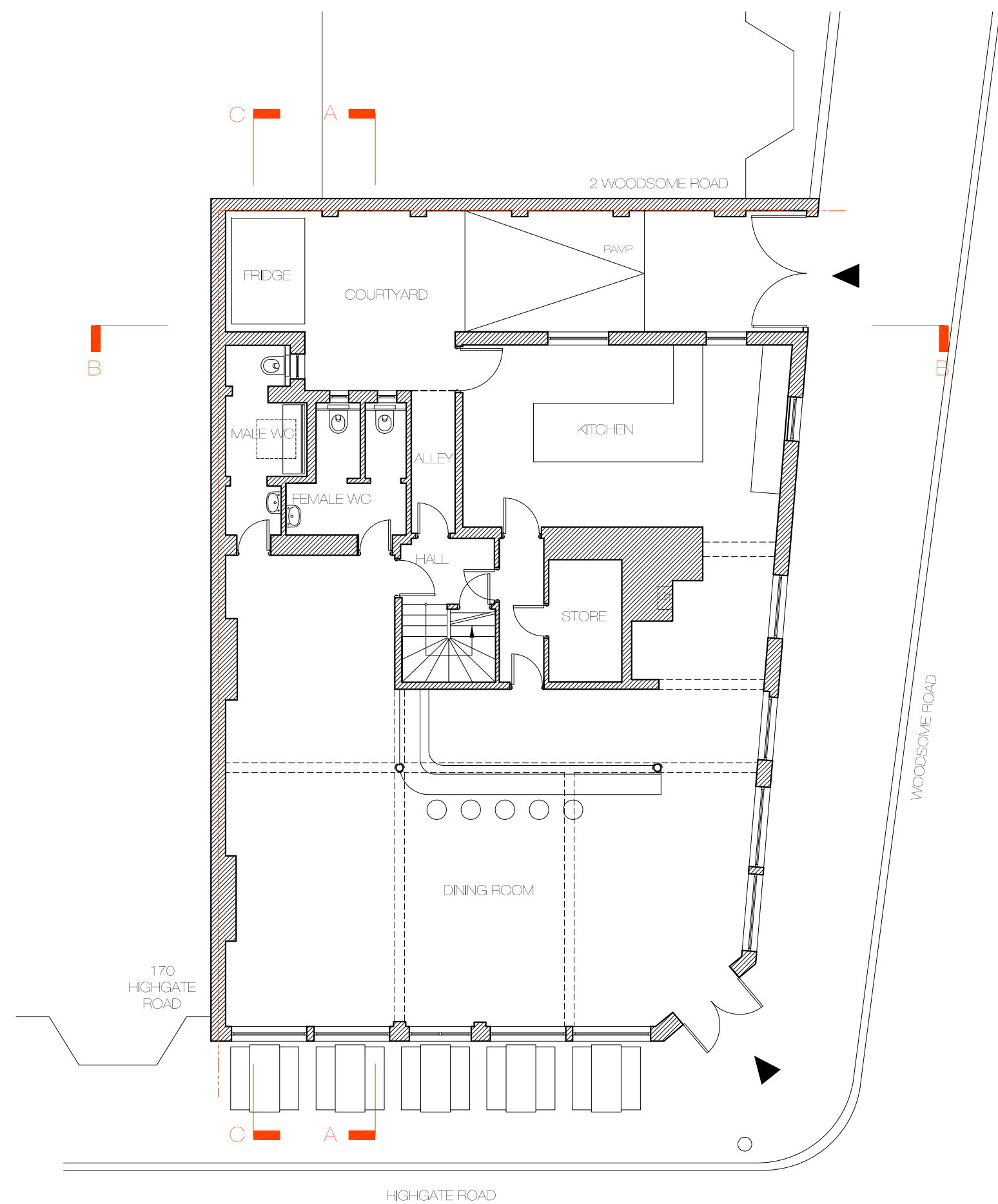
7. BIBLIOGRAPHY

- i. Communities and Local Government 2012. *National Planning Policy Framework*.
- ii. Communities and Local Government 2012a. Technical Guidance to the *National Planning Policy Framework*.
- iii. DEFRA/EA 2005. *Framework and guidance for assessing and managing flood risk for new development, Phase 2, Flood and Coastal Defence R&D Programme, R&D Technical Report FD2320/TR2*. Water Research Council.
- iv. DEFRA/Jacobs 2004. *Strategy for Flood and Coastal Erosion Risk Management: Groundwater Flooding Scoping Study (LDS), Final Report, Volumes 1 and 2*.
- v. Geological Society of London 2006. *Groundwater and Climate Change*. Geoscientist magazine, Volume 16, No 3.
- vi. Institute of Geological Sciences 1977. *Hydrogeological Map of England and Wales*, 1:625,000. NERC.
- vii. London Borough of Camden Preliminary Flood Risk Assessment (PFRA) Version 0.2 dated 2011.
- viii. London Borough of Camden 2014. *Strategic Flood Risk Assessment*.
- ix. London Borough of Camden 2013a. *CPG4 Basement and Lightwells*.
- x. London Borough of Camden 2013b. *Flood risk management strategy*.
- xi. London Borough of Camden 2011. *Surface Water Management Plan* Version 1.
- xii. London Borough of Camden 2010. *Camden geological, hydrogeological and hydrological study – Guidance for subterranean development*.
- xiii. Water UK 2012. *Sewers for Adoption 7th Edition, A design and construction guide for developers*. Water Research Council.

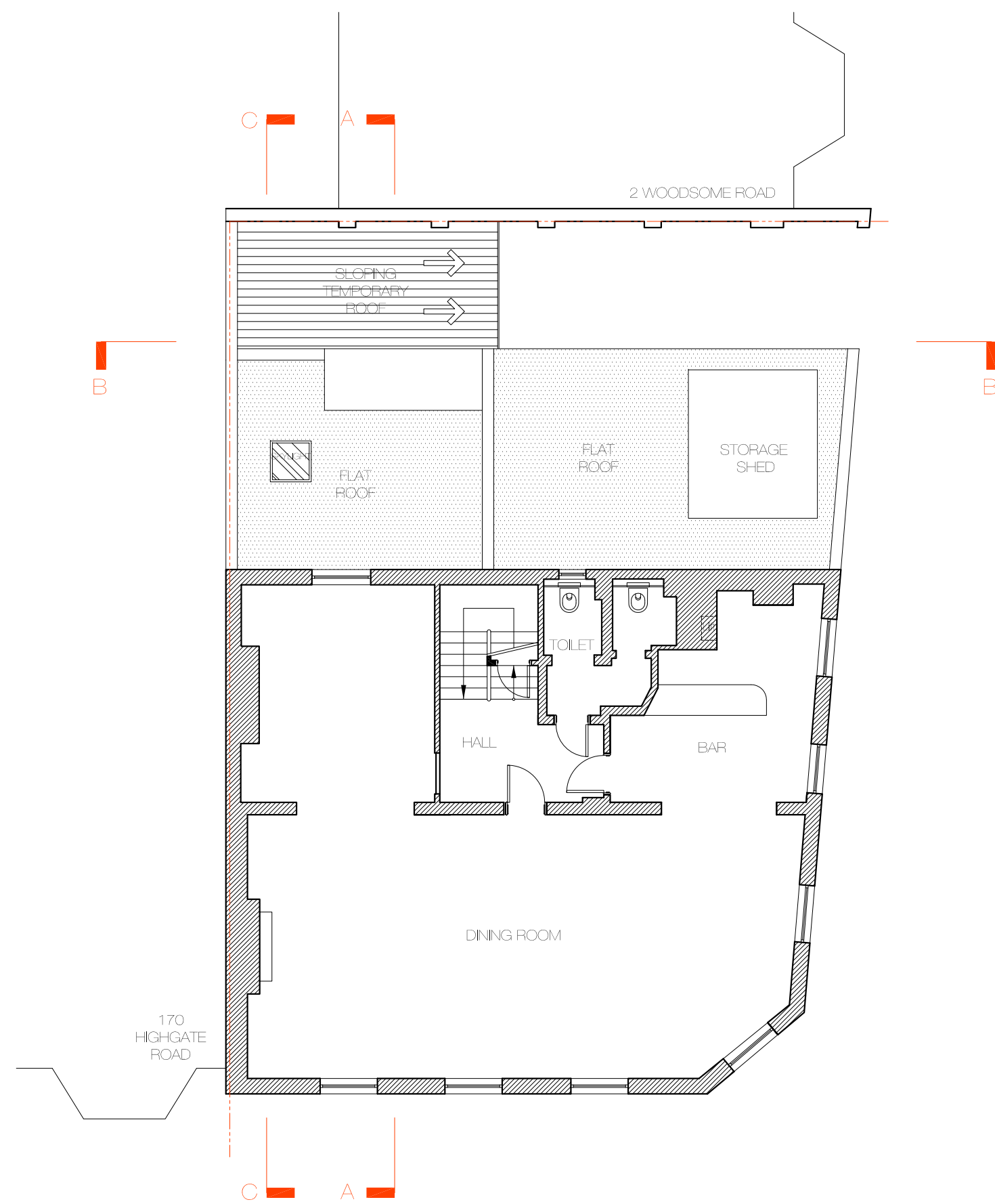
DRAWINGS



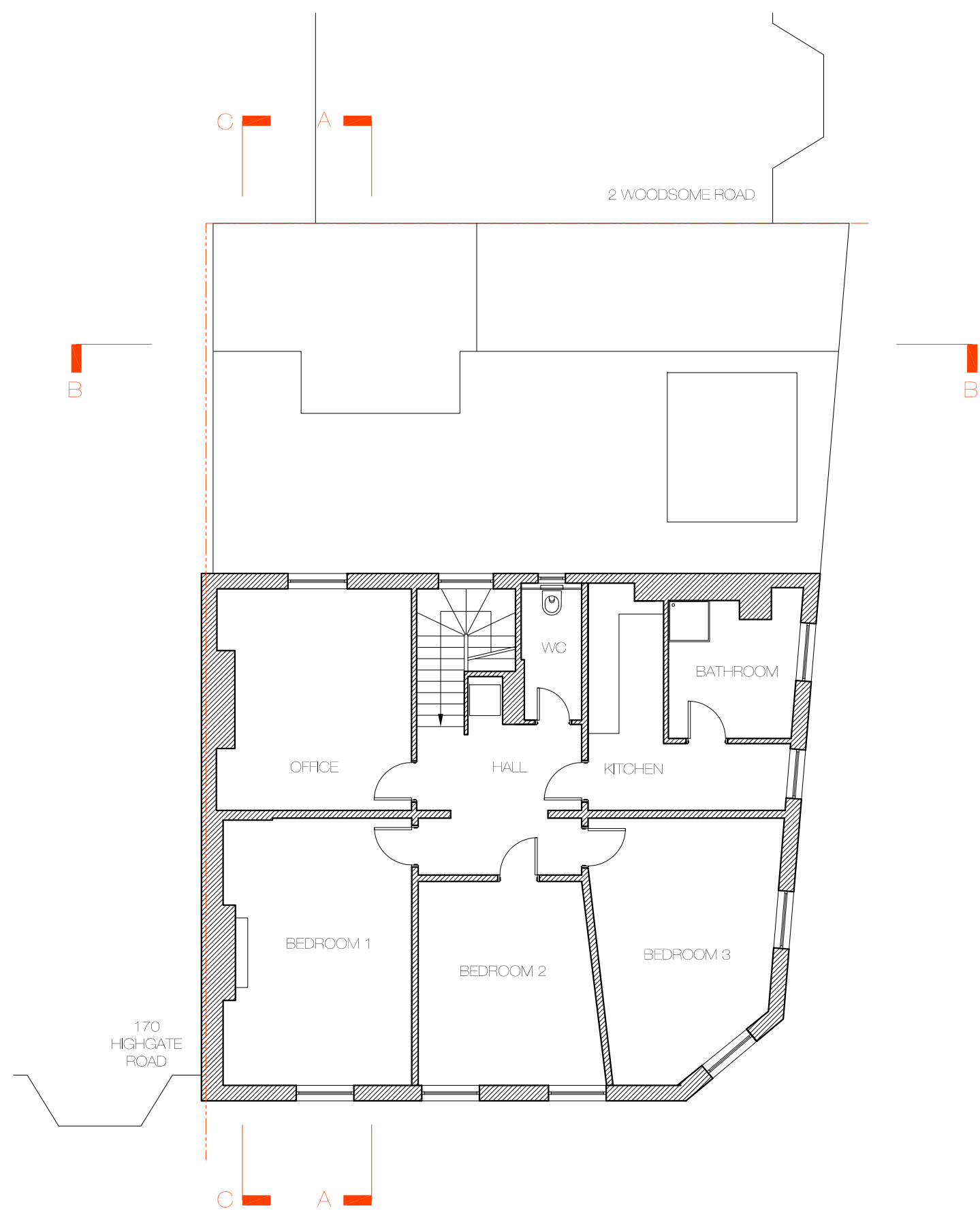
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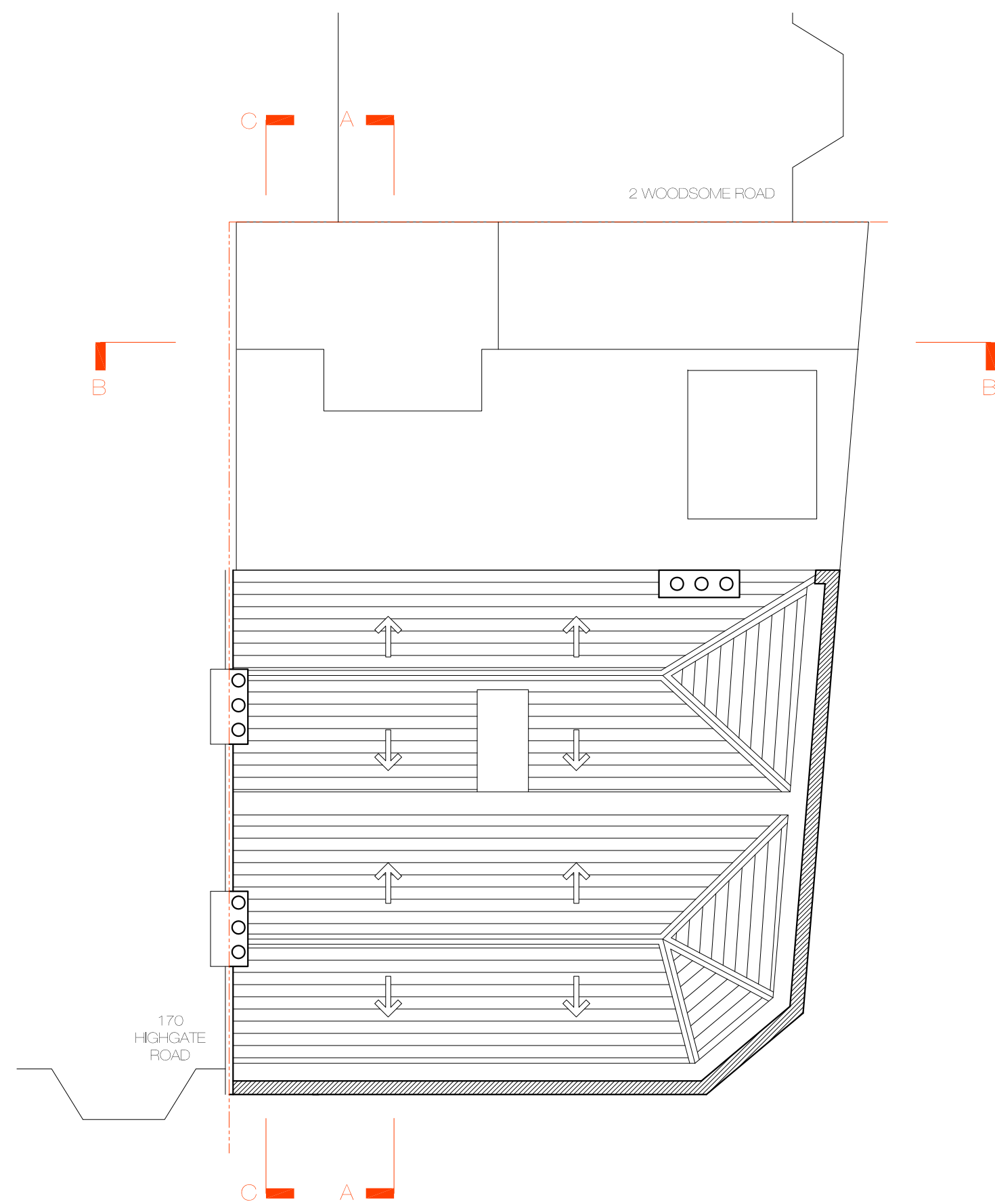
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GROUND FLOOR PLAN



02
FIRST FLOOR PLAN



03
SECOND FLOOR PLAN



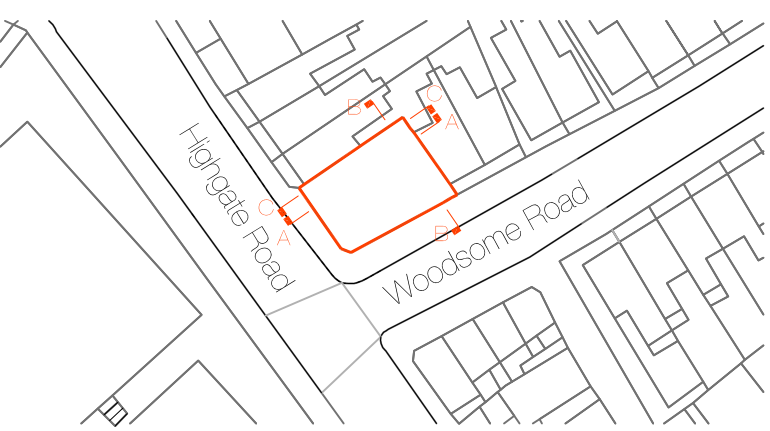
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ROOF PLAN

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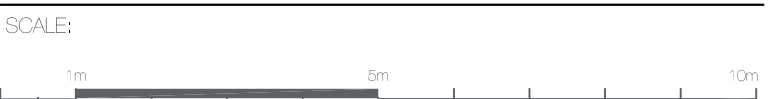
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The areas are approximate and can only be verified by a detailed dimensional survey of the completed building. Any decisions to be made on the basis of these predictions whether as to project viability, pre-letting, lease agreements or the like should include due allowance for the increases and decreases inherent in the design development and building processes. Figures relate to the likely areas of the building at the current state of the design and using Gross External Area (GEA), Gross Internal Area (GIA) and Net Internal Area (NIA) method of measurement from the Code of Measuring Practice, 5th edition (RICS code of practice). All areas are subject to Town Planning and Conservation Area Consent, and detailed Rights to Light analysis.

KEY PLAN:



REVISION	DATE	COMMENT
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DARTMOUTH PARK, LONDON

CLIENT:
ETVE PUBS LIMITED

WMG STUDIO
ARCHITECTURE • INTERIORS • PROJECT MANAGEMENT

DRAWING:
EXISTING PLANS

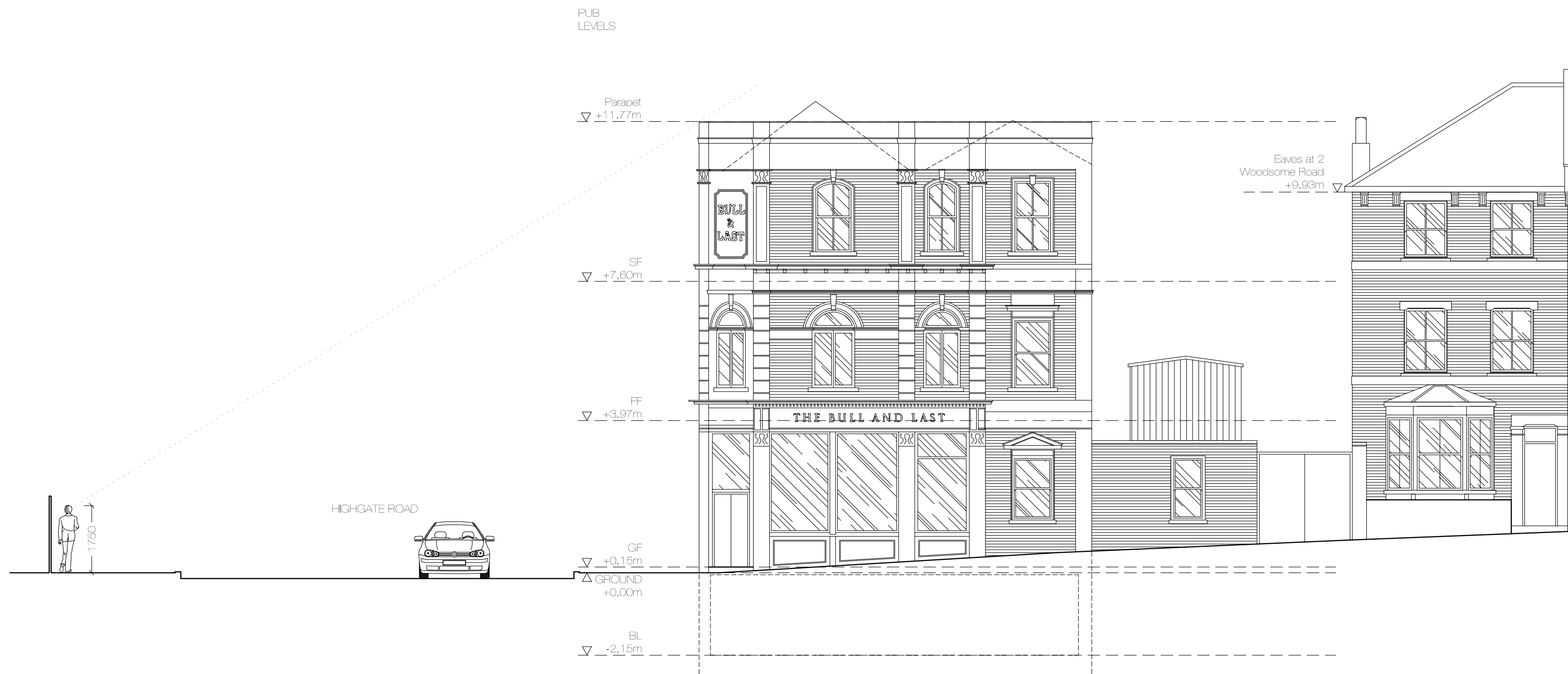
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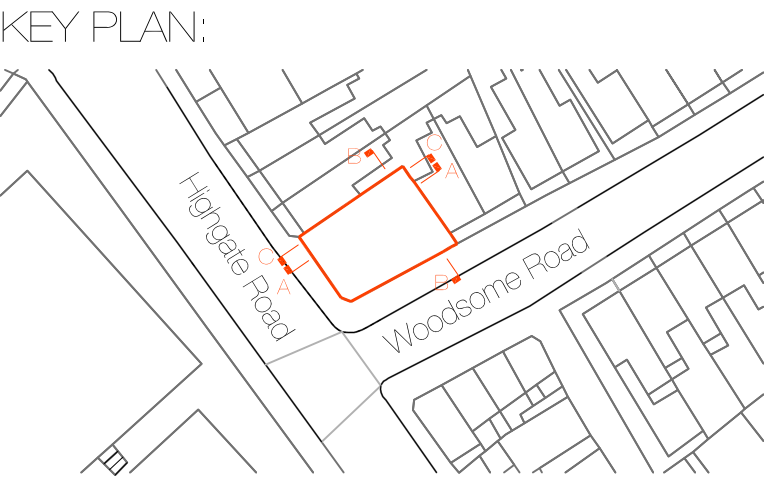


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WOODSOME ROAD ELEVATION

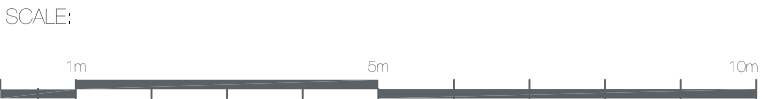
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PROJECT:
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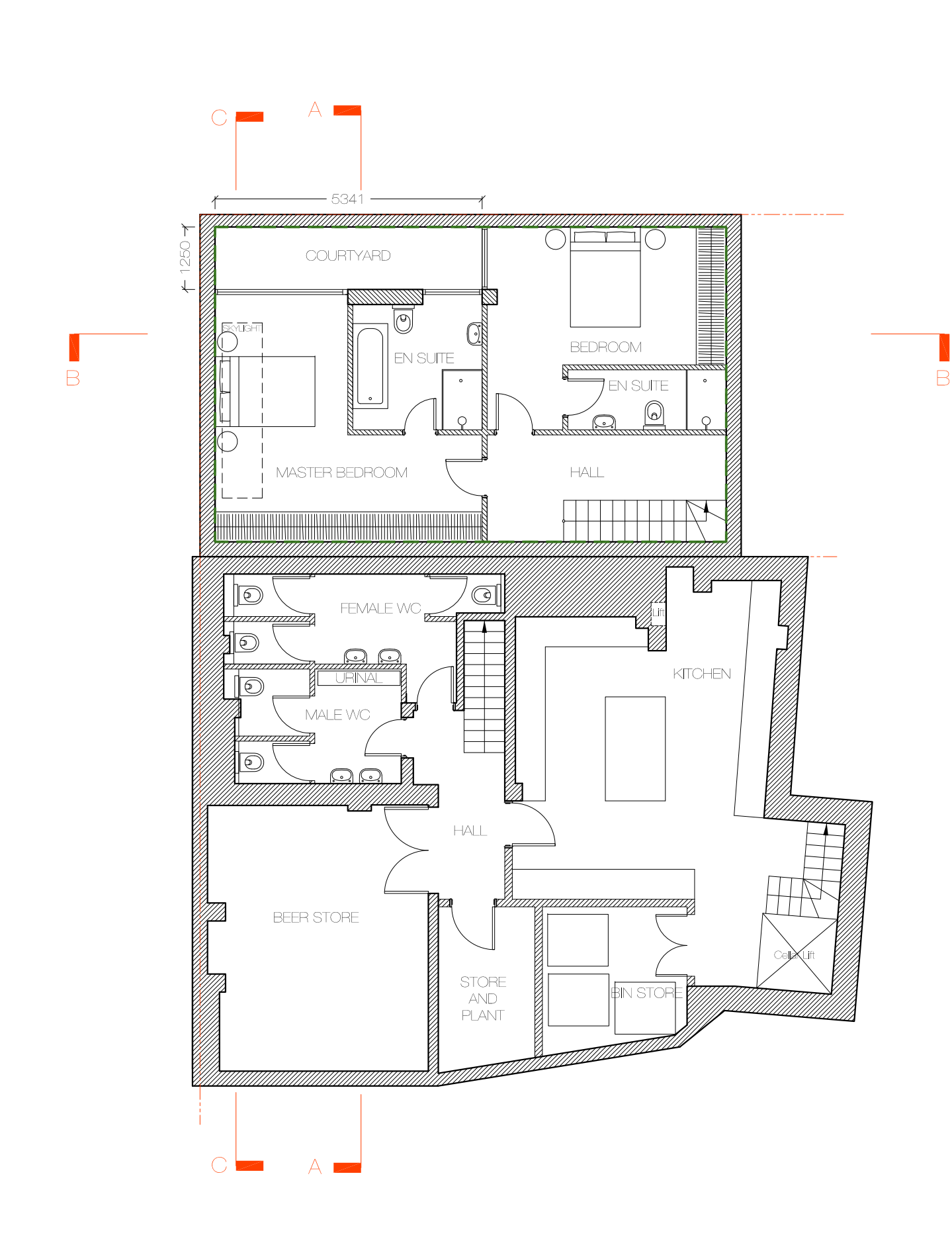
WMG STUDIO
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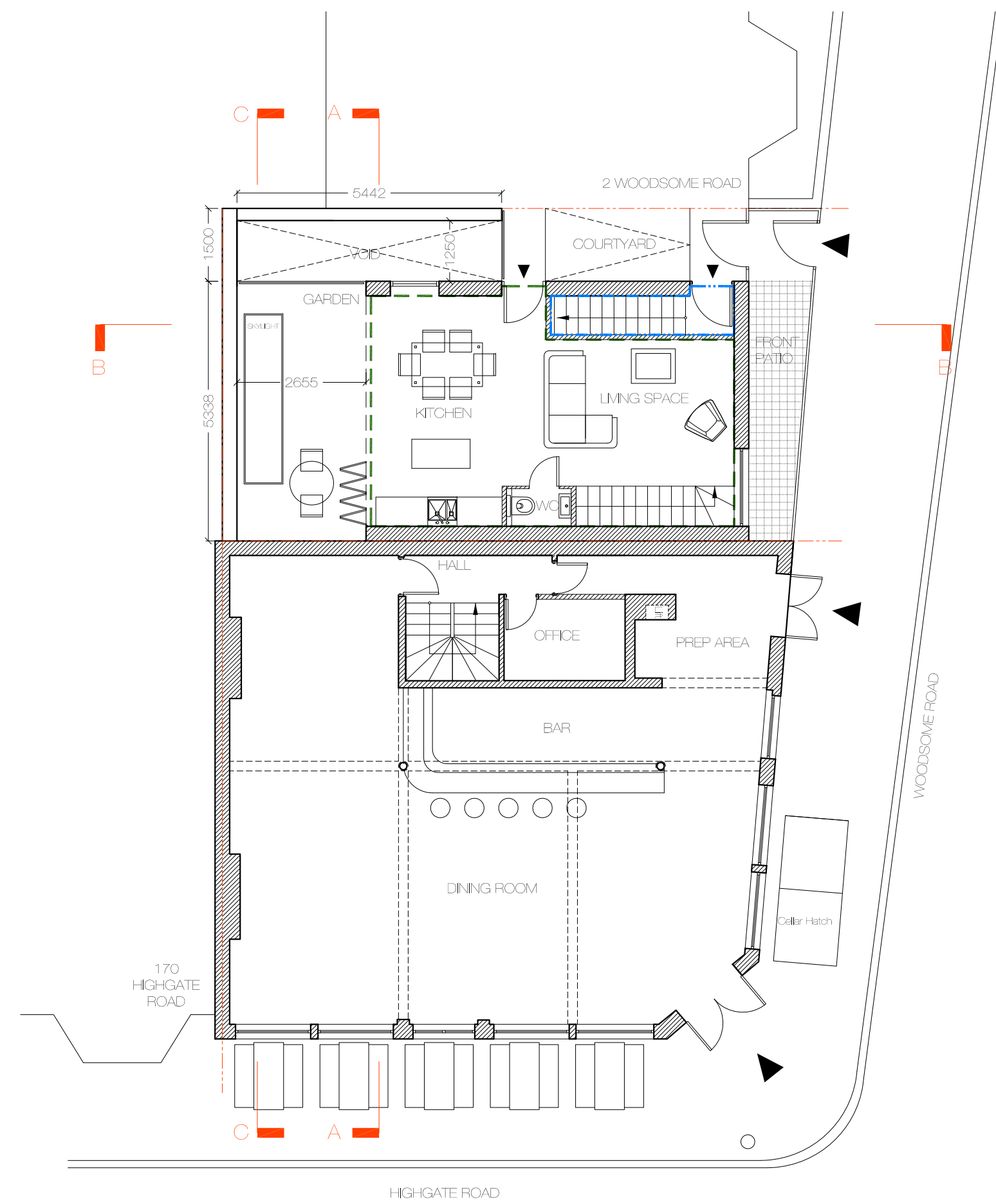
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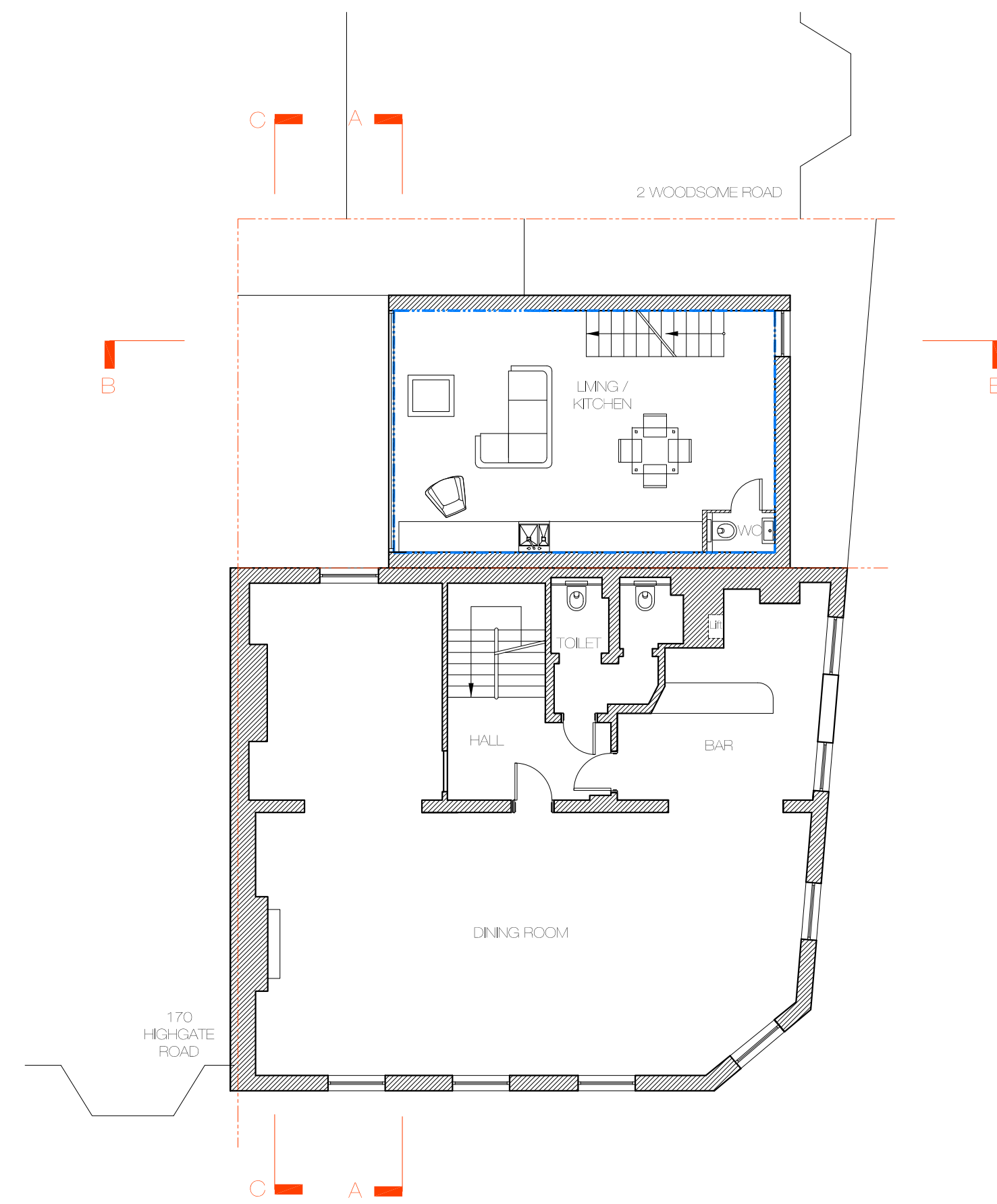
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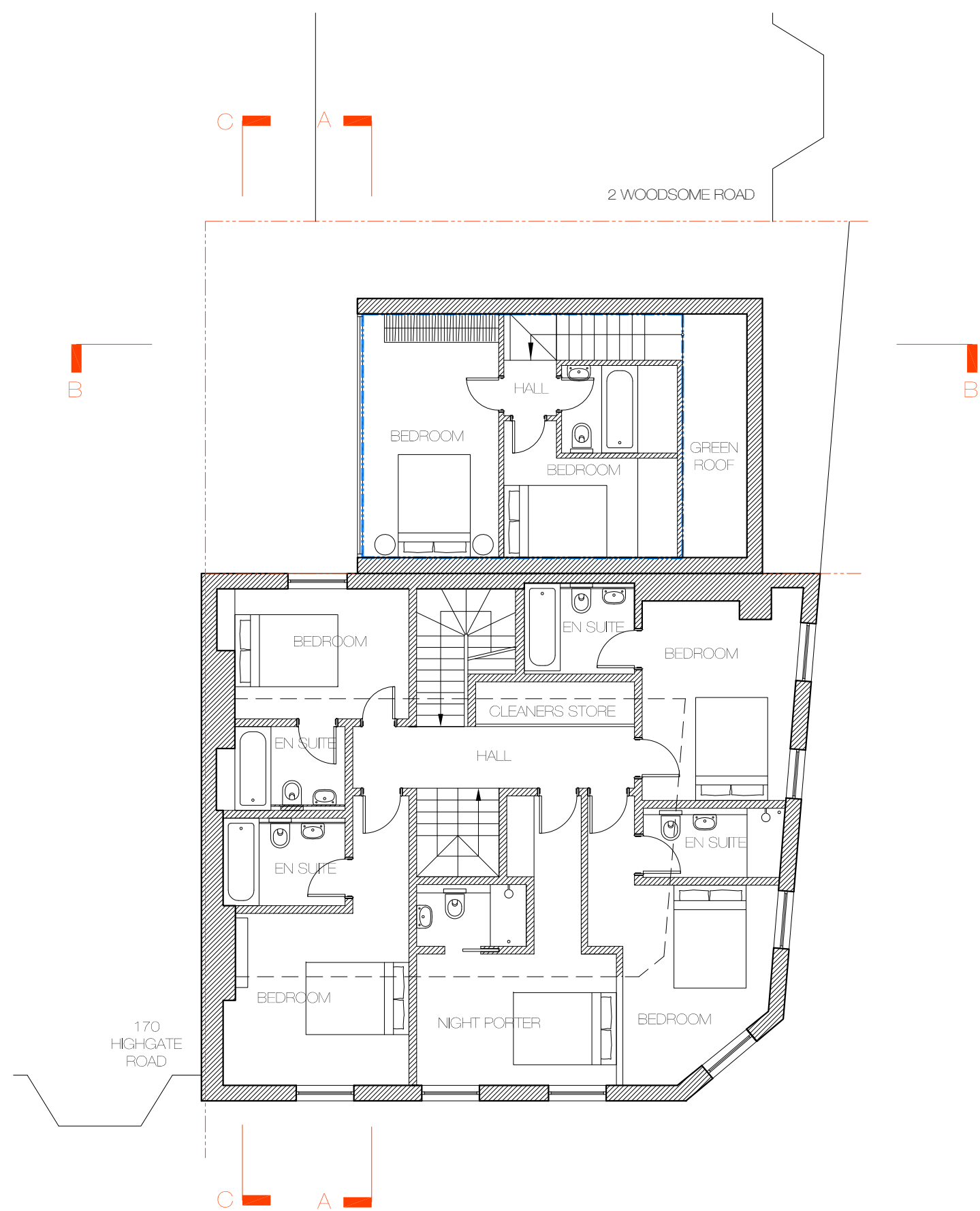
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BASEMENT PLAN



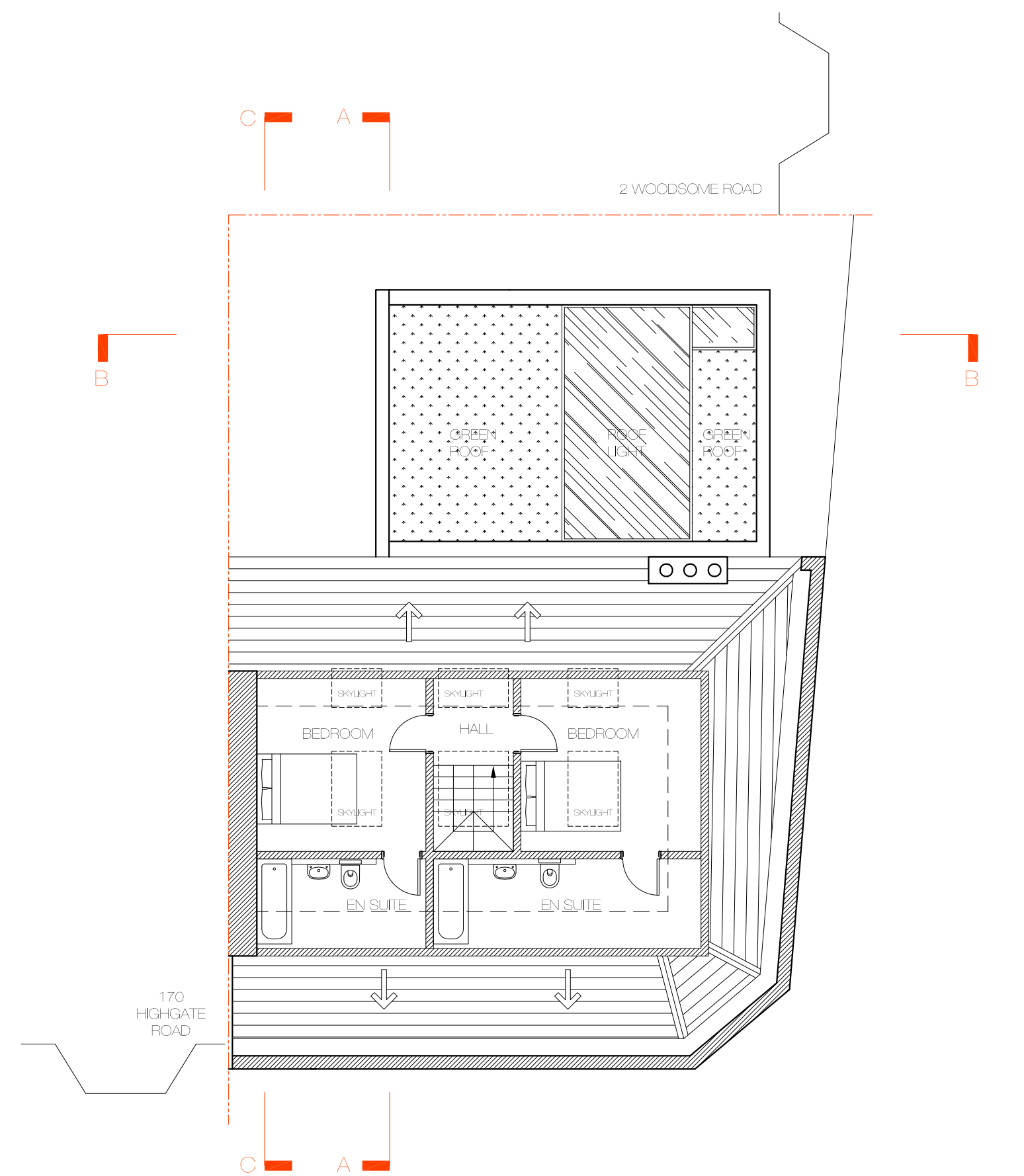
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GROUND FLOOR PLAN



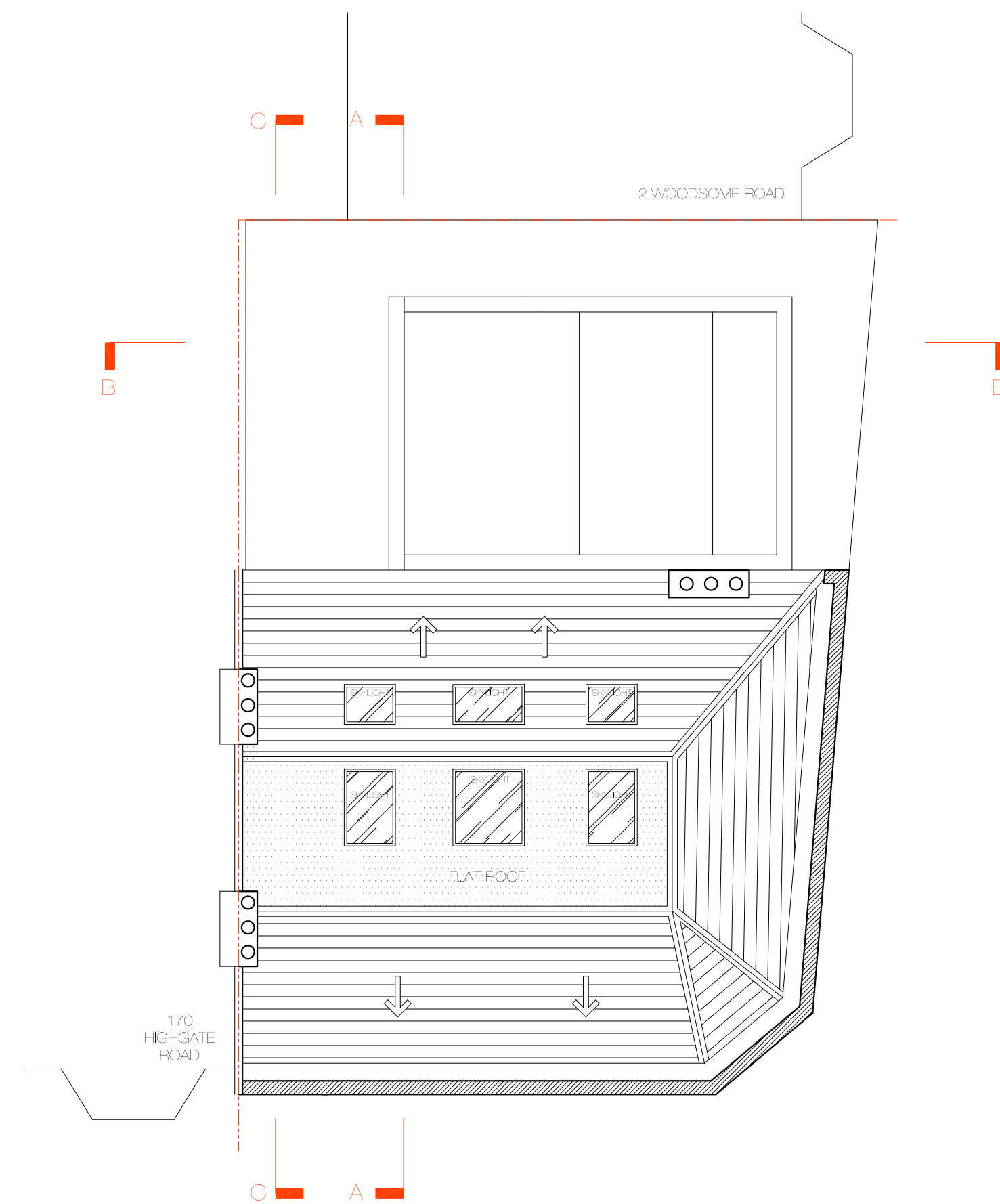
02
FIRST FLOOR PLAN



03
SECOND FLOOR PLAN



04
THIRD FLOOR PLAN



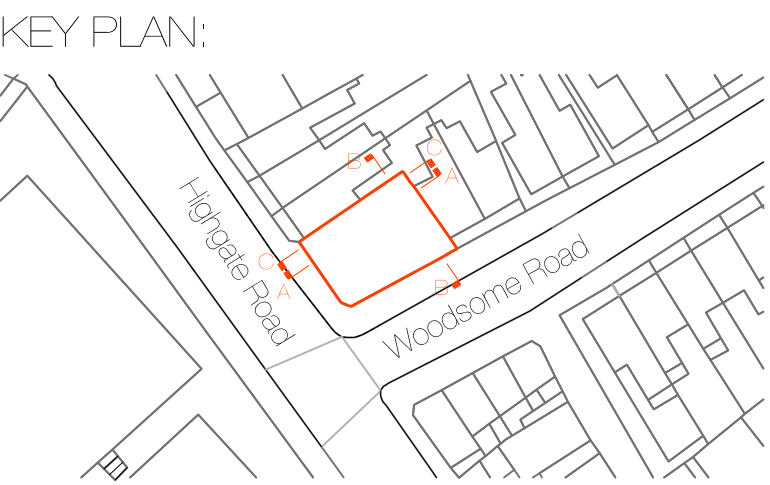
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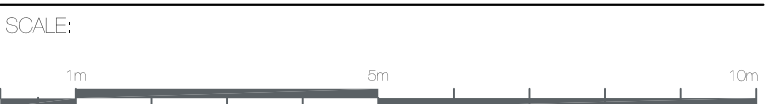
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KEY:
--- UNIT A
--- UNIT B



REVISION	DATE	COMMENT
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PROJECT:
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CLIENT:
ETVE PUBS LIMITED

WMG STUDIO
ARCHITECTURE • INTERIORS • PROJECT MANAGEMENT

DRAWING:
PROPOSED PLANS

DATE: 06.02.15 | SCALE: 1:100 @ A1 | DRAWN BY: DW

REASON FOR ISSUE: PLANNING | NORTH:

DRAWING NO: BALP_PA_005 | REV: -

DO NOT SCALE FROM THIS DRAWING
The contractor shall check and verify all dimensions on site and report any discrepancies in writing to the architect before proceeding with work.

FOR ELECTRONIC DATA USE
Electronic data/drawings are issued as "read only" and should not be interrogated for measurement. All dimensions and levels should be read only from those values stated in text, on the drawing.

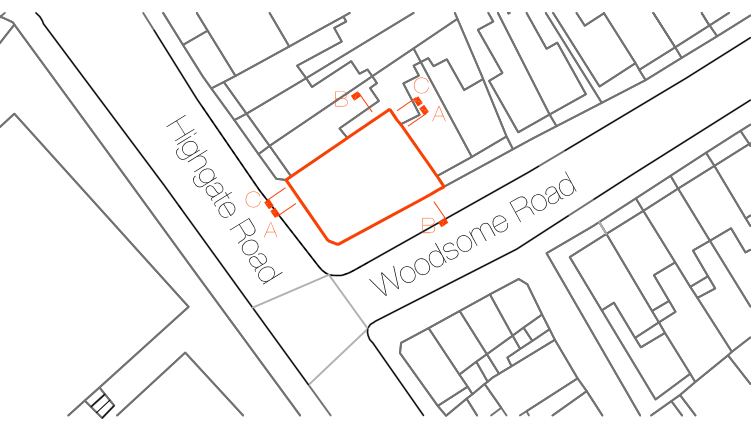
AREA MEASUREMENT
The areas are approximate and can only be verified by a detailed dimensional survey of the completed building. Any decisions to be made on the basis of these predictions whether as to project viability, pre-letting, lease agreements or the like should include due allowance for the increases and decreases inherent in the design development and building processes. Figures relate to the likely areas of the building at the current state of the design and using Gross External Area (GEA), Gross Internal Area (GIA) and Net Internal Area (NIA) method of measurement from the Code of Measuring Practice, 6th edition (RICS code of practice). All areas are subject to Town Planning and Conservation Area Consent, and detailed Rights to Light analysis.

KEY:

--- UNIT A

--- UNIT B

KEY PLAN:



REVISION	DATE	COMMENT
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SCALE:
0m 5m 10m

PROJECT:
BULL AND LAST P.H
DARTMOUTH PARK, LONDON

CLIENT:

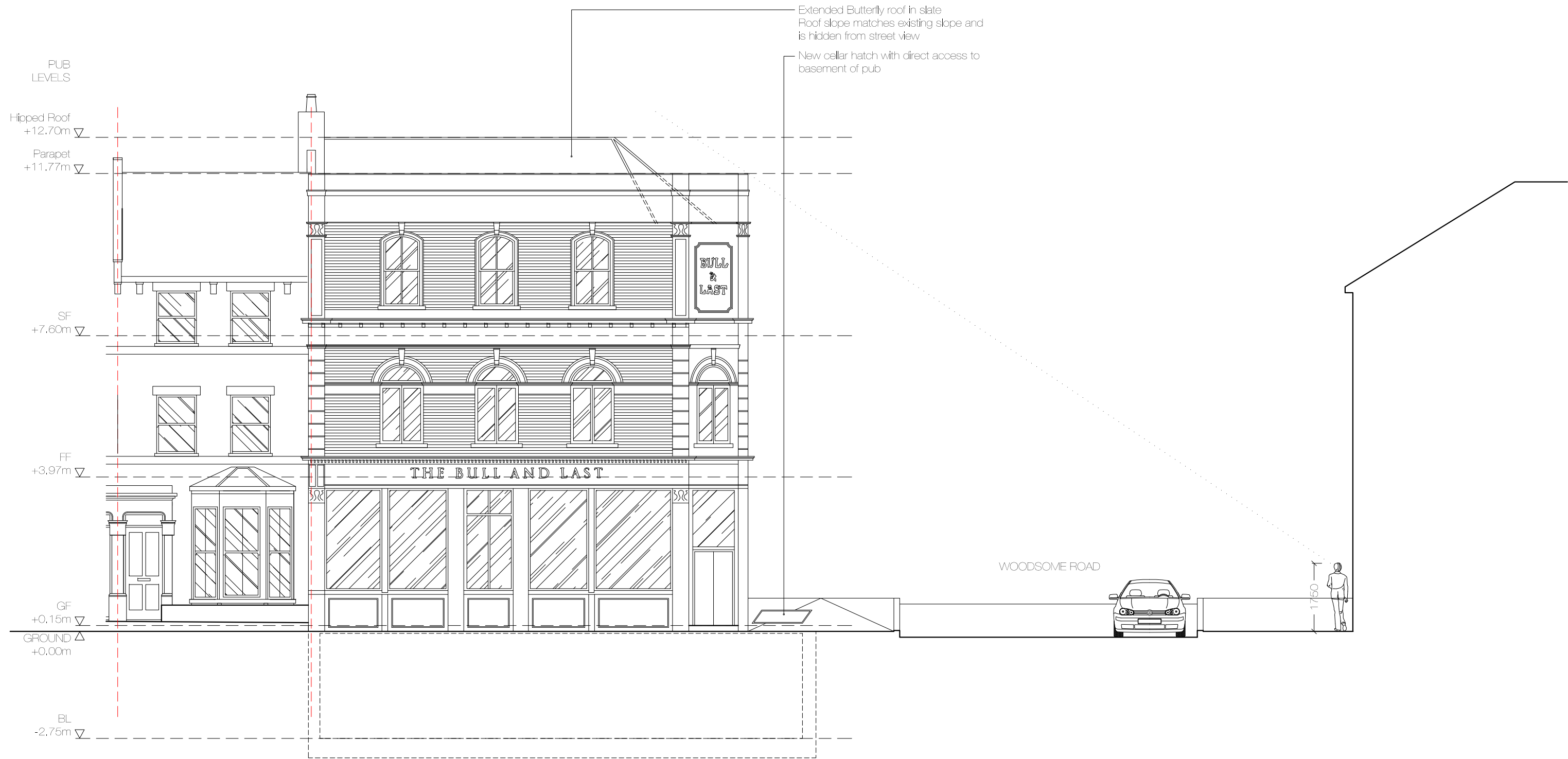
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DRAWING:
PROPOSED ELEVATIONS

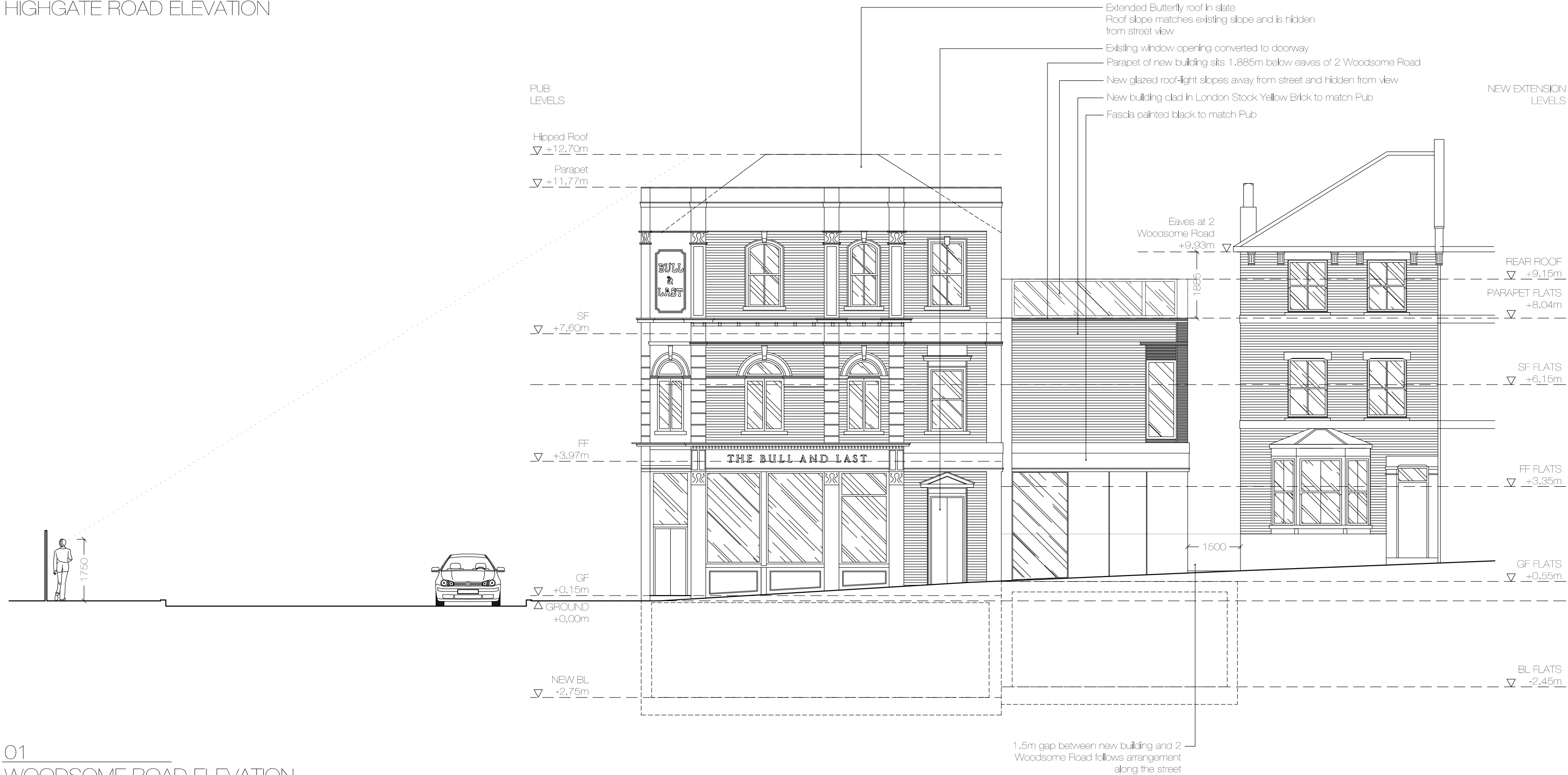
DATE: 06.02.15	SCALE: 1:100 @ A1	DRAWN BY: DW
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REASON FOR ISSUE: PLANNING	NORTH:
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DRAWING NO: BALP_PA_006	REV: -
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HIGHGATE ROAD ELEVATION



01
WOODSOME ROAD ELEVATION

