External Daylight Study

Client: Build Generation Ltd
10-11 Lower Street
London
W1F 9EB

Site Details: 54 Maygrove Road
London
NW6 2ED

Contents

Appendices

Report Details:

Prepared by	Checked by	Date	Job Number	Issue
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1. Introduction & Methodology

The daylight study is to ensure the comfort, health and safety of building occupants as well as visitors and others within the vicinity of the building is acceptable. It is also to enhance the quality of life in dwellings by recognising those that encourage a healthy and safe internal environment for occupants.

Using industry standard methodology as prescribed by BRE and British Standard guidance: we have made numerical analyses to ensure compliance with the recommended levels of change in daylight. There are no national planning policies on daylight or sunlight, therefore the results obtained from the methodology used below should be interpreted with some level of flexibility.

The main criteria used in this analysis to show compliance is the:

Vertical Sky Component (VSC)

VSC measures the general amount of light available on the outside plane of the window as a ratio (%) of the amount of total unobstructed sky viewable following introduction of visible barriers such as buildings. The maximum value is just under 40% for a completely unobstructed vertical wall.

The relevant BRE recommendations for daylight and sunlight are:

The Vertical Sky Component measured at the centre of a window should be no less than 80% of its former value.
The window should receive at least 25% of available annual sunlight hours and more than 5% during the winter months (September 21st to March 21st), and at least 80% of its former value.

Annual Probable Sunlight Hours (APSH)

ASHP is a measure of the amount of potential direct sunlight that is available to a given surface. Only windows which face within 90 degrees of due south need to be assessed. BRE Guidance states that windows should continue to receive in excess of 80% of their pre-development value, **or** 25% of available hours over a year / 5% of hours in winter to considered well lit.

The BRE Guidance is not an instrument of planning policy; therefore, whilst the methods given are technically robust, some level of flexibility should be applied where appropriate.

We must stress that despite the methodology used above and the results that are drawn from it provide helpful guidance to consultants and planning officials, these are purely advisory, how the results are interpreted may depend on the complexity and context of the development as a whole.

2. Proposed Development

There are proposals for a 2-storey rear extension to 54 Maygrove Road, London, NW6 2ED.

54 Maygrove Road – As Proposed

3. Modelling the site & Window Schedule

An analysis model is created of the proposed development and the existing development allowing analysis, calculations are then run. The outputs of those calculations can be exported numerically. Using the BRE guidance which gives absolute figures for the acceptable percentage of daylight and sunlight, we can then establish if the proposal will have the required daylighting levels stipulated by BRE guidelines.

It is important to note that not all nearby features have been modelled, only those that will affect the daylighting. In accordance with BRE recommendations.

The reference document for this analysis, BRE Digest 209, provides the methodology for undertaking the calculations as well as benchmark figures for the acceptable reduction in the daylight/sunlight.

In order to complete an accurate model of the existing and proposed site we have used a combination of the following plans and information provided by the client. These consist of:

- Site Plan
- Existing and proposed sections, elevations and floor plans
- Photographs of the rear of the neighbouring dwellings provided by the client
- Google Maps

Window 2 (as identified in window schedule below) of No. 56 Maygrove Road is of concern when considering the impact that the proposed extension may have in terms of daylight and sunlight. There are additional windows located to the rear south east elevation of both 52 & 56 Maygrove Road that may be affected and have been incorporated for full daylight and sunlight analysis.

For a full location and window schedule please see below.

Window Schedule

Location of 52 Maygrove Road

(Google Maps Image)

Proposed Rear Elevation of 52 /54 & 56 Maygrove Road

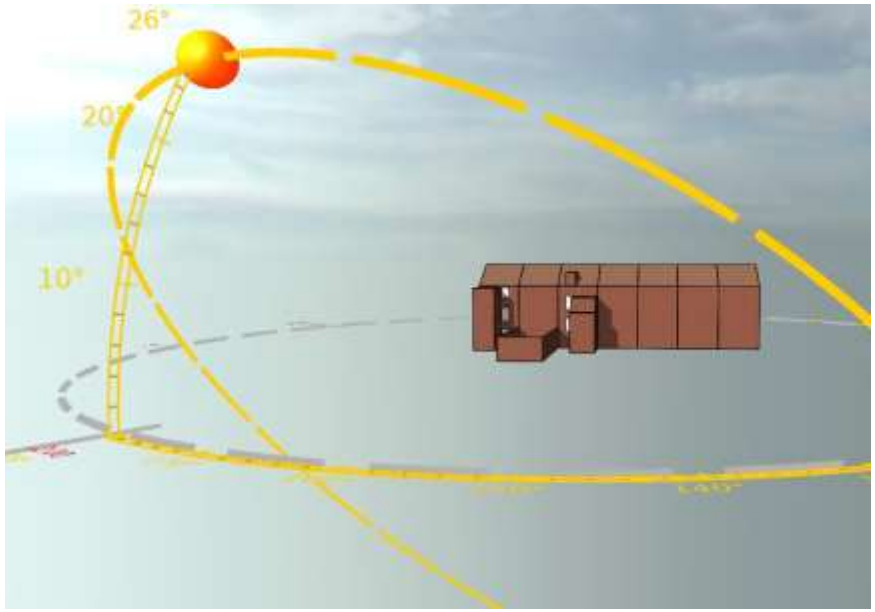
As shown above, there are 4 windows in total that may be affected from the proposed extension of 54 Maygrove Road in terms of daylight and sunlight.

4. Vertical Sky Component Analysis

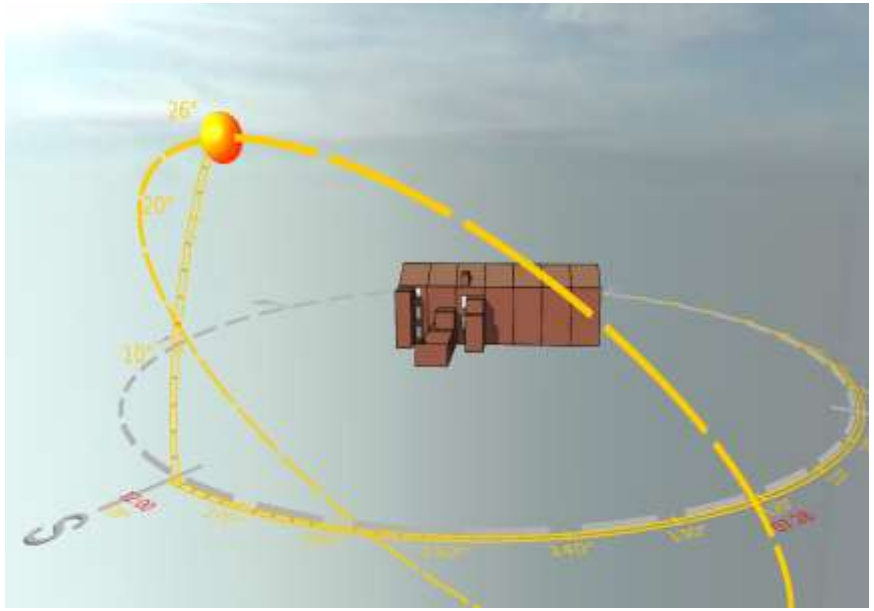
Stage 1 of the analysis is to model the existing site condition and then the proposal in 3 dimensions, thus allowing us to analyse the current situation and compare with relative ease the proposed situation.

The 3D model that has been created is then imported into specialist daylight analysis software from which calculations are then run for both the existing and proposed.

Existing



Proposed



5. Vertical Sky Component Benchmark & Results

As previously stated, even though the benchmark figures provided by BRE may provide helpful guidance to consultants and planning officials, these are purely advisory, how the results are interpreted may depend on the complexity and context of the development as a whole.

Interpretation of the scale of impact

As discussed, the windows of the neighboring dwelling may or may not achieve the targets set by BRE, however, what BRE does not provide is an idea of the significance that these results will have on the assessed neighboring dwellings. Therefore, using professional experience, if we apply a scale to judge the implication these results may have on the dwelling, we can better understand the impact that may be experienced. The scale below is based on the BRE baseline target of 80% daylight retention.

Scale of Impact

Where the loss of daylight and sunlight fully meets the BRE Guidance Values, the impact is assessed as ***Negligible***

Where the loss of daylight and sunlight is reduced within 20 – 35% of the BRE Guidance Values, the impact is can be classed as ***Minor***

Where the loss of daylight and sunlight is reduced within 35 – 50% of the BRE Guidance Values, the impact is can be classed as ***Moderate***

Where the loss of daylight and sunlight is reduced within 50 – 100% of the BRE Guidance Values, the impact is can be classed as ***Major***

***The guidance above has been taken from BRE daylight and sunlight book for the nature and scale section 5. Ref: Site Layout Planning for Daylight and Sunlight, Appendix 1 Environmental Impact Assessment, page 73.*

Vertical Sky Component Analysis Results

The Vertical Sky Component has been calculated for the openings labelled in section 3 of this report for both the existing and proposed conditions. As previously stated, these openings are deemed the 'worst case', therefore if they achieve the required target then the remaining windows will also achieve this by default.

Window Schedule	Existing %	Proposed %	% of Existing
Window 1	29.51	29.51	100%
Window 2	22.91	15.31	67%
Window 3	18.58	18.04	97%
Window 4	24.49	24	98%

As can be seen above, the results show that all the assessed windows, except for window 2, meet and exceed the 80% BRE target, therefore complying with BRE recommendations.

As previously detailed, the windows of the neighboring dwelling may or may not achieve the targets set by BRE, however, what BRE does not provide is an idea of the significance that these results will have on the assessed neighboring dwellings.

Irrespective of Window 2 being below the threshold target set by BRE, when we consider the scale of impact criteria detailed on page 9 of this report, we can conclude that as the loss of daylight and sunlight is reduced within 20 – 35% of the BRE Guidance Values, the impact on that particular window can be classed as ***Minor.***

As previously stated, these openings are deemed the 'worst case', therefore if they achieve the required target then the remaining windows will also achieve this by default.

6. Annual Probable Sunlight Hours Results

Only windows which face within 90 degrees of due south need to be assessed.

Annual Hours

Window Schedule	Existing %	Proposed %	% of Existing
Window 1	62	62	100%
Window 2	47	25	53%
Window 3	28	26	93%
Window 4	41	41	100%

Winter Hours

Window Schedule	Existing %	Proposed %	% of Existing
Window 1	24	24	100%
Window 2	18	8	45%
Window 3	7	7	100%
Window 4	10	10	100%

As shown above, all assessed windows exceed the amount of available hours set by BRE Guidelines both annually and in the winter months.

7. Conclusion

As previously discussed, there are proposals for a 2-storey rear extension to 54 Maygrove Road, London, NW6 2ED. The purpose of this report is to assess the potential impact of the proposed extension on the surrounding neighbouring properties in terms of daylight and sunlight.

The neighbouring properties in question are 52 and 56 Maygrove Road, from the analysis, 4 windows situated on the rear - south east elevations of 52 & 56 Maygrove Road have been identified which may experience a potential impact from the proposed extension of 54 Maygrove Road.

Using industry standard methodology, we have made numerical analysis to calculate the recommended levels of change in daylight for the South West elevation windows of 52 & 56 Maygrove Road. The main criteria used in this analysis to show compliance is the Vertical Sky Component and Annual Probable Sunlight Hours for the effect on a neighbouring dwellings habitable windows.

As shown above, the effects on daylight/sunlight for all of the assessed windows, with exception to window 2, are within the 80% guidance values for both Daylight and Sunlight, as previously noted, all other nearby windows comply by default as the 'worst case' windows achieve the minimum standards.

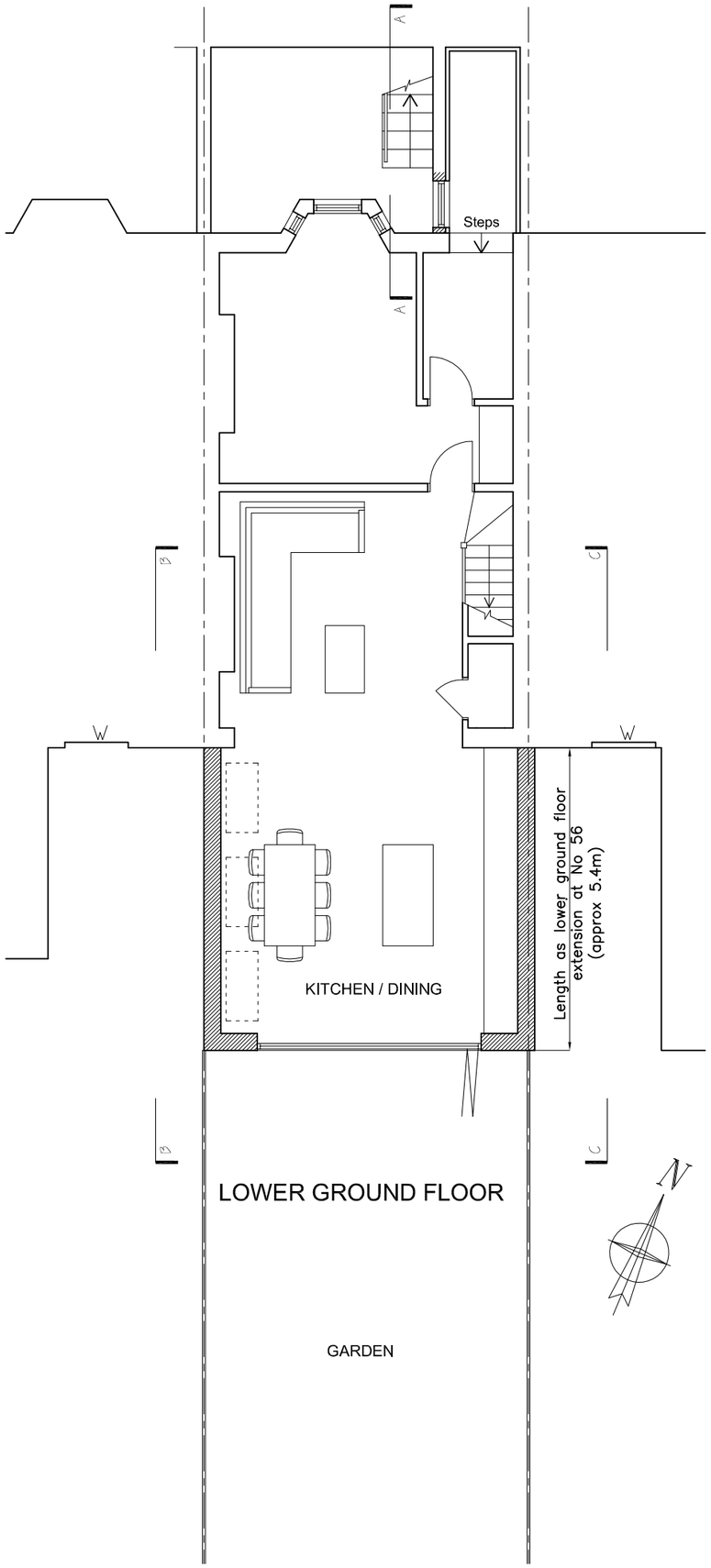
Window 2 is just out of the 80% tolerance level for Daylight but achieves in excess for the target amount of available hours of sunlight both annually and in the winter months.

As previously detailed, whether or not the window achieves the targets set by BRE Guidance, BRE do not provide an idea of the significance that this result may have on the assessed window. Therefore, a scale of impact was used to express the significance based on a numerical figure. (*Please see page* 9)

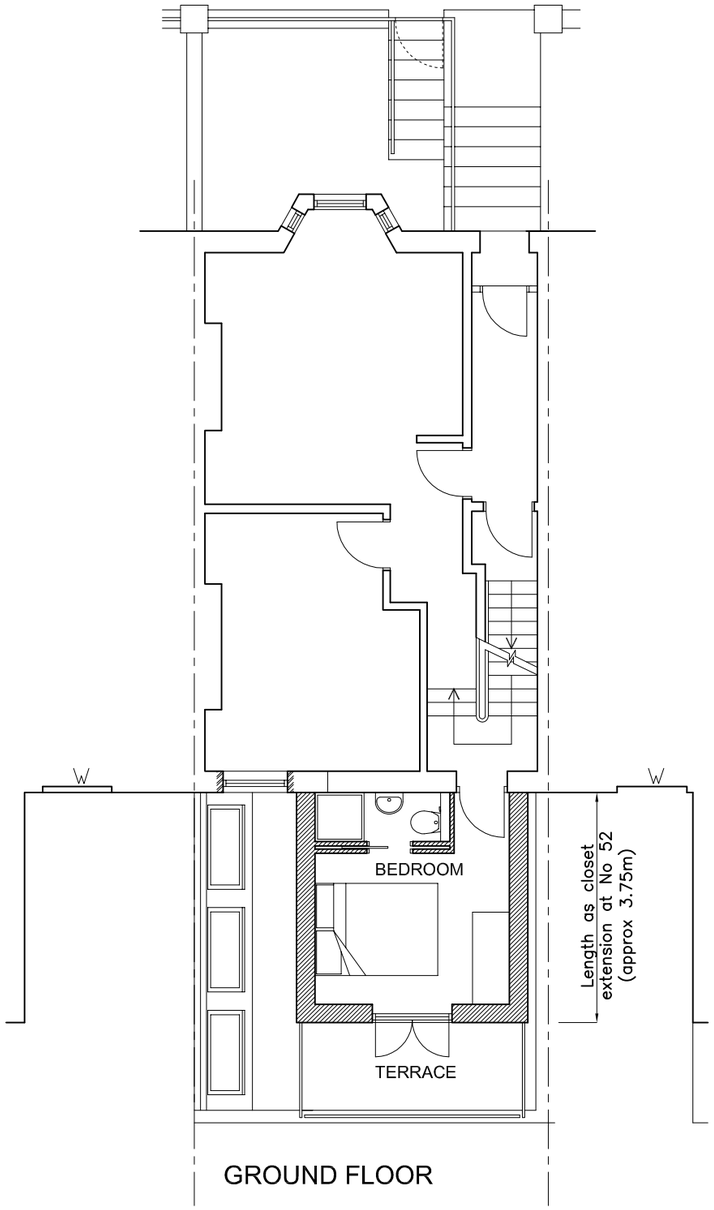
As this window only experiences a loss of daylight within 20 – 35% of the BRE Guidance Value, using professional experience and judgement we can confidently say that the neighbouring window in question may only experience a ***minor*** impact in terms of daylight.

To reiterate, there are no national planning policies on daylight or sunlight, therefore the results obtained from the methodology used above should be interpreted with some level of flexibility.

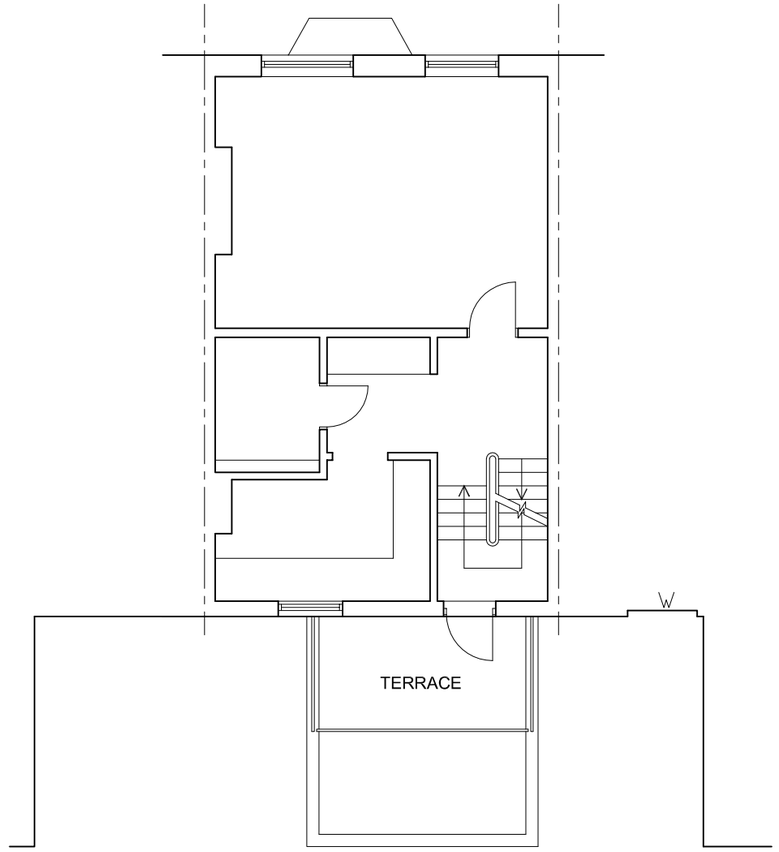
Appendix A	Proposed Plans



LOWER GROUND FLOOR



GROUND FLOOR



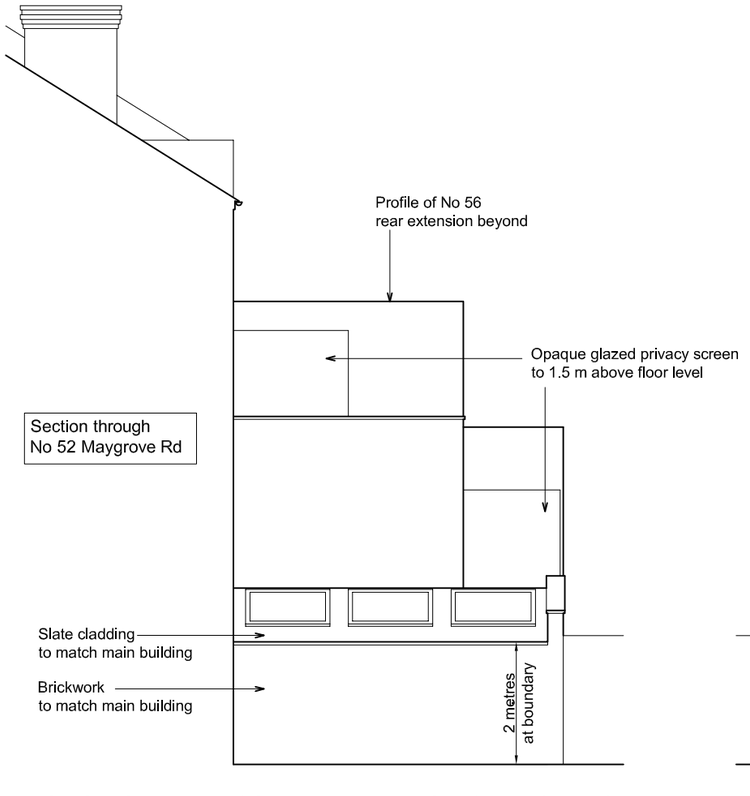
FIRST FLOOR

0 metre 1 2 3 4 5 6 7 8 9 10m

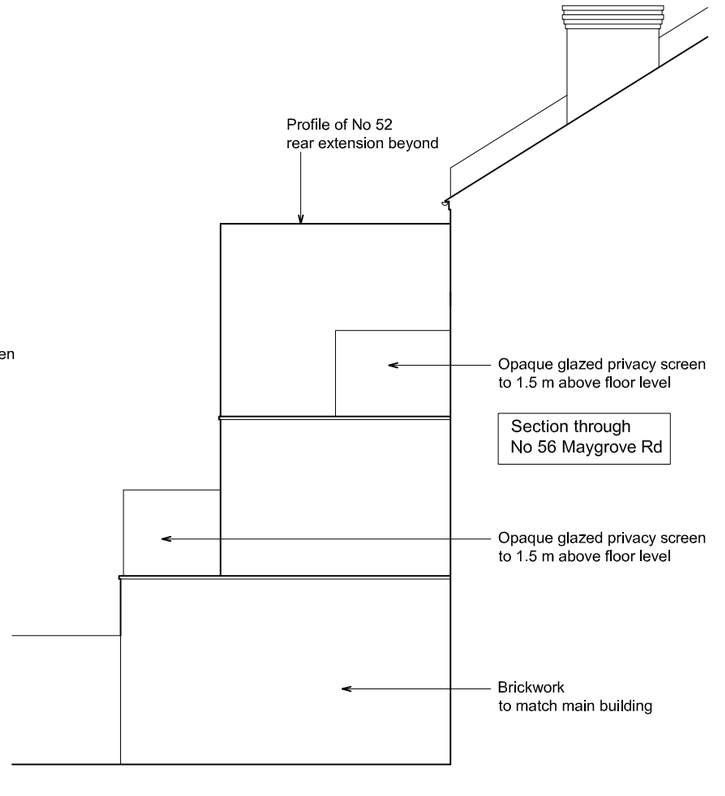
Revisions:

Site: 54 MAYGROVE ROAD LONDON NW6 2ED	Project: REAR EXTENSION	
Drawing Title: PLANS AS PROPOSED	Scale: 1:100 (@ A3)	Job N°: P350.11
	Date: Dec 2017	Rev: B

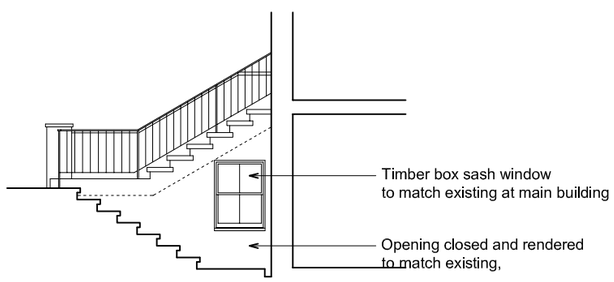
REAR ELEVATION



SECTION B - B / SIDE ELEVATION (west facing)



SECTION C - C / SIDE ELEVATION (east facing)



SECTION A - A
ELEVATION OF STEPS AND STORAGE AREA BELOW

0 metre 1 2 3 4 5 6 7 8 9 10m

Revisions:

Site: 54 MAYGROVE ROAD LONDON NW6 2ED	Project: REAR EXTENSION	
Drawing Title: ELEVATIONS / SECTIONS AS PROPOSED	Scale: 1:100 (@ A3)	Job N°: P350.12
	Date: Dec 2017	Rev: B