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Client : Mr Nigel Canin

Daylight, Sunlight and Overshadowing Assessment for the Development Proposals at No. 10 Sharpleshall Street, London, NW1 8YN

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Contents

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1 Background and Scope of Appraisal

Herrington Consulting has been commissioned by Mr Nigel Canin to assess the potential impact of the proposed development of the rear lower ground and ground floor level of No. 10 Sharpleshall Street, London in relation to daylight, sunlight and overshadowing on the neighbouring building(s). The key objectives of the assessment are as follows:

- To assess the baseline conditions at the site;
- to analyse the potential impacts of the Development on the daylight and sunlight currently received by the existing neighbouring buildings;
- To assess these impacts in line with any relevant planning policies and best practice guidance.

2 The Site and Development Proposals

2.1 Site Location

The site is located within the London Borough of Camden. The location of the site is shown in Figure 2.1 and the site plan included in Appendix A.1 of this report gives a more detailed reference to the site location and layout.

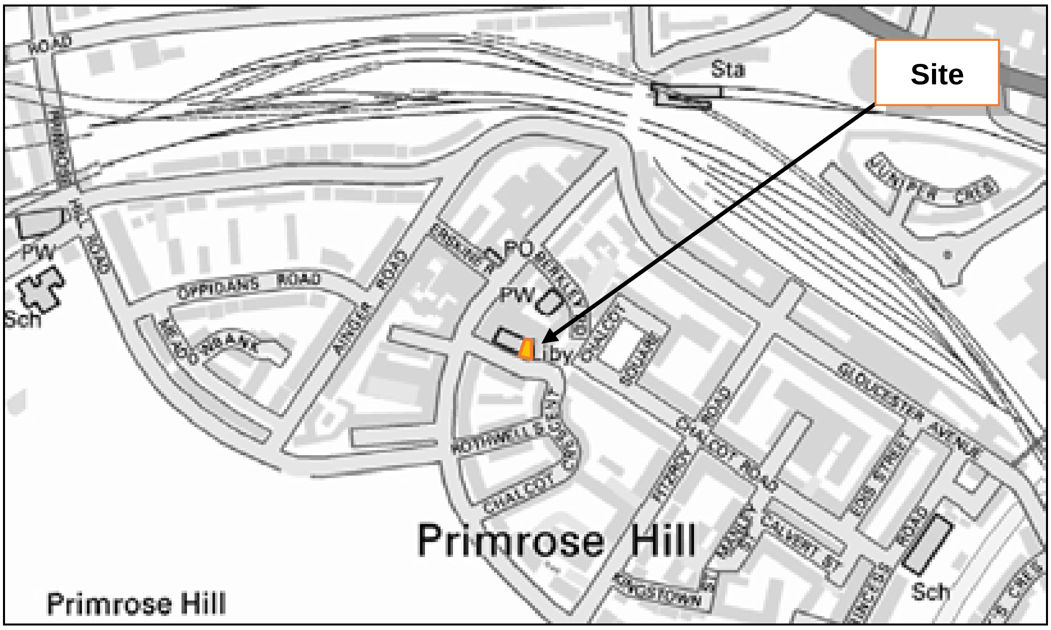


Figure 2.1 – Location map (Contains Ordnance Survey data © Crown copyright and database right 2011)

2.2 The Development

The proposals for development are to extend the current lower ground floor level rear extension of the property, and to provide a larger area of external amenity space at the existing ground floor roof level of the extension. A new 1.8m high obscure glass screen will be installed along the inner boundary line of the party wall between No. 9 and No. 10 Sharples Hall Street, on this ground floor level external amenity area. Drawings of the proposals are included in Appendix A.1 of this report.

3 Policy and Guidance

3.1 Best Practice Guidance

In the absence of official national planning guidance / legislation on daylight and sunlight, the most recognised guidance document is published by the Building Research Establishment and entitled ‘Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice’, Second Edition, 2011; herein referred to as the ‘BRE Guidelines’.

The BRE Guidelines are not mandatory and themselves state that they should not be used as an instrument of planning policy, however in practice they are heavily relied upon as they provide a good guide to approach, methodology and evaluation of daylight and sunlight impacts.

In conjunction with the BRE Guidelines further guidance is given within the British Standard (BS) 8206-2:2008: ‘Lighting for buildings - Part 2: Code of practice for daylighting’.

In this assessment the BRE Guidelines have been used to establish the extent to which the Proposed Development meets current best practice guidelines. In cases where the Development is likely to reduce light to key windows the study has compared results against the BRE criteria.

Whilst the BRE Guidelines provide numerical guidance for daylight, sunlight and overshadowing, these criteria should not be seen as absolute targets since, as the document states, the intention of the guide is to help rather than constrain the designer. The Guide is not an instrument of planning policy, therefore whilst the methods given are technically robust, it is acknowledged that some level of flexibility should be applied where appropriate.

3.2 Planning Policy

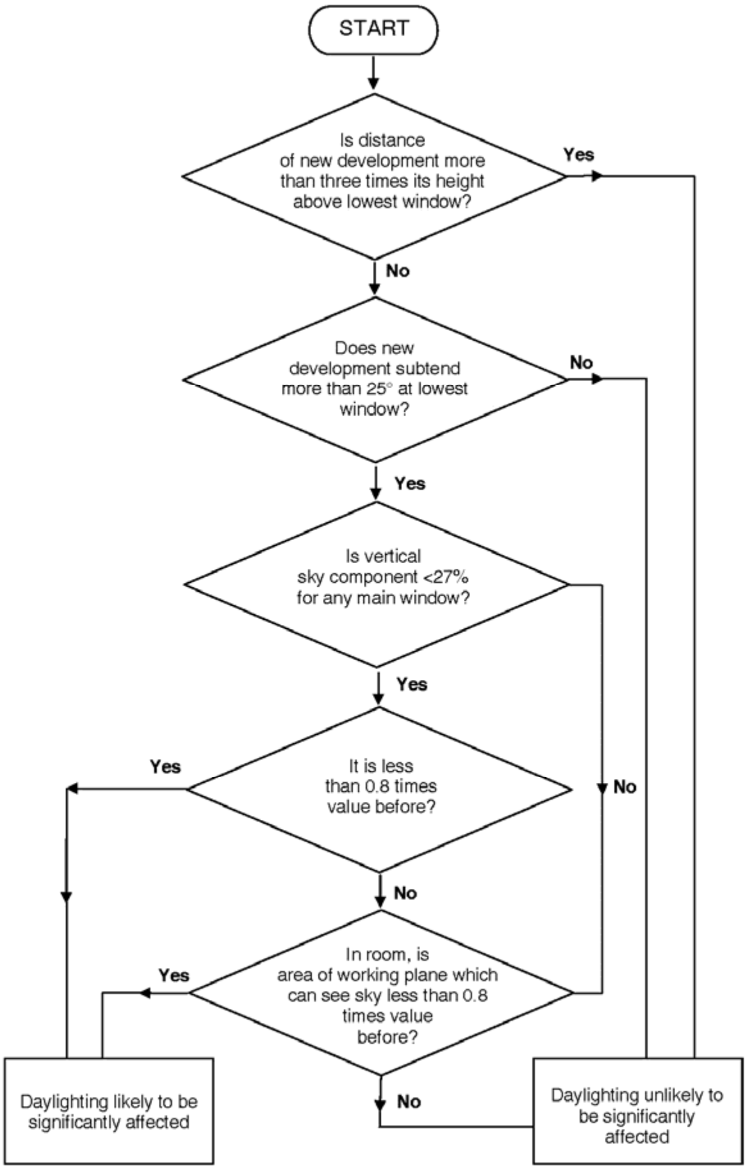
Camden Council outline the need for a daylight and sunlight assessment to accompany planning applications on their website; if proposed developments have the potential to negatively impact existing levels of daylight or sunlight on neighbouring properties, and that a daylight and sunlight assessment should include the necessary information to meet the criteria outlined in the Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice published by the Building Research Establishment (BRE).

4 Assessment Techniques

4.1 Background

Natural light refers to both daylight and sunlight. However, a distinction between these two concepts is required for the purpose of analysis and quantification of natural light in buildings. In this assessment, the term '*Daylight*' is used for natural light where the source is the sky in overcast conditions, whilst '*Sunlight*' refers specifically to the light coming directly from the sun.

The primary objective of this assessment is to quantify the impacts of the proposed development on the adjacent building and therefore the methods employed by this study are focussed on this objective. These methodologies are described in the following sections of this report and follow the hierarchical approach set out by the BRE Guidelines. The 'decision chart' outlining this process (Figure 20 of the Guidelines) has been reproduced below.



The BRE guidelines are intended for use for rooms in adjoining dwellings. They may also be applied to any existing non-domestic buildings where the occupants have a reasonable expectation of daylight, which could include schools, hospitals, hotels and offices. For dwellings it states that living rooms, dining rooms and kitchens should be assessed. Bedrooms should also be checked, although it states that they are less important. Other rooms, such as bathrooms, toilets, storerooms, circulation areas and garages need not be assessed.

4.2 Vertical Sky Component (VSC)

The Vertical Sky Component (VSC) calculation is the ratio of the direct sky illuminance falling on the outside of a window, to the simultaneous horizontal illuminance under an unobstructed sky. The standard CIE (Commission Internationale d'Éclairage) Overcast Sky is used and the ratio is expressed as a percentage. For example, a window that has an unobstructed view over open fields would benefit from the maximum VSC, which would be close to 40%. For a window to be considered as having a reasonable amount of skylight reaching it, the BRE Guidelines suggests that a minimum VSC value of 27% should be achieved. When assessing the impact of a new development on an existing building the BRE Guidelines sets out the following specific requirement:

If the VSC with the new development in place is both less than 27% and less than 0.8 times its former value, then the reduction in light to the window is likely to be noticeable.

This means that a reduction in the VSC value of up to 20% its former value would be acceptable and thus the impact would be considered negligible. It is important to note that the VSC is a simple geometrical calculation, which provides an early indication of the potential for daylight entering the space. It does not, however, assess or quantify the actual daylight levels inside the rooms.

4.3 No Sky Line

The No Sky Line, or sometimes referred to as No Sky View method, describes the distribution of daylight within rooms by calculating the area of the 'working plane', which can receive a direct view of the sky and hence 'skylight'. The working plane height is generally set at 850mm above floor level within a residential property and 700mm within a commercial property.

The BRE Guidelines state that if following the construction of a new development the No Sky Line moves so that the area of existing room that does not receive direct skylight is reduced to less than 0.8 times its former value, the impact will be noticeable to the occupants. This is also true if the No Sky Line encroaches onto key areas like kitchen sinks and worktops.

One benefit of the daylight distribution test is that the resulting contour plans show where the light falls within a room, both in the existing and proposed conditions, and a judgment may be made as to whether the room will retain light to a reasonable depth.

This method can only be accurately used to examine the impact of new development on the daylight distribution within existing buildings when the internal room layout is known. However, in circumstances where the internal layout and dimensions of the affected room are not known, best estimates are used.

4.4 Overshadowing

The BRE Guidance suggests that where a large building is proposed, which may affect a number of gardens or an area of open space, then analysis can be undertaken to quantify the loss of sunlight resulting from overshadowing. Typical examples of areas that could be considered as open spaces or amenity areas are main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas, such as in public squares and focal points for views, such as a group of monuments or fountains. The Guidance suggests that at least half of the amenity area should receive at least two hours of sunlight on the 21st March.

When undertaking this analysis sunlight from an altitude of 10° or less has been ignored as this is likely to be obscured by planting and undulations in the surrounding topography. Driveways and hard standing for cars is also usually left out of the area used for this calculation. Fences or walls less than 1.5 metres high are also ignored. Front gardens which are relatively small and visible from public footpaths are omitted with only main back gardens needing to be analysed.

The guide notes that "normally, trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building". This is especially the case for deciduous trees, which provide welcome shade in the summer whilst allowing sunlight to penetrate during the winter months.

4.5 Annual Probable Sunlight Hours

It is also possible to quantify the amount of sunlight available to a new development and the recognised methodology for undertaking this analysis is the Annual Probable Sunlight Hours (APSH) method.

In the case of sunlight, the assessment is equally applied to adjoining dwellings and any existing non-domestic buildings where there is a particular requirement for sunlight. The BRE Guidelines set out a hierarchy of tests to determine whether the proposed development will have a significant impact. These are set out in order of complexity below:

Test 1 – Assess whether the windows to main living rooms and conservatories of the buildings surrounding the site are situated within 90° of due south. Obstruction to sunlight may become an issue if some part of the new development is situated within 90° of due south of a main window wall of an existing building.

Test 2 - Draw a section perpendicular from the centre of the window in any window walls identified by Test 1. If the angle subtended between the horizontal line drawn from the centre of the lowest window of the existing building and the proposed development is less than 25°, then the proposed development is unlikely to have a substantial effect on the direct sunlight enjoyed by the existing window.

Test 3 – If the window wall faces within 20° of due south and the reference point has a VSC of 27% or more, then the room is considered to receive sufficient sunlight.

Test 4 – If all of the above tests have been failed, then a more detailed analysis is required to determine the obstruction level to the existing building. In such cases, the BRE Guidance recommends the use of the Annual Probable Sunlight Hours (APSH) test to assess the impact on the availability of sunlight. To pass this test the centre point of the window will need to receive more than one quarter of APSH, including at least 5% APSH in the winter months between 21st September and the 21st March. The BRE Guidelines state that if 'post-development' the available sunlight hours are both less than the amount above and less than 0.8 times their 'pre-development' value, either over the whole year or just within the winter months, then the occupants of the existing building will notice the loss of sunlight. In addition, if the overall annual loss is greater than 4% of APSH, the room may appear colder and less pleasant.

4.6 Average Daylight Factor

The Average Daylight Factor (ADF) method calculates the average illuminance within a room as a proportion of the illuminance available to an unobstructed point outdoors under a sky of known luminance and luminance distribution. This is the most detailed of the daylight calculations and considers the physical nature of the room behind the window, including; window transmittance, and surface reflectivity.

This method of quantifying the availability of daylight within a room does, however, require the internal layout to be known and is generally only used for establishing daylight provision in new rooms. The BRE Guide sets out the following guidelines for the assessment of the ADF:

If a predominantly daylit appearance is required, then the ADF should be 5% or more if there is no supplementary electric lighting, or 2% or more if supplementary electric lighting is provided. In dwellings, the following minimum average daylight factors should be achieved: 1% in bedrooms, 1.5% in living rooms and 2% in kitchens.

For offices, the British Council for Offices (BCO) Guide to Lighting provides guidance on how to specify good office lighting. The main message is to use daylight effectively and use artificial lighting only where and when it's is needed. The new guide recognises that maximising natural daylight within offices can bring about tangible benefits for employee wellbeing and suggests that a well daylit office space is one that achieves an average daylight factor of between 2% and 5%.

5 Assessment Methodology

5.1 Identification of Key Sensitive Receptors

The BRE Guidelines are intended for use for rooms and adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms circulation areas and garages are not deemed as requiring daylight and therefore are not identified as sensitive receptors. The BRE document also states that the guidelines may also be applied to any non-domestic building where the occupants have a reasonable expectation of daylight. This would normally include schools, hospitals, hotels, hostels, small workshops and some offices.

The first step in this process is to determine the key sensitive receptors, i.e. which windows may be affected by the proposed development. Key receptors are those windows that face, or are located broadly perpendicular to the proposed development

If a window falls into this category, the second step is to measure the obstruction angle. This is the angle at the level of the centre of the lowest window between the horizontal plane and the line joining the highest point of nearest obstruction formed from any part of the proposed development. If this angle is less than 25° then it is unlikely to have a substantial effect on the diffuse daylight enjoyed by the existing window and the window is not deemed to be a sensitive receptor. A graphical representation of the 25° rule is illustrated in Figure 5.1 below.

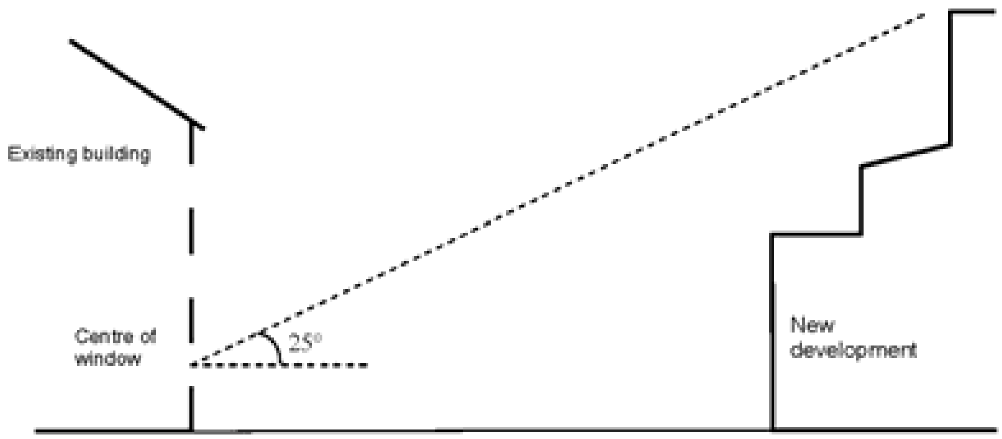


Figure 5.1 – Graphical representation of the 25° Rule

As part of this assessment a digital three dimensional model of the study area has been created for both the ‘pre’ and ‘post’ development scenarios. Images of these models are shown in Figures 5.2 and 5.3.

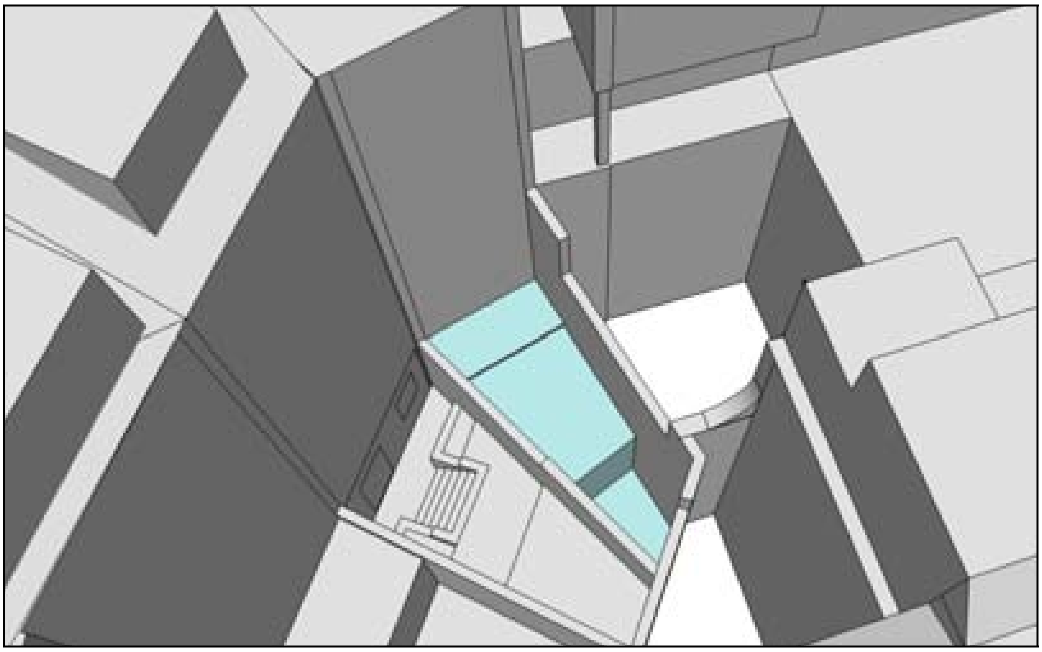


Figure 5.2 – Image of the 3D digital model of the pre-developed site and surrounding area

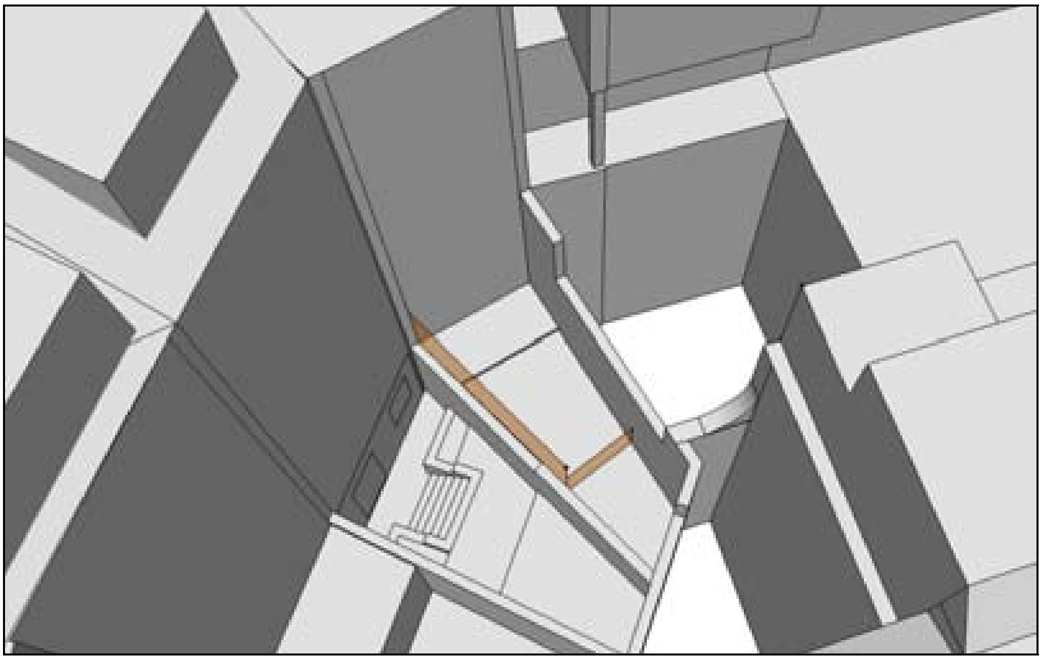


Figure 5.3 – Image of the 3D digital model of the post-developed site and surrounding area

Using the 3D model it is possible to construct 25° planes that extend outwards from the windows that overlook the site. If these intersect the proposed development then the window is identified as a sensitive receptor.

An example of the way in which the 25° obstruction angle test is used in this way is shown graphically in Figure 5.4 below.

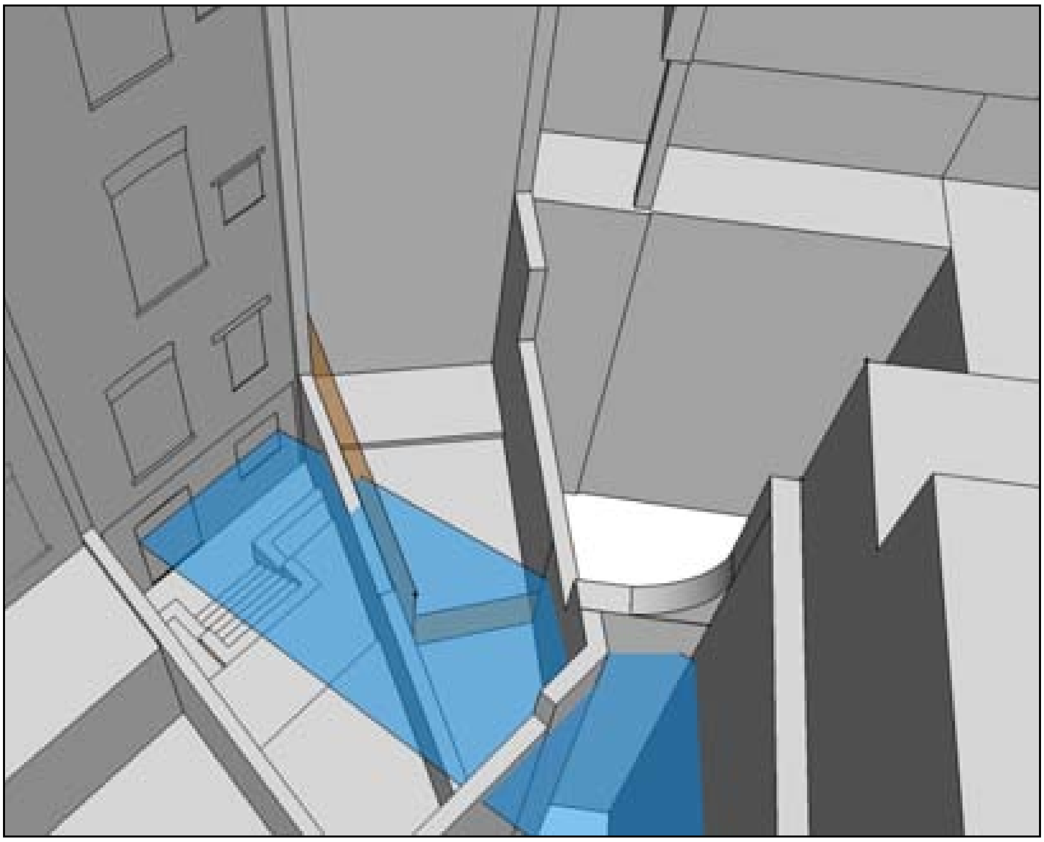


Figure 5.4 – Example of how the 25° obstruction angle test is applied

Applying the 25° obstruction angle test to all windows surrounding the site allows a schedule of windows that require additional or more detailed analysis to be developed. This is further refined such that where possible, windows serving non-habitable spaces such as toilets, store rooms, stairwells and circulation spaces are removed. Where it has not been possible to establish the use of a room, it is assumed to be habitable, but marked with a '?' in the table.

All windows serving habitable rooms that are not taken forward to the second stage of analysis are deemed to pass the 25° obstruction angle test. Therefore, in line with the hierarchy of assessment criteria set out within the BRE Guidelines, the impact of the proposed development on these windows is considered to be negligible and no further tests are required.

Two windows on the lower ground level of the rear elevation to No. 9 Sharpleshall, situated next door to the adjacent No. 10 have been highlighted as being potential sensitive receptors using the 25° obstruction angle test. The windows above on the ground floor do not have an obstruction angle that bisects the proposed development are therefore not taken forward as sensitive receptors.

At this stage an assessment of the use of the room served by each window is also made and in this case it has been identified that the windows on the lower ground floor of the adjacent buildings probably do serve habitable spaces as the building is a residential terraced house. Therefore the application of assessment criteria specifically aimed at habitable rooms is appropriate. Consequently, these windows are identified as sensitive receptors. The two sensitive receptors identified as requiring more detailed analysis are summarised in Table 5.1.

Window Number	Building	Floor	Room Type
Window 1	No. 9 Sharples Hall Street, London. Rear (North) Elevation	Lower Ground	Habitable?
Window 2	No. 9 Sharples Hall Street, London. Rear (North) Elevation	Lower Ground	Habitable?

Table 5.1 – Receptor window naming convention (to be read in conjunction with the layout plan included in Appendix A.1)

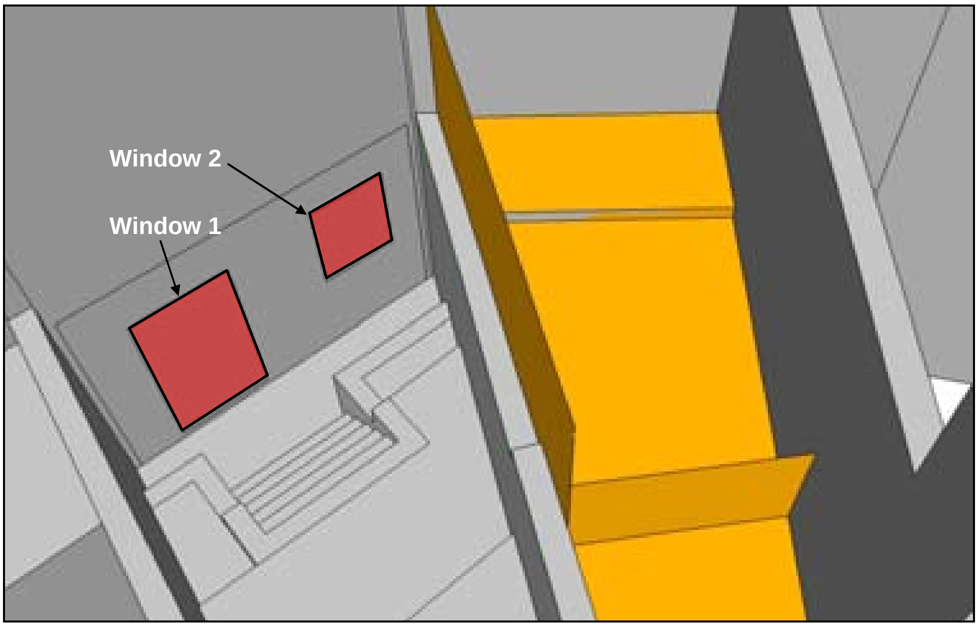


Figure 5.5 – Location of sensitive receptors

5.2 Method of Baseline Data Collation

The following data and information has been used to inform this study:

- OS Mastermap mapping
- Measured survey data (Blueprint Surveys Ltd, London – November 2014)
- Scheme drawings

- Photographic information collected during a site survey by Blueprint Surveys Ltd carried out November 2014

- Aerial photography (Google Maps and Bing)

5.3 Numerical Modelling

The numerical analysis used in this assessment has been undertaken using the software packages within the IES Virtual Environment suite (Version 2014.0.1). The packages/models used are described below:

ModelIT - ModelIT is the model-building component of the Virtual Environment and allows the user to create the 3D models required by other components within the Virtual Environment. ModelIT is designed to enable appropriate levels of complexity to be incorporated within a model across the entire design spectrum. The 3D model of the proposed development and adjacent buildings is shown in Figures 5.2 and 5.3.

SunCast - SunCast can be used at any stage of the design process to perform shading and solar insolation studies and can generate images and animations quickly and easily from a model created by the IES model builder (ModelIT). SunCast can be used to investigate:

- External obstruction and self-shading of a building

- Solar mapping through windows and openings

- The effects of changing orientation of building

SunCast generates shadows and internal solar insolation from any sun position defined by date, time, orientation, site latitude and longitude.

Radiance - Radiance is a software package developed by the Lighting Systems Research group at the Lawrence Berkeley Laboratory in California, USA. It was developed as a research tool for predicting the distribution of visible radiation in illuminated spaces. A three-dimensional geometric model of the physical environment is used, and a default material or map file detailing the spectral radiance values into a “photo-realistic” colour image. It can be used to calculate lighting levels, Daylight Factors or Glare for daylight and/or artificial lighting. Radiance is internationally recognised as one of the leading lighting simulation tools available and for this appraisal has been used to calculate both the Daylight Factor and the Vertical Sky Component.

FlucsDL – This package calculates a point by point illuminance within each specified room which allows the daylight factor on any surface within the model, or on specified work planes (e.g. the height of a desk) to be determined. It is also used to calculate the sky view from any point within a room, again on any surface within the model, or on specified work planes. Using the data from the sky view analysis it is then possible to plot a contour of that surface that has a view of the sky and calculate this area as a percentage of the total surface. These results are used to inform the No Sky Line test described in Section 4.3.

The numerical modelling has been used to examine the scenarios described below.

‘Without Development’ Scenario: This is simply an accurate replication of the existing buildings, with the results of the analysis being used as a baseline against which to compare the proposed development.

’With Development’ Scenario: The Proposed Development is representative of the buildings that would be present once the development is complete. The model includes the existing adjoining properties.

5.4 Calculation Assumptions

The following assumptions have been made when undertaking the analysis:

- When assessing the VSC the calculation is based on the centre point of the window position

- When assessing the ADF for internal rooms, the glazing type is assumed to be double clear glazing with a light transmittance of 0.8 and the Frame Factor is taken as 0.8

- In the absence of internal room layouts of the adjacent property, best estimates as to room layout and size have been made in order to undertake the ADF and/or No Skyline analysis.

- In areas where survey data has not been provided or needs to be supplemented with additional information, photographs, OS mapping and brick counts have been used in the process of building the 3D model of the surrounding and existing buildings.

- When analysing the effect of the new building on the existing buildings, the shading effect of the existing trees has been ignored. This is the recommended practice where deciduous trees that do not form a dense belt or tree line are present (BRE Guidelines – Appendix H). This is because daylight is at its scarcest and most valuable in the winter when most trees will not be in leaf.

6 Daylight Analysis

6.1 Background

The use of the Vertical Sky Component Test and No Sky Line test (as discussed in section 4 of this report) quantifies the amount of unobstructed skylight visible (in the form of illuminance under standardised overcast sky conditions) from viewing positions on or within specific planar geometry built as 3D virtual model. As such these are geometric based tests and the daylight values derived from these are dependent on fully opaque surfaces in the model which can block the visible sky light.

However, when applying the numerical tests prescribed by the BRE Guidelines, i.e. the VSC and NSL tests, it has to be acknowledged that these analysis techniques do not have the facility to model translucent features. Consequently, when undertaking the analysis it has been assumed that the translucent glass privacy screens area modelled as fully opaque features. Whilst this is an overly conservative approach, it does at least present a worst-case-scenario. Thus, when understanding that the actual screens will allow light to radiate through them, the impacts predicted using the VSC and NSL tests need to be interpreted appropriately.

In addition to the use of the VSC and the NSL tests it has also been considered appropriate to undertake more detailed analysis using the Average Daylight Factor (ADF). This test allows for a more detailed quantitative assessment of the daylight within an enclosed geometric space, but is also influenced by the amount of daylight accessible to the room from an unobstructed sky.

6.2 Vertical Sky Component Assessment

Using the analytical techniques discussed above, the VSC for the key receptors has been calculated for the ‘pre’ and ‘post’ development conditions. The results are summarised in Table 6.1 below.

Receptor	VSC (pre-development – existing conditions)	VSC (post-development – with screens in place)	Ratio of change	BRE minimum requirements met?
Window 1	9.7%	8.1%	0.8	Yes
Window 2	10.3%	8.0%	0.8	Yes

Table 6.1 – Comparison of ‘pre’ and ‘post’ development VSC Tests

The BRE Guidelines operate on the general principle that firstly, if the VSC is 27% or greater then the impact is unlikely to be noticeable to the occupant. Secondly, if the VSC is below 27% and is not reduced to less than 0.8 times its former value, then it can also be concluded that the reduction in daylight is unlikely to be noticeable to the building’s occupants.

From the above it can be seen for both pre and post development conditions the VSC results remain below 27%, however the ratio of change is 0.8 which according the BRE’s target criteria indicates that the predicted reduction in daylighting to the occupants of No. 9 Sharples Hall Street would not be noticeable.

However, it is recognised that the above results are based on the balustrade being modelled as a fully opaque structure, whereas in effect it will be constructed from a translucent glass and will therefore allow a degree of daylight to pass through it. Consequently, the above results should be considered as overly conservative and a worst-case-scenario.

The graphical outputs from the numerical analysis are included in Appendix A.2.

6.3 No Sky Line Assessment

In order to pass the No Sky Line Assessment the BRE Guidelines state that the area of the working plane within the room that has a view of the sky should not be reduced to less than 0.8 times its former value as a result of new development. One benefit of the daylight distribution test is that the resulting contour plans show where the light falls within a room, both in the existing and proposed conditions, and a judgement may be made as to whether the room will retain light to a reasonable depth.

In this case the dimensions and exact layout of the room(s) behind windows 1 & 2 within the existing building of No. 9 Sharples Hall Street are not known. However, in order to gain an understanding of the impact of the proposed development on the daylight distribution within the potentially affected room(s) an estimate of the room dimension and layout has been made. The results of this analysis are summarised in Table 6.2 and detailed outputs of the analysis are included in the Appendix to this report.

Where the internal arrangements and room uses have been estimated, this has no bearing upon the tests for VSC or APSH because the reference point for those tests, is at the centre of the window being tested and windows have been accurately drawn from the survey information. In the absence of suitable plans, estimation is a conventional approach.

Receptor	Percentage of working plane area with a sky view		Ratio of change
	Pre Development	Post Development	
Window 1	38.2%	35.0%	0.9
Window 2	38.2%	35.0%	0.9

Table 6.2 – Comparison of ‘pre’ and ‘post’ development No Sky Line tests

The BRE Guidelines state that, if following the construction of a new development, the no sky line moves such that the area of the room that does receive direct skylight is reduced to less than 0.8 times its former value, this will be noticeable to the occupants, and more of the room will appear poorly lit.

From these results, it can be seen that as a result of the proposed development the area of the working plane within the room that receives direct light from the sky will not be reduced to an extent such that the ratio of change is significantly less than the 0.8 recommended value. Consequently, from this analysis it can be concluded that the distribution of daylight within the assessed room(s) is unlikely to be significantly affected.

As discussed in Section 6.1 and 6.2 of this report the choice of material for the proposed balustrade/screens will be translucent glass. Due to the nature of the NSL test being geometrically dependent, it should be recognised that the above results are based on the balustrade being a modelled as a fully opaque structure, whereas in effect it will be constructed from a translucent obscured glass and will therefore allow a degree of daylight to pass through it. Consequently, the above results should be considered as overly conservative and a worst-case-scenario.

6.4 Average Daylight Factor

Whilst not prescribed by the BRE Guidelines as a specific test to inform planning decisions, the Average Daylight Factor (ADF) method is an additional method of quantifying potential reductions in daylight. The ADF method calculates the average illuminance within a room as a proportion of the illuminance available to an unobstructed point outdoors under a sky of known luminance and luminance distribution. This is the most detailed of the daylight calculations and considers the physical nature of the room behind the window, including; window transmittance, and surface reflectivity.

This method of quantifying the availability of daylight within a room does, however, ideally require the internal layout to be known and is generally only used for establishing daylight provision in new rooms. As for the No Sky Line test, the room dimensions are assumed for No. 9 Sharples Hall Road. Whilst this means that the results of the analysis do not necessarily exactly replicate levels of daylight within the assessed room, the key point here is that the analysis seeks to quantify the magnitude of change. In this respect, the techniques employed are appropriate and accurate. The results of this analysis are summarised in Table 6.3 below.

Receptor	Average Daylight Factor (ADF) %		Ratio of change
	Pre Development (no balustrade)	Post Development fully opaque screen to No. 10)	
Lower Ground Floor Habitable Room	1.4%	1.2%	0.9

Table 6.3 – Comparison of 'pre' and 'post' development ADF analysis results

From the above, it can be seen that as a result of the installation of the proposed screens, the ADF value will reduce from 1.4% to 1.2%, giving a ratio of change of 0.9. This is above the minimum target value of 0.8 set out within the BRE Guidelines and therefore it can be concluded that the reduction in daylight is unlikely to be noticeable to the occupants of No. 9 Sharpleshall Street.

7 Sunlight and Overshadowing Analysis

7.1 Annual Probable Sunlight Hours Assessment

Section 4 of this report sets out the four tests prescribed by the BRE Guidelines for assessing the impact of development on sunlight. These tests are applied in hierarchical order below.

Test 1 – *Assess whether the windows to main living rooms and conservatories of the buildings surrounding the site are situated within 90°of due south. The impact on sunlight received by all other windows is deemed to be insignificant and further analysis of these windows is not required.*

Neither of the two sensitive receptors identified are situated within 90°of due south. Therefore Test 2 does not need to be applied these windows. Consequently the criteria for this test have been satisfied.

7.2 Permanent Overshadowing

The BRE Guidelines acknowledge that good site layout planning for daylight and sunlight should not limit itself to providing good natural light inside buildings. Sunlight in the space between buildings has an important effect on the overall appearance and ambiance of a development. The worst situation is to have significant areas on which the sun does not shine for a large part of the year. These areas would, in general, be damp, chilly and uninviting. The BRE Guidelines suggest that the Spring Equinox (21st March) is a good date for assessment.

7.3 Transient Overshadowing

The BRE Guidelines suggest that where large buildings are proposed, which may affect a number of open spaces or amenity areas, it is useful and illustrative to plot a shadow plan to show the location of shadows cast by the proposed development.

Typical examples of areas that could be considered as open spaces or amenity areas are main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas, such as in public squares and focal points for views. In assessing and quantifying potential impacts, the Guidance suggests that for the impact to be deemed insignificant, at least half of the amenity area should receive at least two hours of sunlight on the 21st March with the proposed development in place.

7.4 Assessment of Overshadowing Impacts

It would be impractical and prohibitive to suggest that new development should not cast any shadow on existing garden or amenity areas and therefore the BRE Guidelines set out a simple assessment criterion. The Guidance suggests that for the impact of a new development to be deemed negligible, at least half of the affected garden/amenity area should receive at least two hours of sunlight on the 21st March. However, in the current situation the courtyard of no. 9 receives no sunlight on the 21st March and therefore simply applying the standard assessment criteria reveals little about the impact of the proposed development. Consequently, more detailed analysis of the sunlighting to this area has been undertaken to help clarify any potential impacts.

8 Direct Sunlighting to Neighbouring Amenity Areas

8.1 Background

In addition to assessing the provision of natural daylight to the habitable room(s) of neighbouring No. 9 Sharples Hall Street, it is necessary to quantify the direct sunlight available to the garden at the rear of the property. The BRE Guidelines do highlight the importance of sunlight to external amenity spaces, however, the methodology that is usually adopted for quantifying the amount of direct sunlight that is received by a particular area is more suited for larger areas such as gardens, parks and public spaces.

Generally when assessing the potential impact of new development on neighbouring gardens the BRE Guidelines suggest that shadow plots are used to show the location of shadows at different times of the day and year. For the impact to be deemed insignificant, at least half of the amenity area should receive at least two hours of sunlight on the 21st March with the proposed development in place.

When assessing spaces such as small rear gardens in tightly packed urban environments the use of shadow plots becomes rather cumbersome and may struggle to quantify sunlight and shading to sites with small surface areas and complex geometry bounding them. Consequently, a more detailed assessment of solar shading analysis has been carried out using the IES VE SunCast software package. This allows the potential sunlight, i.e. the number of sunlight hours available ignoring cloud cover, to be calculated as a percentage coverage for any particular surface; for each hour of the day and for each month of the year and therefore allows a much more detailed understanding of the exposure to direct sunlight to be gained.

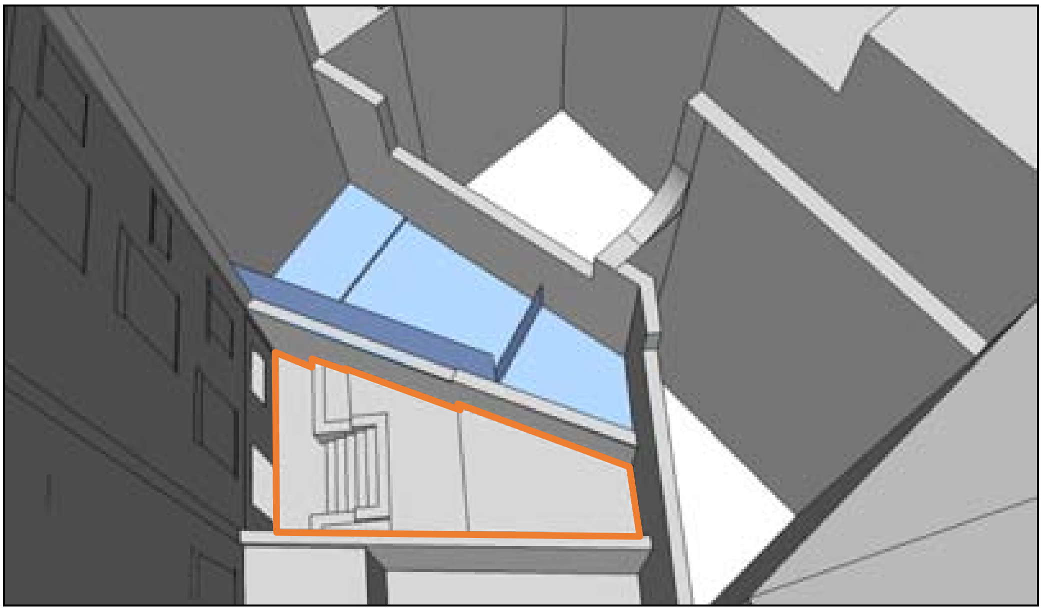


Figure 8.1 – Location of amenity spaces (orange) neighbouring the proposed development (blue) at the rear elevation of No. 9 & No. 10 Sharples Hall Street

8.2 Direct Sunlight to the Garden Terraces

The rear garden to No. 9 Sharples Hall Street is accessible via the lower ground level room assessed in the previous sections of this report and it features three main levels or terraces which step up towards the rear (North end) of the garden. Each level has been referred to as a terrace for descriptive purposes and each level is shown graphically with the numerical outputs showing the percentage of the area receiving direct sunlight at each time-step. Figure 8.2 shows the configuration of the terraces within the garden amenity space, and each area is discussed below.

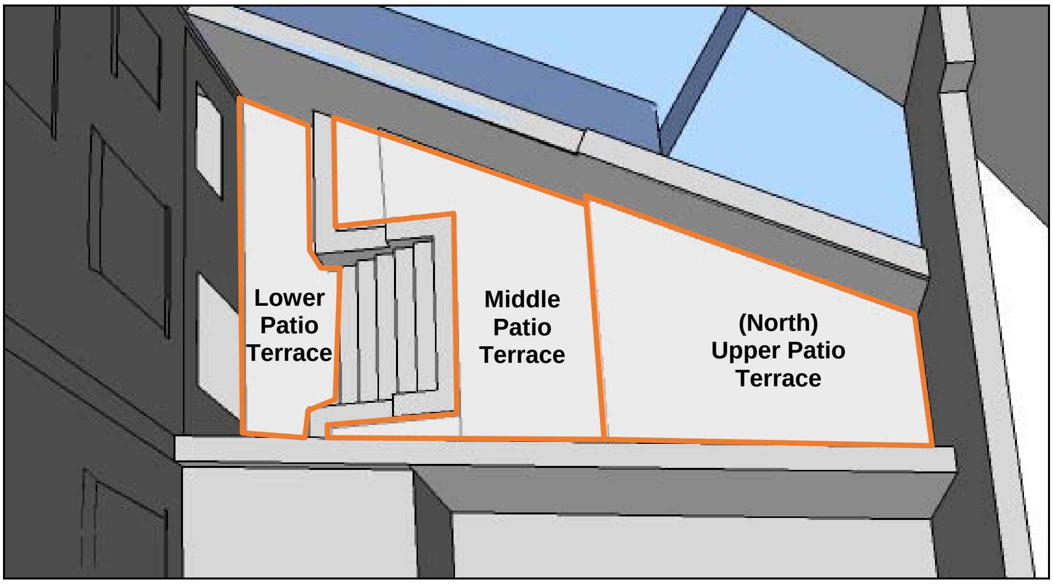


Figure 8.2 – Location of three main levels to rear garden of No. 9 Sharples Hall Street.

Lower Patio Terrace

Month	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00
Jan									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Feb								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Mar							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Apr						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
May					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Jun				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Jul					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Aug					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Sep						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Oct							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Nov								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Dec									0.0	0.0	0.0	0.0	0.0	0.0	0.0									

Figure 8.3 – The area (as a percentage) of direct sunlight reaching lower level patio at specific time steps during each month of the year – Pre-Development

Month	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00
Jan									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Feb								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Mar							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Apr						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
May					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Jun				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Jul					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Aug					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Sep						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Oct							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Nov								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Dec									0.0	0.0	0.0	0.0	0.0	0.0	0.0									

Figure 8.4 – The area (as a percentage) of direct sunlight reaching lower level patio at specific time steps during each month of the year – Post Development

From figure 8.3 and 8.4 it is observed that under both pre-development and post development conditions no direct sunlight reaches the lower level patio terrace during the year, at any time. Consequently the introduction of the glass screens will not have any impact to this area.

Middle Patio Terrace

Month	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00
Jan									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Feb								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Mar							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Apr						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
May		-			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0					
Jun				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0				
Jul					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0				
Aug					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Sep						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Oct							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Nov								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Dec									0.0	0.0	0.0	0.0	0.0	0.0	0.0									

Figure 8.5 – The area (as a percentage) of direct sunlight reaching middle level patio at specific time steps during each month of the year – Pre-Development

Month	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00
Jan									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Feb								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Mar							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Apr						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
May					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Jun				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0				
Jul					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Aug					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Sep						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Oct							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Nov								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Dec									0.0	0.0	0.0	0.0	0.0	0.0	0.0									

Figure 8.6 – The area (as a percentage) of direct sunlight reaching middle level patio at specific time steps during each month of the year – Post Development

From figure 8.5 it can be seen that under pre-development conditions direct sunlight reaches the middle patio around 2pm during the hight of the summer months. Of this less than 1% of the terrace's surface area achieves direct sunlight coverage during May and July, while near 10% of the terrace's surface area achieves direct sunlight in June.

Figure 8.6 shows that under post-development conditions there is a reduction in the amount of surface area of the patio receiving direct sunlight. However, it must be understood that even under existing conditions, these results are showing that the middle terrace receives virtually no direct sunlight and consequently the introduction of the screens would not have any noticable impact to this area.

Upper (North) Patio Terrace

Month	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00
Jan				-					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		-						
Feb								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Mar							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Apr						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0						
May		-			0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	5.3	11.4	0.0	0.0	0.0	0.0	0.0					
Jun				0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	36.2	33.6	40.2	1.5	0.0	0.0	0.0	0.0	0.0				
Jul					0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	22.6	39.9	0.0	0.0	0.0	0.0	0.0	0.0				
Aug					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0					
Sep						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Oct							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Nov								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Dec									0.0	0.0	0.0	0.0	0.0	0.0	0.0									

Figure 8.7 – The area (as a percentage) of direct sunlight reaching upper level patio at specific time steps during each month of the year – Pre-Development

Month	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00
Jan									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Feb								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Mar							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Apr						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
May					0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	5.3	8.3	0.0	0.0	0.0	0.0	0.0					
Jun				0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	36.2	33.6	36.1	1.5	0.0	0.0	0.0	0.0	0.0				
Jul					0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	22.6	29.4	0.0	0.0	0.0	0.0	0.0	0.0				
Aug					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0					
Sep						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Oct							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Nov								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								
Dec									0.0	0.0	0.0	0.0	0.0	0.0	0.0									

Figure 8.8 – The area (as a percentage) of direct sunlight reaching upper level patio at specific time steps during each month of the year – Post Development

From Figure 8.7 and 8.8 it is evident that the bulk of direct sunlight reaching the garden is to the upper north end terrace during mid-afternoon in the height of the summer months, in both pre- and post-development conditions.

When the impact of the screens is interpreted from the results of the solar shading analysis it can be seen that the regardless of whether screens are in place or not, this area at best receives direct sunlight to around 40% of its area for 3 hours of the day during June. The introduction of the proposed screens has virtually no impact in the amount of sunlight received by this area.

Again it needs to be highlighted here that these results are based on the screens being modelled as fully opaque features, whereas in reality they will be constructed from a translucent glass that will allow sunlight to penetrate to a degree. Therefore when this is taken into consideration alongside the results of the solar shading analysis it is concluded that the impact of the screens will be negligible.

8.3 Discussion of Sunlight Results

The general requirement prescribed by the BRE Guidelines to establish whether an amenity space is deemed to be adequately lit by direct sunlight is if it receives a minimum of 2 hours of direct sunlight to 50% or more of its total area on 21st March. From the above results it can be seen that for all areas of the garden at No. 9 Sharples Hall Road this criteria is not achieved.

However it should be noted that the BRE criteria does not constitute a pass or fail threshold. Examination of the results in more detail shows that the North end of the garden does provide some access to direct sunlight during the summer months. It is also evident when comparing 'pre' development with 'post' development results that there is little significant difference between either set of results. This highlights that it is the existing site geometry which influences the provision of sunlight (and daylight) to the amenity space at No. 9 Sharpleshall Street.

The garden area of No. 9 Sharpleshall Street is situated on a much lower external ground level to No. 10. The two properties are separated by a large masonry wall nearly 2.5m high. These facts combined with the relatively small ground area of the garden (being less than 18m^2) and that the garden's boundaries are fully enclosed on all sides by much taller buildings or masonry structures of 3 to 4 storeys high in some places explain the low exposure to direct sunlight.

These site conditions are typical of many densely packed urban environments, especially in Greater London, that represent the real influence on sunlight (and daylight) quality. The analysis that has been undertaken has shown that whilst the garden area of No. 9 Sharpleshall Street does not receive a great deal of direct sunlight, the introduction of the glass screens is unlikely to result in any noticeable reduction.

9 Conclusions

The detailed analysis undertaken as part of this assessment has examined the impact of the proposed development on the amount of daylight enjoyed by the neighbouring building at No. 9 Sharpleshall Street. In line with the assessment criteria prescribed by the BRE Guideline, it has been shown that the reduction in daylighting to the windows of the neighbouring buildings is less than the value that is considered by the BRE Guidelines to represent a notable impact.

It is also worth highlighting at this point that the assessment did not include detailed analysis of the ground floor windows of No. 9 Sharpleshall Street. This is because the obstruction angle measured from these window was significantly less than 25 degrees and therefore in line with the hierarchical approach set out within the BRE Guidelines it can be concluded that the proposed development would not have any significant or noticeable impact. In addition to this, reference to the VSC and NSL results for the windows below on the lower ground floor show that even at this lower elevation the impacts are negligible. Consequently it is appropriate to conclude that the impacts to any windows above would be even less noticeable.

The assessment of the impact of the proposed development on the sunlight enjoyed by the neighbouring building and its amenity space has shown that there is a limited amount of sunlight available under existing conditions. However, the introduction of the proposed glass screens does not significantly change this. Consequently, in line with the assessment criteria set out within the BRE Guidelines, it can be concluded that the change is unlikely to be of a magnitude that would be noticeable by the occupants of No. 9 Sharpleshall Street.

A Appendices

A.1 Appendix A.1 – Scheme Drawings

A.2 Appendix A.2 – Vertical Sky Component Calculations

A.3 Appendix A.3 – No Sky Line Assessment Outputs

Appendix A.1 – Scheme Drawings

LOCATION PLAN @ SCALE 1:1250

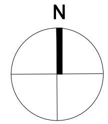
SITE PLAN @ SCALE 1:500

GENERAL NOTES:

1.CONTRACTORS SHOULD NOT SCALE FROM DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS ARE SHOWN IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORKS.
5. ALL BOUNDARY LINES MUST BE CHECKED AND VERIFIED BEFORE PROCEEDING WITH THE WORKS.
6. THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY IN WRITING OF ANY DISCREPANCIES.
7. ALL INFORMATION REMAINS THE PROPERTY OF THE ARCHITECT AND MAY NOT BE USED FOR ANY PURPOSE , OR REPRODUCED THROUGH ANY MEDIUM, WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT.
8. ALL COPYRIGHTS ARE RETAINED BY GILLIAN PESKETT.
9. SUBJECT TO SURVEY AND ALL NECESSARY STATUTORY AND LEGAL CONSENTS.
10. REFER TO PROJECT ORGANISATION SHEETS FOR DRAWING KEYS NOTES AND ABBREVIATIONS.

GENERAL:

- SITE BOUNDARY
- EXISTING BUILDINGS
- EXISTING EXTENSION



PLANNING

Rev	Date	By	Revisions

Job Title:
10 SHARPLESHALL ST.NW1 8YN

Drawing Title:
LOCATION AND SITE PLANS

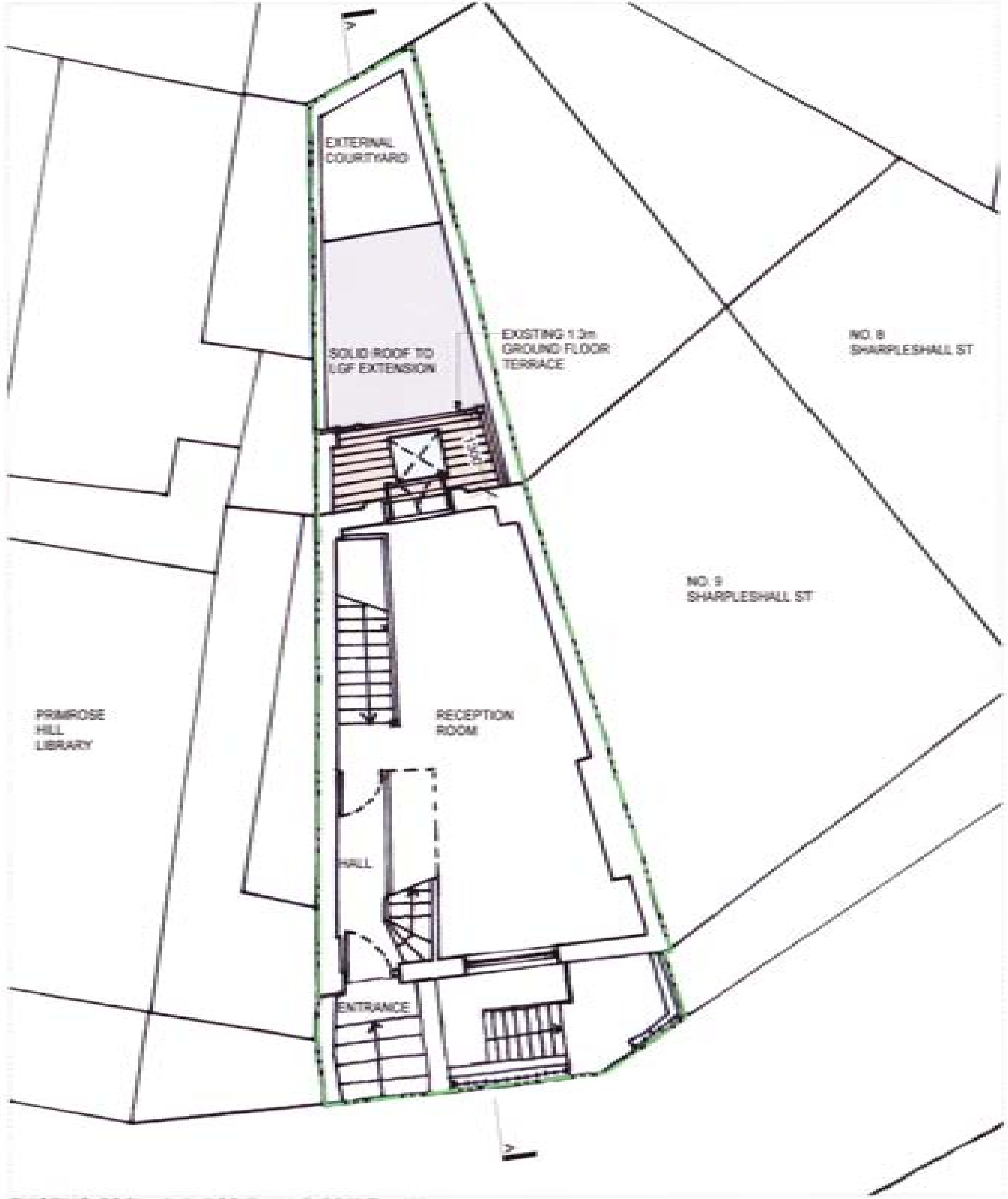
Drawing No: **013/A/1.100**

Revision:

Date: 13.10.14

Scale: 1:1250, 1:500 @ A4

groundplane Architecture



EXISTING GROUND FLOOR PLAN @ SCALE 1:100

0m 5m

GENERAL NOTES:

1. CONTRACTOR SHOULD NOT SCALE FROM DRAWINGS, DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS ARE SHOWN IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORKS.
5. ALL BOUNDARY LINES MUST BE CHECKED AND VERIFIED BEFORE PROCEEDING WITH THE WORKS.
6. THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY IN WRITING OF ANY DISCREPANCIES.
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8. ALL COPYRIGHTS ARE RETAINED BY GILLIAN RESKETT.
9. SUBJECT TO SURVEY AND ALL NECESSARY STATUTORY AND LEGAL CONSENTS.
10. REFER TO PROJECT ORGANISATION SHEETS FOR DRAWING KEYS NOTES AND ABBREVIATIONS.

GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

PLANNING

Rev	Date	By	Revisions

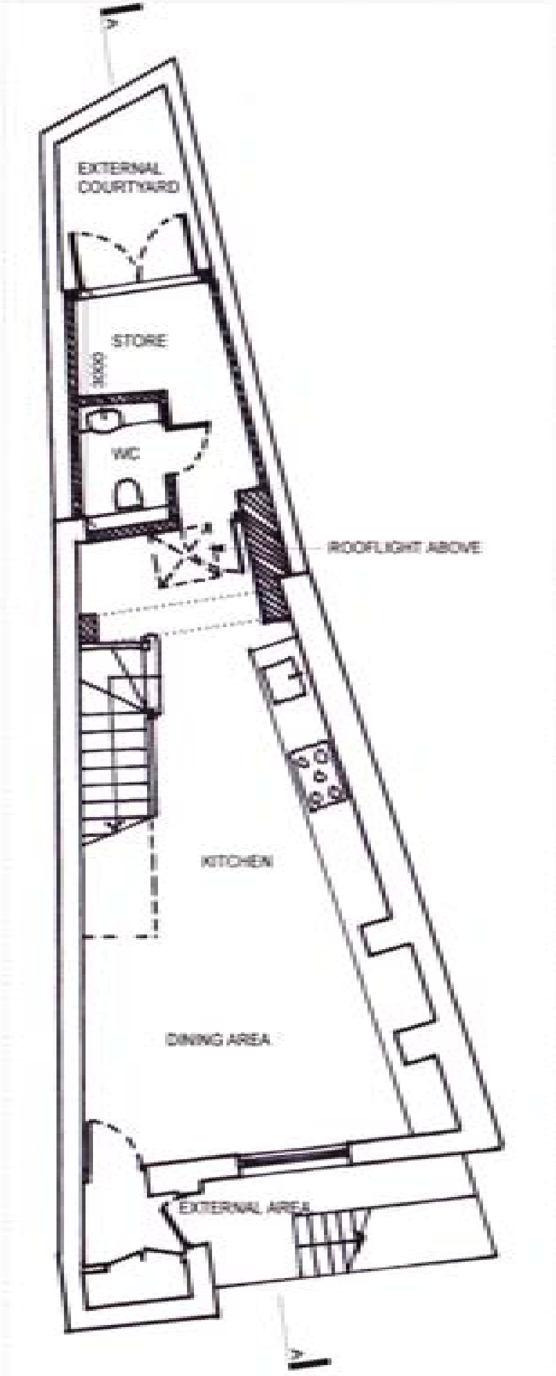
Job Title:
10 SHARPLESHALL ST. NW1 8YN

Drawing Title:
EXISTING GROUND FLOOR PLAN

Drawing No: 013/A/1.110
Revision:

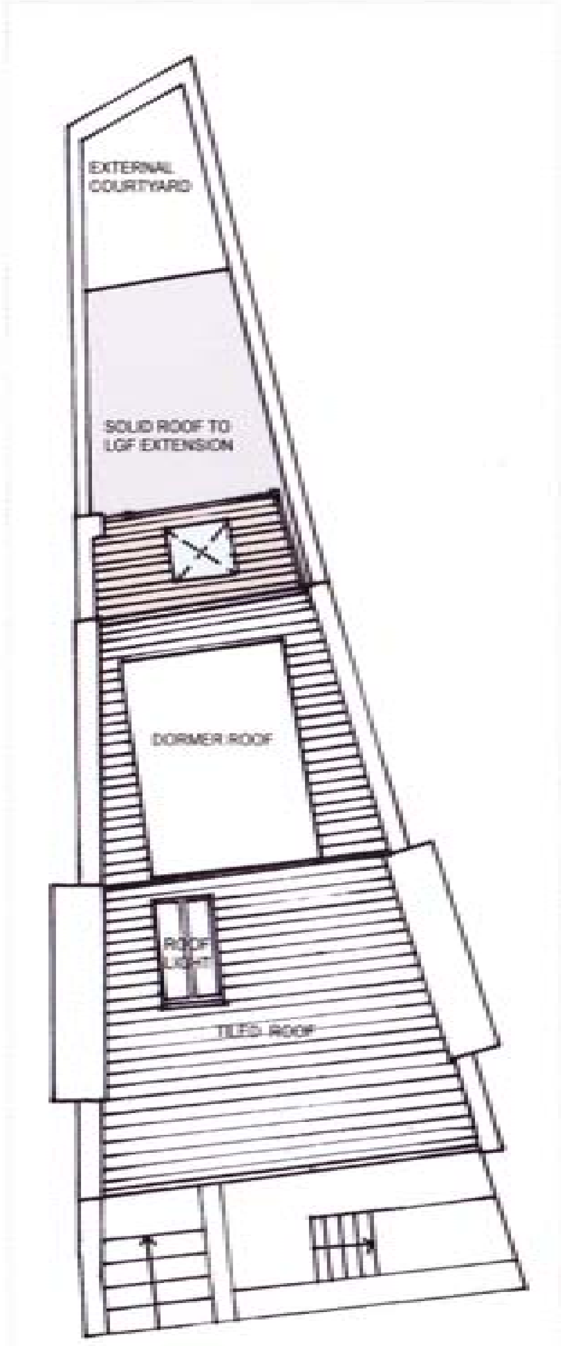
Date: 13.10.14
Scale: 1:100 @ A4

groundplane architecture



EXISTING LOWER GROUND FLOOR PLAN

NOTE: FIRST, SECOND AND LOFT FLOOR PLANS ARE UNALTERED



EXISTING ROOF PLAN

GENERAL NOTES:

1. CONTRACTOR SHOULD NOT SCALE FROM DRAWINGS. DIMENSIONS GOVERN.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS ARE SHOWN IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORKS.
5. ALL BOUNDARY LINES MUST BE CHECKED AND VERIFIED BEFORE PROCEEDING WITH THE WORKS.
6. THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY IN WRITING OF ANY DISCREPANCIES.
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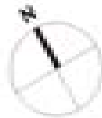
9. SUBJECT TO SURVEY AND ALL NECESSARY STATUTORY AND LEGAL CONSENTS.
10. REFER TO PROJECT ORGANISATION SHEETS FOR DRAWING KEYS NOTES AND ABBREVIATIONS.

GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD



PLANNING

Rev	Date	By	Revisions

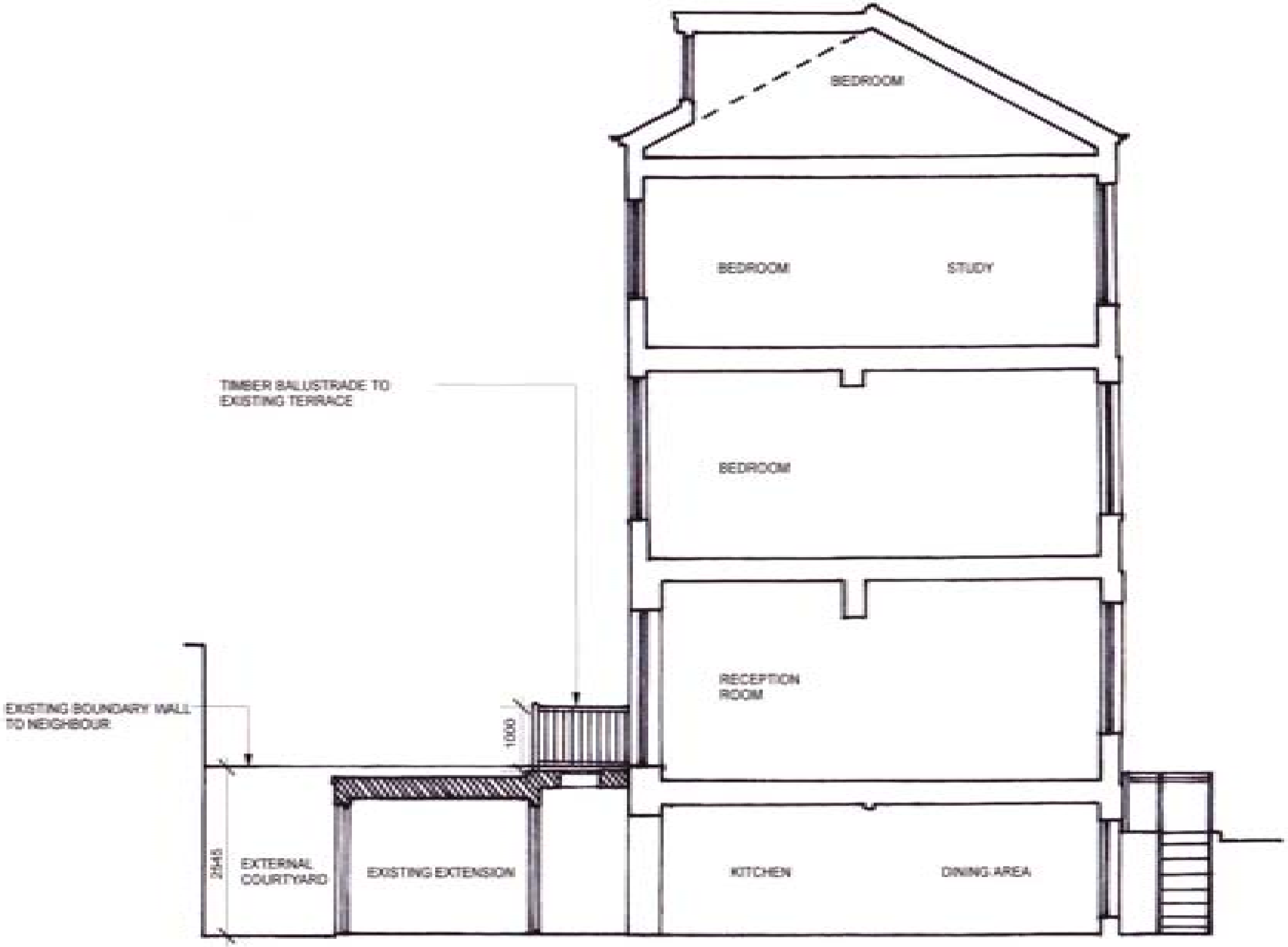
Job Title:
10 SHARPLESHALL ST. NW1 8YN

Drawing Title:
EXISTING LOWER GROUND AND ROOF PLANS

Drawing No: **013/A/1.111**
Revision:

Date: 13.10.14
Scale: 1:100 @ A4

groundplane architecture



EXISTING SECTION @ SCALE 1:100

0m 5m

GENERAL NOTES:

1. CONTRACTOR SHOULD NOT SCALE FROM DRAWINGS, DIMENSIONS GOVERN.
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GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

PLANNING

Rev	Date	By	Revisions

Job Title:
10 SHARPLESHALL ST. NW1 8YN

Drawing Title:
EXISTING SECTION

Drawing No: **013/A/1.120**

Revision:

Date: 13.10.14

Scale: 1:100 @ A4

groundplane architecture

EXISTING REAR ELEVATION @ SCALE 1:100

EXISTING FRONT ELEVATION @ SCALE 1:100

0m 5m

GENERAL NOTES:

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GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

PLANNING

Rev	Date	By	Revisions

Job Title:
10 SHARPLESHALL ST. NW1 8YN

Drawing Title:
EXISTING FRONT AND REAR ELEVATIONS

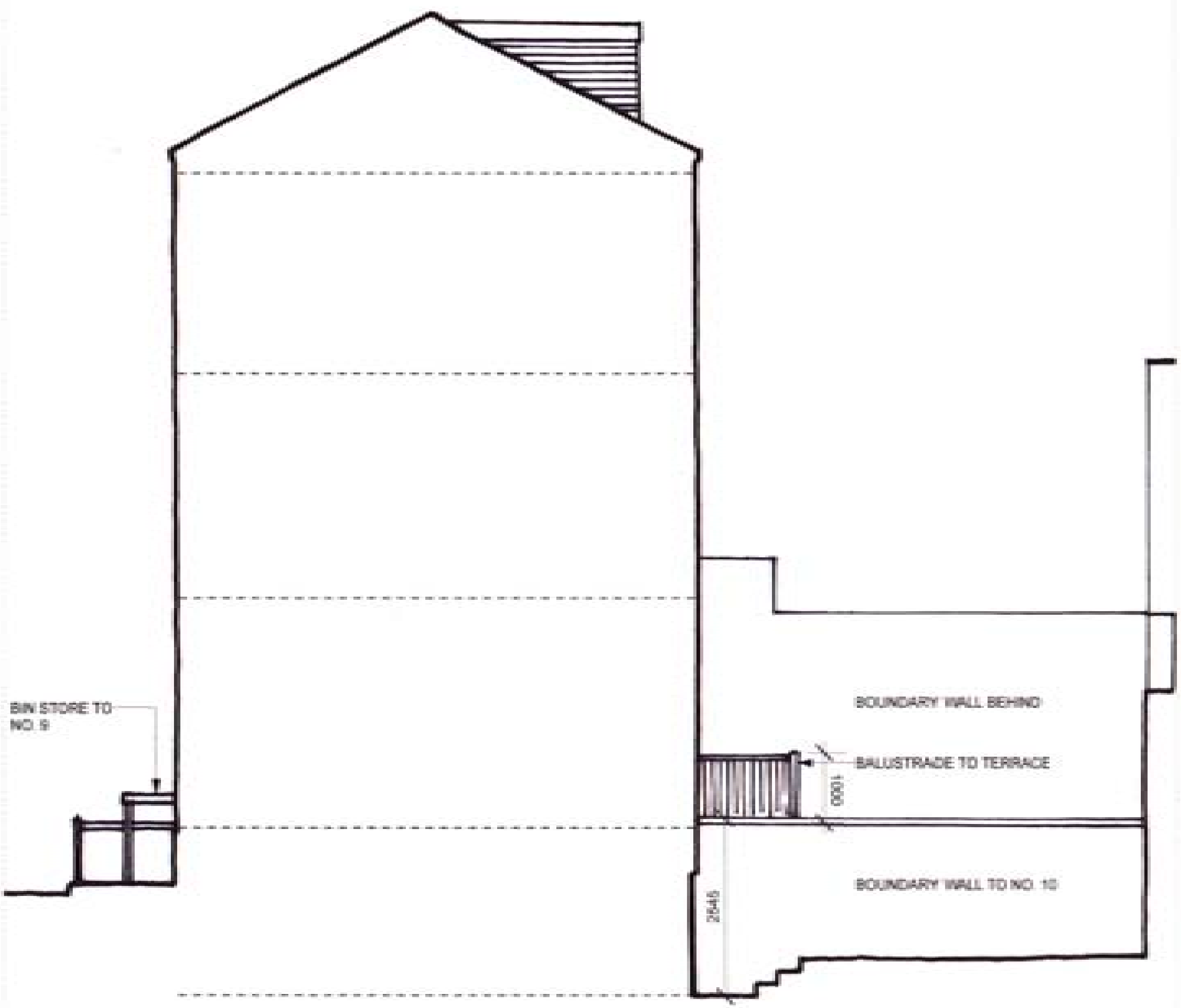
Drawing No: **013/A/1.130**

Revision:

Date: 13.10.14

Scale: 1:100 @ A4

groundplane architecture



EXISTING SIDE ELEVATION (VIEWED FROM NO. 9 SHARPLESHALL ST) @ SCALE 1:100

GENERAL NOTES:

1. CONTRACTOR SHOULD NOT SCALE FROM DRAWINGS. DIMENSIONS GOVERN.
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GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

0m 5m

PLANNING

Rev	Date	By	Revisions

Job Title:
10 SHARPLESHALL ST. NW1 8YN

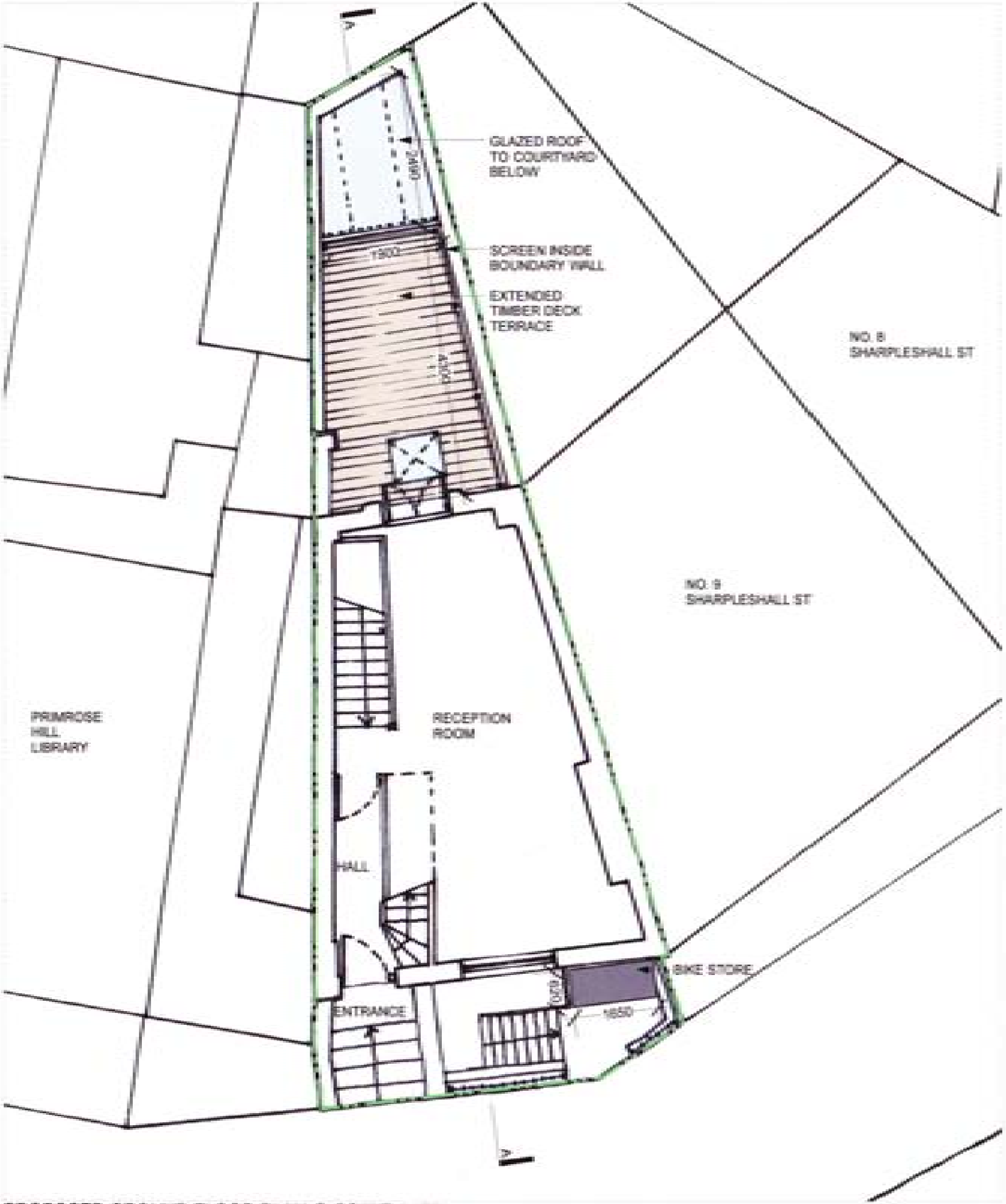
Drawing Title:
EXISTING SIDE ELEVATION

Drawing No: Revision:
013/A/1.131

Date: 13.10.14

Scale: 1:100 @ A4

groundplane architecture



PROPOSED GROUND FLOOR PLAN @ SCALE 1:100

0m 5m

GENERAL NOTES:

1. CONTRACTOR SHOULD NOT SCALE FROM DRAWINGS, DIMENSIONS GOVERN.
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GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

PLANNING

Rev	Date	By	Revisions

Job Title:
10 SHARPLESHALL ST. NW1 8YN

Drawing Title:
PROPOSED GROUND FLOOR PLAN

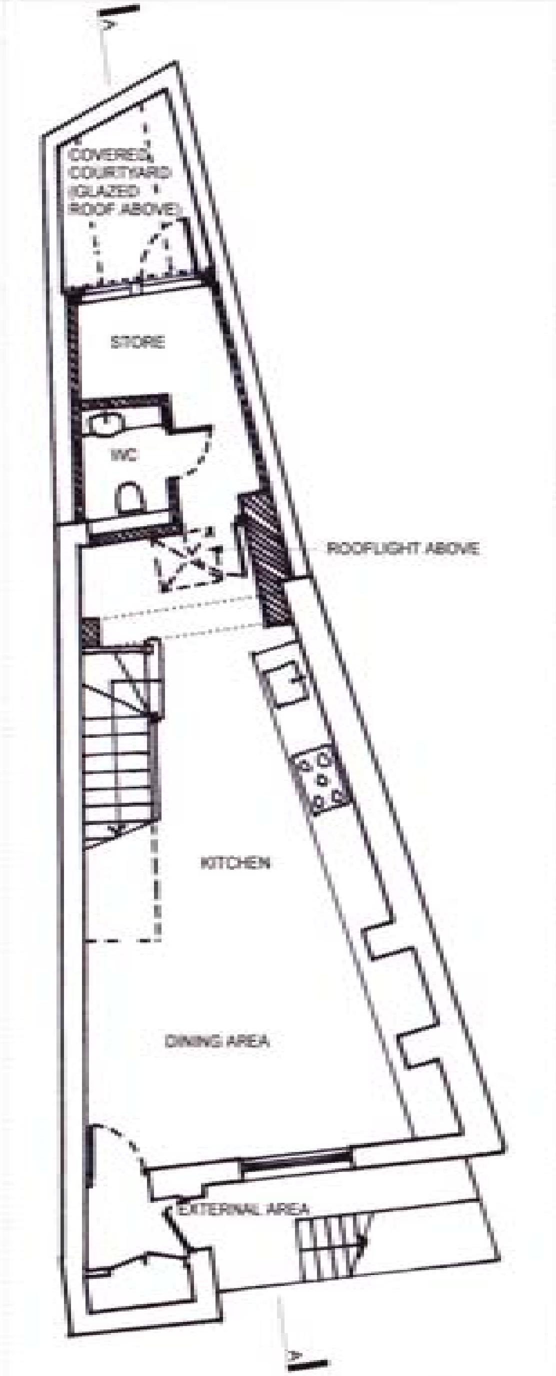
Drawing No: 013/A/1.210

Revision:

Date: 13.10.14

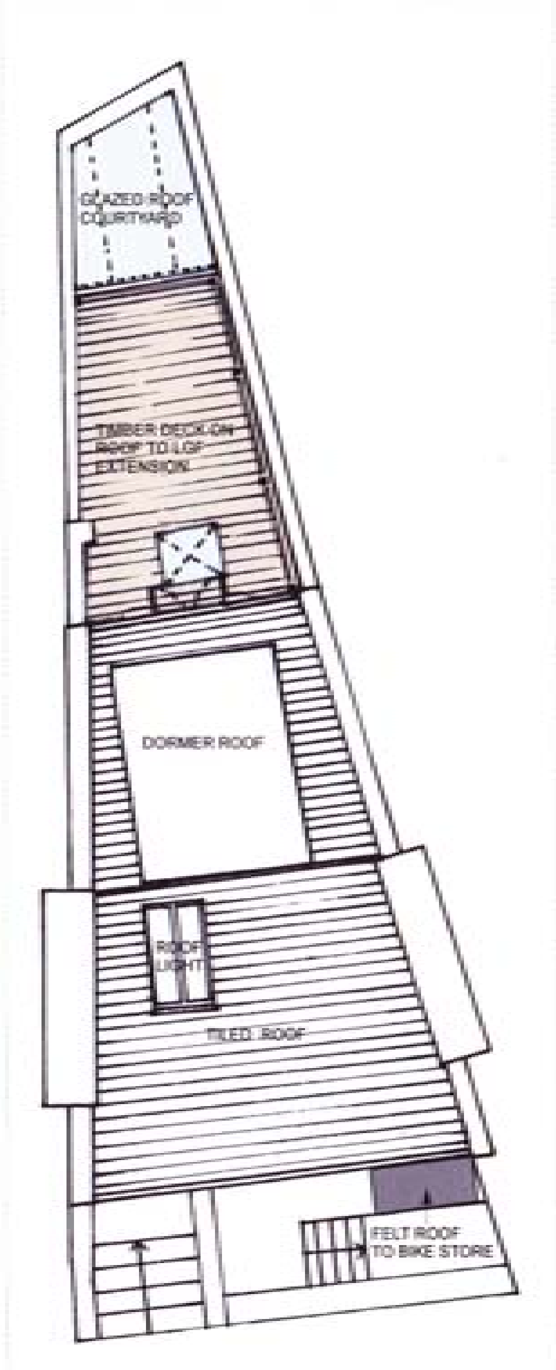
Scale: 1:100 @ A4

groundplane architecture



PROPOSED LOWER GROUND FLOOR PLAN

NOTE: FIRST, SECOND AND LOFT FLOOR PLANS ARE UNALTERED



PROPOSED ROOF PLAN

0m
5m

GENERAL NOTES:

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10. REFER TO PROJECT ORGANISATION SHEETS FOR DRAWING KEYS NOTES AND ABBREVIATIONS.

GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

PLANNING

Rev	Date	By	Revisions

Job Title: 10 SHARPLESHALL ST. NW1 8YN

Drawing Title: PROPOSED LOWER GROUND AND ROOF PLANS

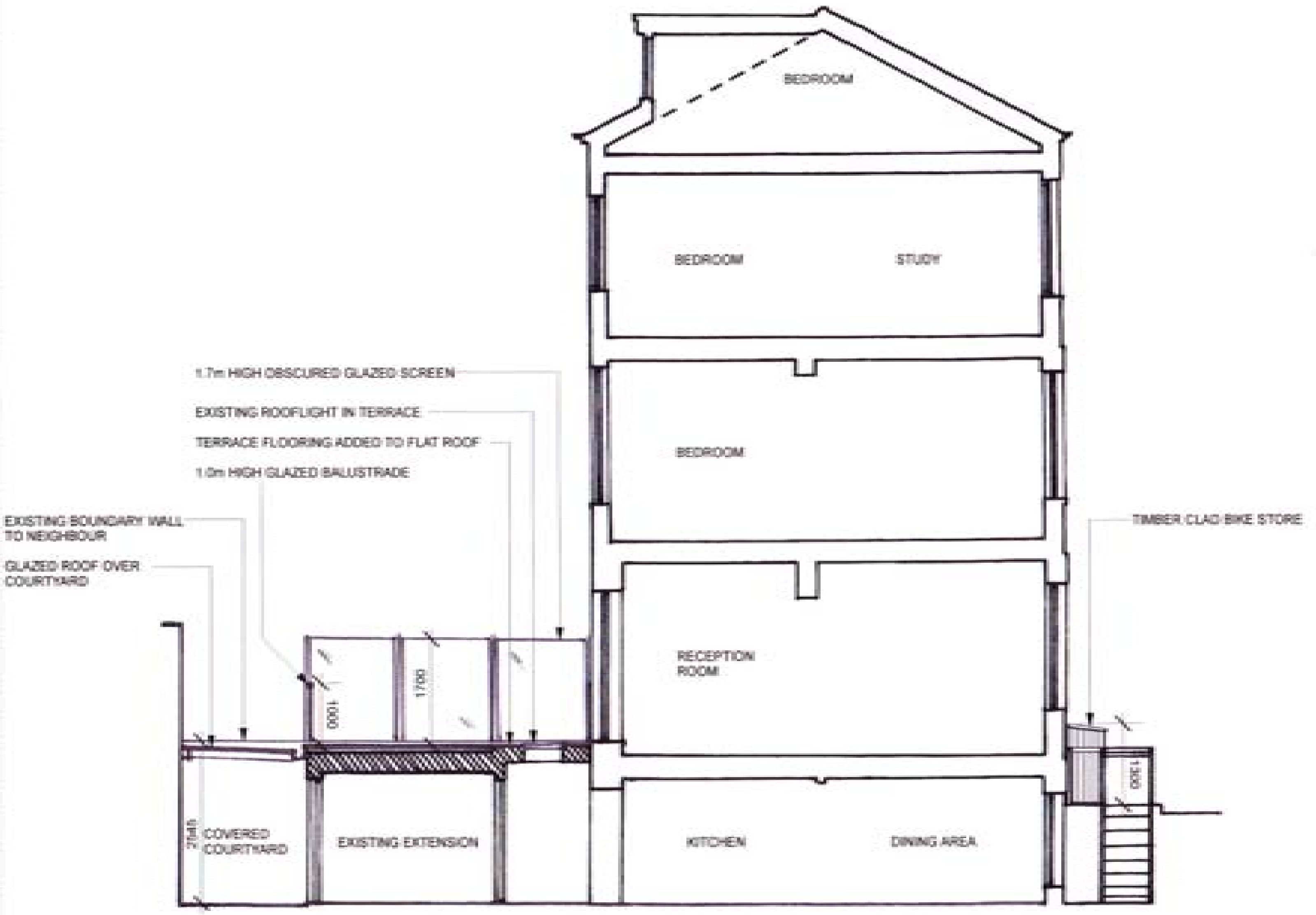
Drawing No: **013/A/1.211**

Revision:

Date: 13.10.14

Scale: 1:100 @ A4

groundplane architecture



PROPOSED SECTION @ SCALE 1:100

0m 5m

GENERAL NOTES:

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GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

PLANNING

Rev	Date	By	Revisions

Job Title:
10 SHARPLESHALL ST. NW1 8YN

Drawing Title:
PROPOSED SECTION

Drawing No: 013/A/1.220

Revision:

Date: 13.10.14

Scale: 1:100 @ A4

groundplane architecture

PROPOSED REAR ELEVATION @ SCALE 1:100

PROPOSED FRONT ELEVATION @ SCALE 1:100

0m 5m

GENERAL NOTES:

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GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

PLANNING

Rev	Date	By	Revisions

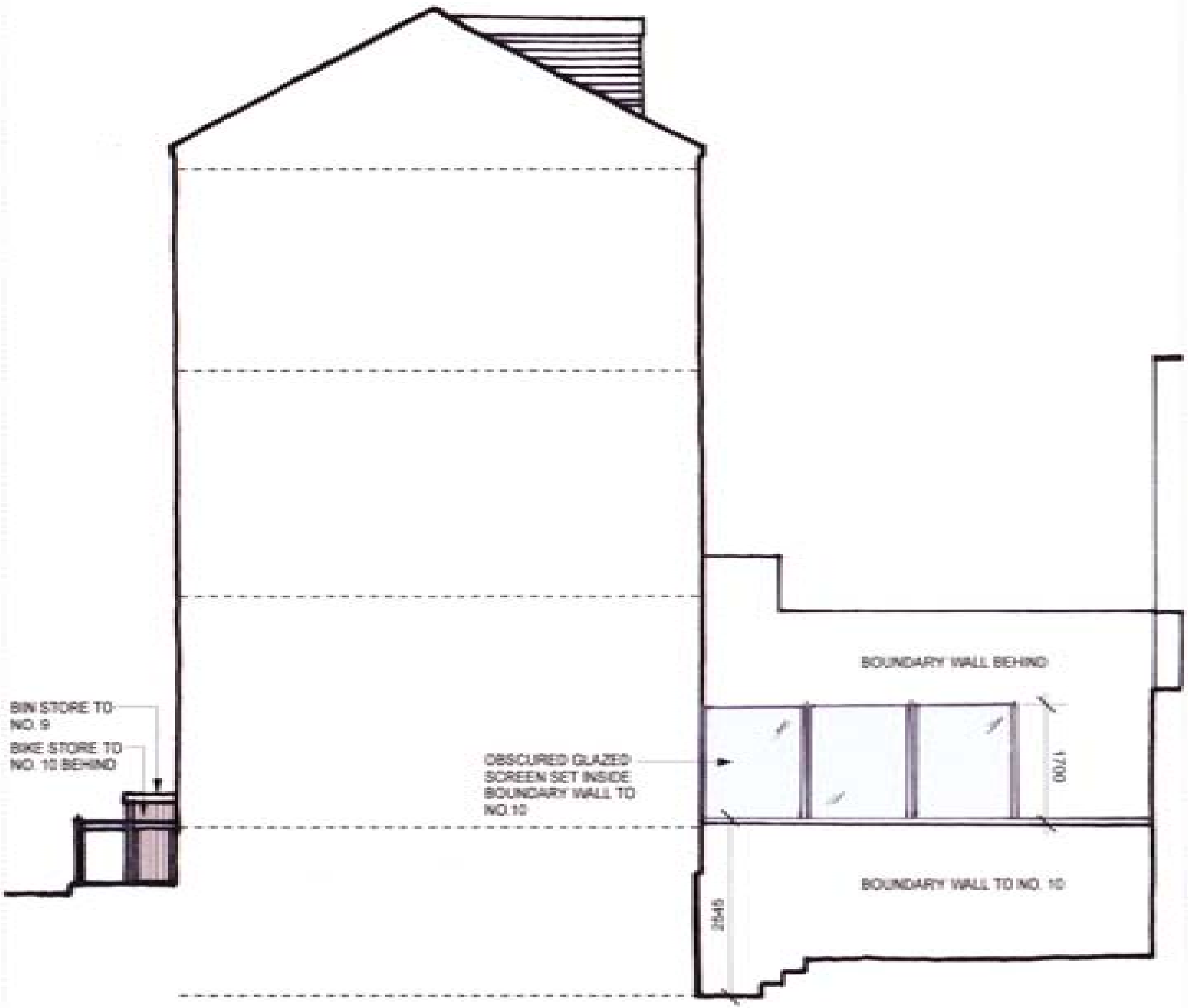
Job Title:
10 SHARPLESHALL ST. NW1 8YN

Drawing Title:
PROPOSED FRONT AND REAR ELEVATIONS

Drawing No: **013/A/1.230**
Revision:

Date: 13.10.14
Scale: 1:100 @ A4

groundplane architecture



PROPOSED SIDE ELEVATION (VIEWED FROM NO. 9 SHARPLESHALL ST) @ SCALE 1:100

GENERAL NOTES:

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10. REFER TO PROJECT ORGANISATION SHEETS FOR DRAWING KEYS NOTES AND ABBREVIATIONS.

GENERAL:

- SITE BOUNDARY
- EXISTING CONSTRUCTION
- DEMOLITION
- PROPOSED CONSTRUCTION
- FURNITURE AND FITTINGS
- STRUCTURE OVERHEAD

PLANNING

Rev	Date	By	Revisions

Job Title:
10 SHARPLESHALL ST. NW1 8YN

Drawing Title:
PROPOSED SIDE ELEVATION

Drawing No: 013/A/1.231

Revision:

Date: 13.10.14

Scale: 1:100 @ A4

groundplane architecture

GENERAL NOTES:

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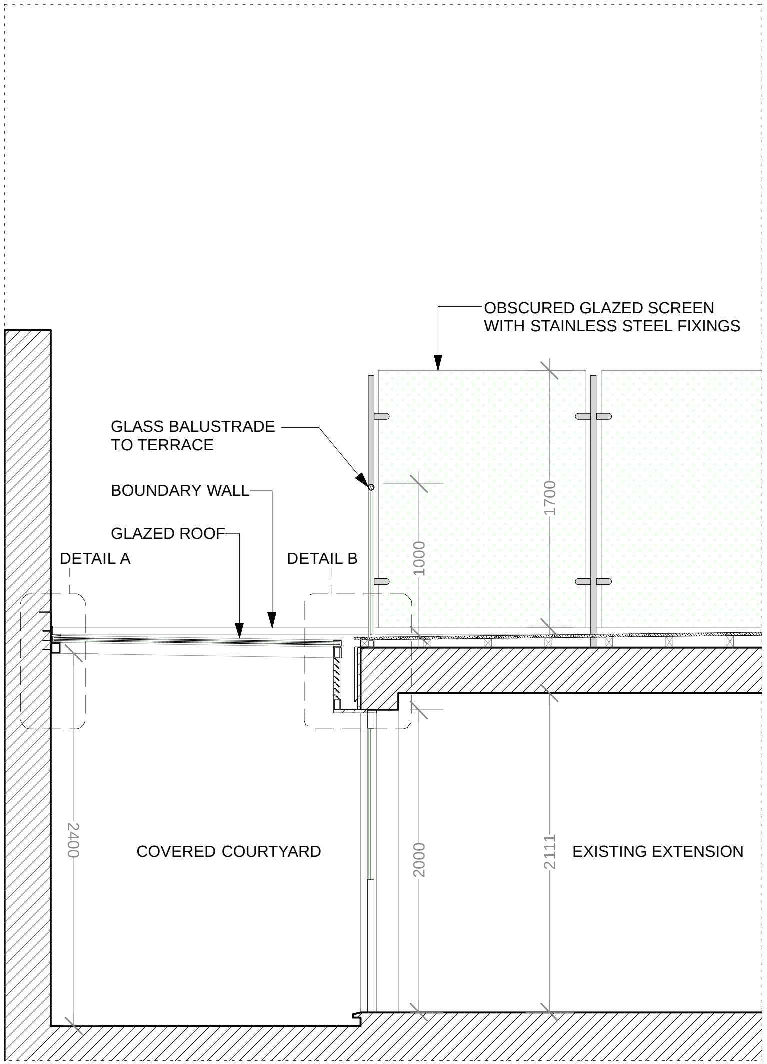
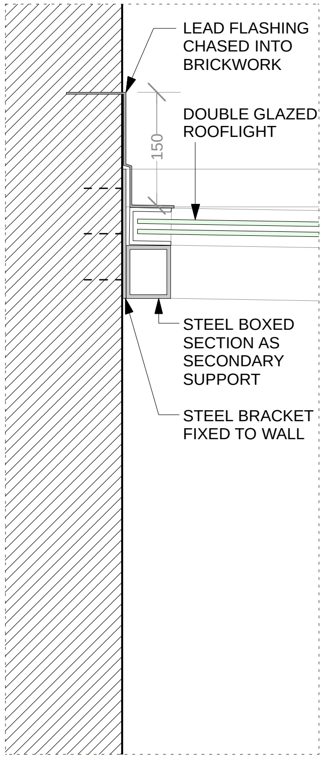
GENERAL:

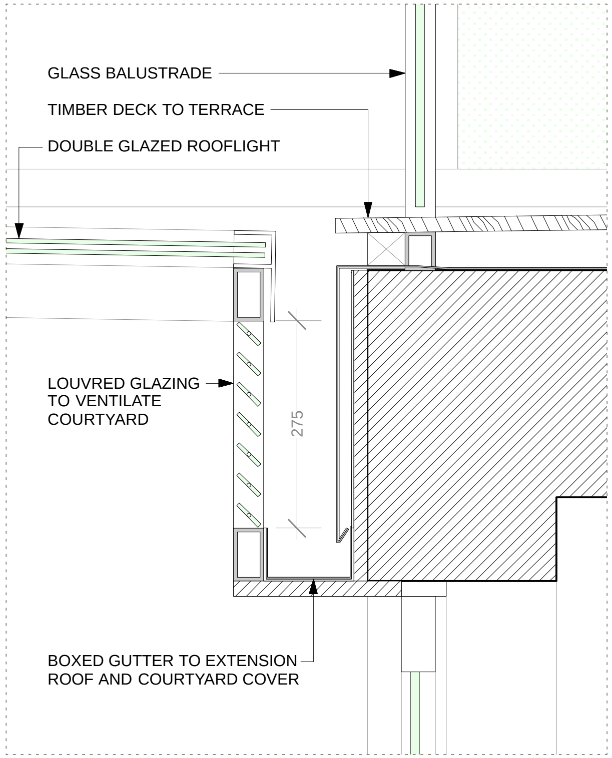
SITE BOUNDARY
EXISTING CONSTRUCTION
DEMOLITION
PROPOSED CONSTRUCTION
FURNITURE AND FITTINGS
STRUCTURE OVERHEAD



PROPOSED DETAILED SECTION THROUGH COURTYARD @ SCALE 1:50



DETAIL A @ SCALE 1:10



DETAIL B @ SCALE 1:10

0m 5m

0m 1m

PLANNING

Rev	Date	By	Revisions

Job Title:
10 SHARPLESHALL ST. NW1 8YN

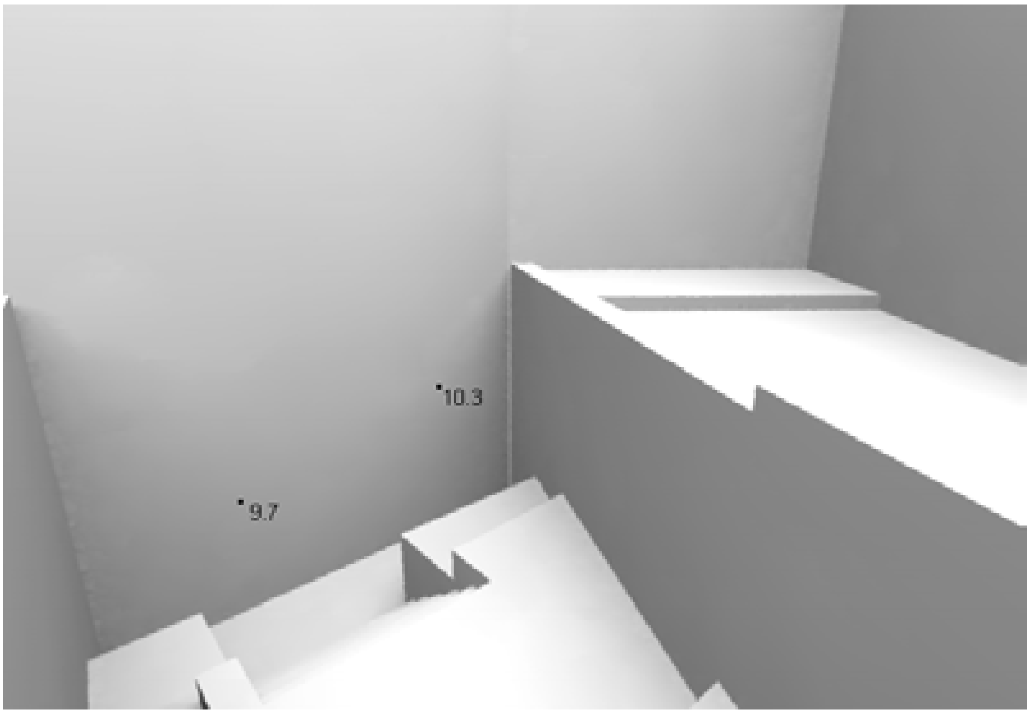
Drawing Title:
PROPOSED COURTYARD AND TERRACE DETAILS

Drawing No: 013/A/1.241
Revision:

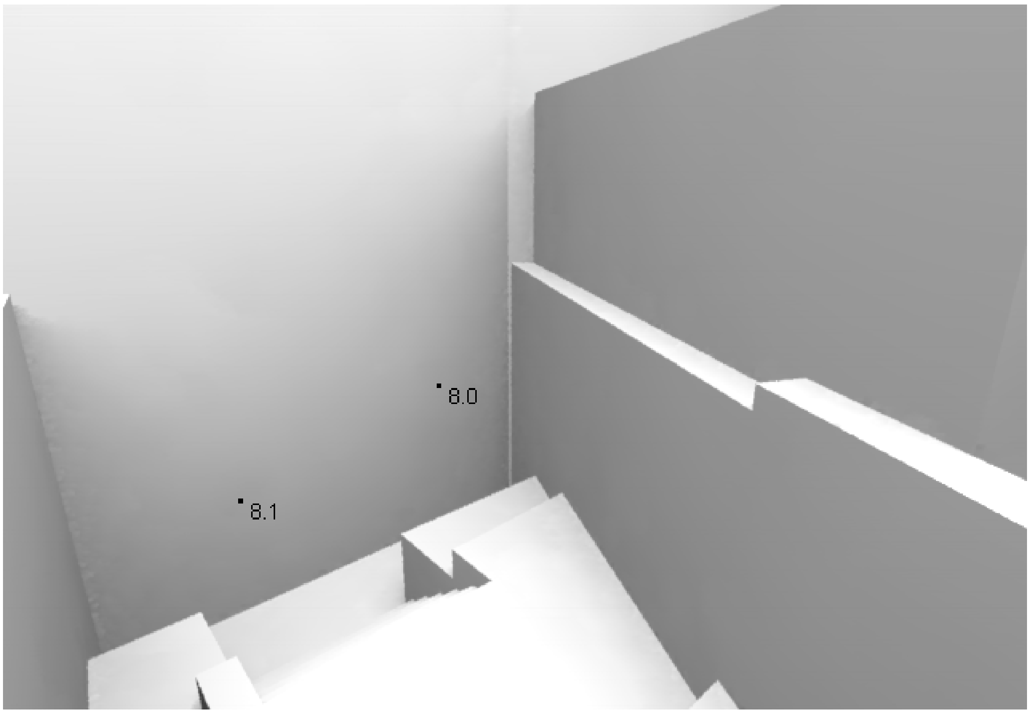
Date: 13.10.14
Scale: 1:50 & 1:10 @ A4

groundplane architecture

Appendix A.2 – Vertical Sky Component Calculations



No. 9 Sharpleshall Street – Pre-development



No. 9 Sharpleshall Street – Post-development

Appendix A.3 – No Sky Line Assessment Outputs

Daylight Analysis

Integrated
Environmental
Solutions Limited

Analysis Overview

Analysis Comparison (against previous assessment)

	Total	Comparison (with previous)
Daylight levels (lux)	126.271	No previous
Percentage area above threshold (%)	38.2	No previous

Analysis History

Date / Time	Area-weighted average daylight factor (%)	Area-weighted average illumination (lux)

Threshold Calculation

Building Results

Total floor area (m^2)	Total floor area above threshold (m^2)	Percentage floor area above threshold (%)	Area-weighted average daylight factor (%)	Area-weighted average illumination (lux)
15.975	6.101	38.2	1.0	126.271

Rooms included in the analysis

Room ID	Room name	Working plane	Floor area (m^2)	Floor area > threshold (m^2)	Percentage floor area > threshold (%)	Average illumination (%)
00000001	Room 002	0	15.975	6.101	**38.2**	126.271

Rooms not included in the analysis

Room ID	Room name	Reason
00000000	Room 001	Not selected for inclusion in report
00000002	Room 003	Not selected for inclusion in report

Things to consider:

Increase amount of **glazing** (assess **trade-off** with energy consumption)

Evaluate size and shape of glass (glass **above** 2.3m (7'6") has **greater impact**)

Select a **glass type** with a different **visible transmittance** (Tvis)

Evaluate other daylighting metrics such as **glare**

Calculation Data

Location: London Weather Centre, United Kingdom(51.54 N, 0.16 W)
Calculated: 26 Nov 2014 at 11:37
Sky Model: CIE Standard Overcast Sky
Working plane height: 0.850m
Grid Size: 0.250m
Illuminance Threshold (%): 1.000
Light Penetration: No light penetration through internal windows

Daylight Analysis

Integrated Environmental Solutions Limited

Analysis Overview

Analysis Comparison (against previous assessment)

	Total	Comparison (with previous)
Daylight levels (lux)	112.367	No previous
Percentage area above threshold (%)	35.0	No previous

Analysis History

Date / Time	Area-weighted average daylight factor (%)	Area-weighted average illumination (lux)

Threshold Calculation

Building Results

Total floor area (m^2)	Total floor area above threshold (m^2)	Percentage floor area above threshold (%)	Area-weighted average daylight factor (%)	Area-weighted average illumination (lux)
15.975	5.598	35.0	0.9	112.367

Rooms included in the analysis

Room ID	Room name	Working plane	Floor area (m^2)	Floor area > threshold (m^2)	Percentage floor area > threshold (%)	Average illumination (%)
00000001	Room 002	0	15.975	5.598	**35.0**	112.367

Rooms not included in the analysis

Room ID	Room name	Reason
00000000	Room 001	Not selected for inclusion in report
00000002	Room 003	Not selected for inclusion in report

Things to consider:

Increase amount of **glazing** (assess **trade-off** with energy consumption)

Evaluate size and shape of glass (glass **above** 2.3m (7'6") has **greater impact**)

Select a **glass type** with a different **visible transmittance** (Tvis)

Evaluate other daylighting metrics such as **glare**

Calculation Data

Location: London Weather Centre, United Kingdom(51.54 N, 0.16 W)
Calculated: 26 Nov 2014 at 11:42
Sky Model: CIE Standard Overcast Sky
Working plane height: 0.850m
Grid Size: 0.250m
Illuminance Threshold (%): 1.000
Light Penetration: No light penetration through internal windows