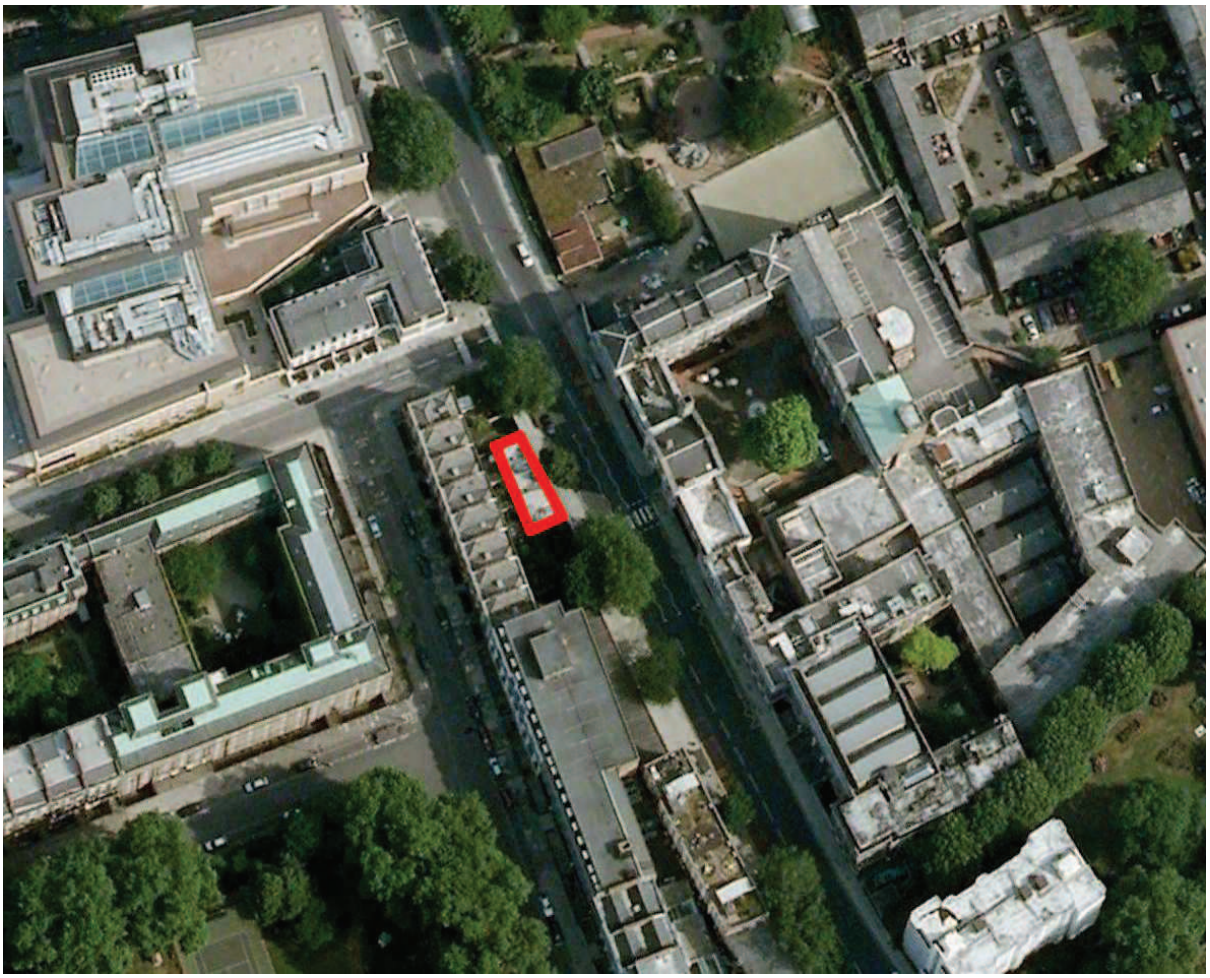
european urban architecture

195 – 199 GRAYS INN ROAD
LONDON WC1X 8UL

SUMMARY HERITAGE / DESIGN AND ACCESS STATEMENT
REV H

JULY 2014



INDEX

Site address	195-199 Grays Inn Road
Proposal development	3no 2-storey terraced dwellings

This application compromises the following documents:

AL(00)01 Site plan
AL(00)02 Location plan

AL(00)03 Ground Floor plan EXISTING – REV C
AL(00)04 Roof plan EXISTING – REV C
AL(00)05 Front elevation EXISTING – REV C
AL(00)06 Section AA EXISTING – REV C
AL(00)07 Section BB EXISTING – REV C
AL(00)08 Rear Elevation EXISTING – REV C
AL(00)09 Side SouthEast Elevation EXISTING-Rev C
AL(00)10 Side NorthWest Elevation EXISTING-Rev C

AL(00)11 Ground Floor plan – Resi layout PROPOSED – REV C
AL(00)12 First Floor plan PROPOSED – REV C
AL(00)13 Roof Plan PROPOSED - REV C
AL(00)14 Front elevation V4 - PROPOSED - REV C
AL(00)15 Rear elevation PROPOSED - REV C
AL(00)16 Proposed South East elevation PROPOSED-Rev C
AL(00)17Proposed North West elevation PROPOSED-Rev C
AL(00)18 Section AA PROPOSED-Rev C
AL(00)19 Section BB PROPOSED-Rev C

AL(00)30-AL(00)35 LTH Compliance - REV C

AL(00)40 Ground Floor Plan - Drainage PROPOSED - 1.100

AL(00)50 Typical bay detail AA - REV C
AL(00)51 Typical bay detail BB - REV C
AL(00)51 Bike store detail BB - REV -

Visualisations – Rev C

Appendix 5.9. Planning statement

Appendix 5.10. Structural statement - Michael Horrigan associates

Appendix 5.11. Sustainable statement – Mc Coopers

Appendix 5.12 Heritage Impact Assessment – Kristian Kaminski

Appendix 5.13 Statement on the loss of retail land use – David Shapiro

Appendix 5.14 Arboriculture Statement

1. INTRODUCTION and SUMMARY

1.1. This is a proposal to re-develop the application site to provide 3no. 2-storey C3 terraced dwellings

1.2. Of particular importance to the consideration of the appropriate development for this site is its important historic context. The summary heritage statement below explains that importance and - in this context - why a building of the proposed height, bulk and character as proposed is appropriate for this site. In summary, the design takes its cue from historical precedent to create what appears to be 3 tall shops as was likely to have originally stood on the site.

1.3. The proposal is for a new development on the footprint of the existing building, save for the rear extension to 199 Gray's Inn Road, as that is included within the listing for 1 – 8 Mecklenburgh Street. There are no works proposed to that listed part. The rest of the proposal site is not listed.

1.4. There is no further demand for any shops in this locality, as has been explained in Alliance Planning's Support Statement. In response to LB Camden's pre-application feedback, evidence to demonstrate compliance with the test as set out in DP10 e) has been provided by the former agent, Fresson & Tee Charters surveyors, and can be found appended to this application. Items covered are as follows:

(i.) Where and when the premises were advertised
(ii.) How long the premises where advertised for and whether this was over a consistent period
(iii.) Rental Prices quoted in the advertisement
(iv.) Copies of adverts
(v.) Estate agents details
(vi.) Feedback from interested parties
(vii.) Consideration of alternative retain uses and layouts

The loss of undesirable retail space is balanced against the benefits of providing 3no. new two bed dwellings. This mix is proposed on Camden's recommendation, in keeping with the provisions of DP5, which outlines the LA's priority to increase supply of medium size and self-contained dwellings. The creation of under provided, high demand C3 is presented as further justification for the loss of retail space, as required by the terms of DP10 f).

1.5 The appropriate height and bulk of the building generated from character and listed building setting considerations allows for two stories of accommodation, although the lower floor needs to be sunk by a few steps, so that one enters from the street at a quarter landing level in between the two floors. Notwithstanding these levels there is no prejudice to the quality of disabled access to the 2 floors since stairs serving the upper ground floor have the required "easy going" pitch prescribed by Life Time Homes for manageable ambulant access.

1.6 The current building has a membrane covered flat roof. The proposal would incorporate a sedum green roof, thus enhancing both the visual amenity from the residential windows to the Mecklenburgh Terrace to the rear, as well as enhancing the biodiversity the site and SUDS at the site.

1.7 This proposal will not have any impact on the neighbour's amenity:

(i.) The rear part of the bulk of the building at roof level is chamfered away in order to create the envelope that has no impact at all on the daylight enjoyed by the residential windows to the Mecklenburgh Terrace to the rear. This chamfer in the ceiling / wall junction of the first floor accommodation does not impact on the quality of use of that accommodation.

(ii.) The increased height has no impact on any sunlight enjoyed by the occupants of the adjacent buildings. This building is east of those neighbours and any very low early morning sun would in any event already be blocked by the Eastman Dental Hospital opposite.

(iii.) The layout of the building is designed so that its windows look out to the front of the building or else onto private courtyard space. A window is provided to the side elevation of no.199 but is significantly set back from the boundary, orientated at a 90 degree angle to the rear of the neighbouring terraces. The development has no impact on the neighbours' habitable room privacy.

1.8. In conclusion, the proposal:

(i.) replaces an unneeded and unprotected shop with much needed residential accommodation,

(ii.) makes best use of the site to create quality accommodation,

(iii.) enhances the character of the conservation area and the setting of the listed buildings and

(iv.) has no adverse impact on neighbours' amenity.

It is a fitting development for its complex context.

2. DESIGN IN CONTEXT

2.1 The heritage Assets

This area of Camden has a variety of historic buildings and open spaces. The site lies within the Bloomsbury Conservation Area and is shares a rear boundary with the listed buildings of 1 – 8 Mecklenburgh Street. Significant weight should be therefore being given to this historical context in the consideration of any proposal for this site.

Behind it, is the rear of the Grade II listed terrace of severe plain townhouses facing Mecklenburgh Street. The listing is primarily concerned with the front of the properties, which have retained their original cast iron railings and balconies, and makes no reference to the rear.

In front of it is Eastman Dental Hospital, constructed in the 1920s which is of a stripped Beaux Arts neo-classical style. There is a listed grade II cattle trough on the pavement outside no 199 Grays Inn Road.

Grays Inn Road is a wide busy road of a more varied character than the quieter surrounding streets, created by piecemeal development over the 19th & 20th centuries of a coarser grain. There is also a greater variety of materials, particularly in the later development, which employ stone, glass, steel and concrete, although the predominant material is of London stock brick.

Immediately adjacent to the subject building are large scale advertising billboards which make a substantial negative contribution to the character and appearance of the conservation area and the setting of the listed buildings.

2.2 History of the Site

Three buildings have existed on the site from before 1870, as can be seen on the OS map of that year; at this stage only that at no 195 joined the Mecklenburgh Street town houses with a small lean-to enclosure. They remained separated from the lean-to rear extensions to the houses behind no 197 & 199 at this stage but were joined by time of the 1896 OS map. A 1946 aerial photograph shows three buildings, separated by party wall parapets at roof level. [Appendix 5.1]

These buildings were shops as was commonly built after around 1850 adjacent to earlier townhouses as the economic conditions for the latter declined and for the former improved. The 1882 Post Office Directory, attached at appendix 4.2 shows that at this date, no. 195 was a tobacconist, no. 197 was a shirt and collar dresser and no.199 was a tobacconist.

In 1891 a 12 year old boy (Walter Richard Curtis, b.1879) is recorded as living at 197 Grays Inn Road. This evidence of living accommodation at this address, housing a boy presumably as part of a family group, suggests that a taller building existed on the site at this time with living accommodation above the shop below.

No historic photographs of this section of the street are at the Camden archive at Holborn library, but one can reasonably infer what may have been the kind of character of these shops from historical photographs and the many other surviving examples in London. [See appendix 5.3].

2.3 Character and Listing Status of the Current Building

Significant alterations have taken place to the current building on the site, which has amalgamated the three distinctly separate shops into one showroom. The front elevation is now a late 20th century aluminium framed structure of full height glazing and a continuous flat fascia across the whole. There is no semblance of the original historical structure left, and what now exists has a glazed, bland and

horizontal emphasis that is totally at odds with its precedents and the surrounding context. As such, it makes a negative contribution to the character and appearance of the conservation area and the setting of the listed structures surrounding it.

The conservation area statement was clearly concerned with precisely this situation when it referred to the area having been "blighted by vacancies in commercial uses and inappropriate signage, replacement windows and shop-fronts."

The map on Camden's website identifies the extent of the listing to the Mecklenburgh Street town houses and shows that the small lean-to structures to the rear of 195 & -197 Grays Inn Road, within the ownership of this building, and which adjoin the rear extensions to the Mecklenburgh Street houses are not part of the listed structures. However the small lean-to structure to the rear of 199 Grays Inn Road is shown as being included within the listing (See Appendix 4.4). This proposal does not include making any changes at all to this listed structure, and the application red line boundary excludes it. As such, whereas the proposal to be brought forward in a planning application does need to be considered in the setting of those adjacent and nearby listed structures, no listed building consent would be required.

2.4 Proposal Design Rationale

The evidence of the history of the site suggests that the original buildings were likely to be substantial shops with living accommodation above. The front elevation of these buildings has therefore been designed in a manner that is derived from mid-19th century shops. Shop fronts of this era hugely varied in their individual character within a recognisable vocabulary of stall riser, shop front, clerestory, fascia, ordered by a hierarchy of pilasters each side of the door and windows and separating adjacent shops.

This genre has been employed within the design of the proposal, to make a composition with strong vertical rhythmic definition in place of the bland horizontal existing one; a theme which the conservation area statement considers to be typical.

Although the height of the proposal is likely to be of a similar height to that incorporating a mezzanine living floor which originally existed, although taller than that of the current building. The existing shop, adjacent billboards on the building line and other structures beyond combine to make a varied height of tall single storey mixed character facades.

Seen in this context, the height of the proposal sits comfortably within the overall character of tall single storey structures of which it is part, and the increase in height by comparison with that which exists (which is lower than its neighbouring billboard) appears to be negligible. The impact of the increased height would be barely perceptible by the passerby.

In summary, this proposal removes a building that makes a negative contribution to the character and appearance of the conservation area and from the setting of the listed structures surrounding it. The proposal replaces this building with three traditional style shops likely to closely resemble those which previously existed on the site. Consequently, the proposal would enhance the character and appearance of the conservation area and the setting of the listed buildings.

3 DESIGN PRINCIPLES

3.1 Life Time Homes

Policy DP6 of the Development Policies Document states that all housing must meet Lifetimes Homes standards. The justification below outlines the proposal's compliance with the requirements.

The proposed building will comprise a lower ground floor 750 mm below access level, and one upper ground floor plan in order to achieve the best use of the site within the appropriate bulk.

It is possible to achieve full compliance with lifetime home criteria by providing a 'easy-going' pitch stair.

Table below outlines the levels of compliance with Lifetime Homes, and includes our justification for achievability for each criterion.

Read in conjunction with:

AL(00)30 Ground Floor Plan LTH Compliance – HOUSE 195
AL(00)31 Frist Floor Plan LTF Compliance – HOUSE 195
AL(00)32 Ground Floor Plan LTH Compliance – HOUSE 197
AL(00)33 Frist Floor Plan LTF Compliance – HOUSE 197
AL(00)34 Ground Floor Plan LTH Compliance – HOUSE 199
AL(00)35 Frist Floor Plan LTF Compliance – HOUSE 199

LIFETIME HOMES CRITERIA	COMPLIANCE	JUSTIFICATION
1 Parking (width or widening capability)	N / A	Car free status, in accordance with Camden policy CPG7 and DP18.
2 The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping.	N / A	Not applicable. See Criterion 1
3. The approach to all entrances should be level or gently sloping.	Yes	The approach to the entrance is the public pavement.
4. All entrances should be illuminated, have level access over the threshold and have effective clear opening.	Yes	Diffused luminaries on the front entrance. Level access from the street. 800 mm clear width
5. Communal stairs should provide easy access and where homes are reached by a lift, it should be fully accessible.	N / A	No communal stair/lift requirement. Each dwelling is self-contained.
6. The width of the doorways and hallways should conform to the specifications in the next column.	Yes.	Minimum door and hallway widths as specified by the London design standards will be met.
7. There should be space for turning a wheelchair in dining areas and living rooms and adequate circulation space	Yes.	Wheelchair adaptable standards will be provided with adequate turning circles for ease of circulation and manoeuvrability.

for wheelchairs elsewhere.		Clear width of 750 mm provided at both sides and foot of the bed.
8. The living room should be at entrance level.	Yes, with qualification.	In accordance with LTH guidance, the entrance level will be considered as the upper ground storey which is accessible in each dwelling via a short flight stair with easy-going pitch.
9. In houses of two or more storeys, there should be space on the entrance level that could be used as a convenient bed-space.	Yes, with qualification.	Space for a temporary bed space will be provided on the upper ground accessible level
10. There should be a wheelchair accessible entrance level WC, with drainage provision enabling a shower to be fitted to be fitted in the future.	Yes	An accessible WC will be provided at the upper ground accessible level
11. Walls in bathrooms and toilets should be capable of taking adaptations such as handrails.	Yes	Bathroom walls will be sufficiently capable of firm fixings.
12. The design should incorporate provision of a stair lift and a suitably identified space for a through-the-floor lift from the ground to the first floor.	Yes	Space will be allocated to accommodate future lift provision
13. The design should provide a reasonable route for a potential hoist from a main bedroom to the bathroom.	Yes	The design does provide a route for this and the structure will be designed to accept any future installation of hoists.
14. The bathroom should be designed to incorporate ease of access to the bath, WC and wash basin.	Yes	The bathrooms will be provided with an ease of access WC on the same level as the main bedroom.
15. Living room should include glazing that starts no higher than 800mm above floor level.	Yes	Windows sills will not be higher than 800 mm above floor level. Windows will have easily accessible ironmongery.
16. Switches, sockets, ventilation and service controls should be at a height usable by all (i.e. between 450 and 1200 mm from the floor).	Yes	All service controls will be within specified by London design standard

3.2 Design Standards

The scheme proposes to meet Camden's demand for medium scale accommodation by adopting a terraced arrangement of self-contained units spread over two levels. Room sizes and storage provision are planned in conformity with Camden's Planning Guidance, CPG2.

A generously glazed front facade furnishes all units with diffuse light and sky views. No windows are proposed to the rear elevation which maximises privacy for incoming occupiers and ensures that there is no impact on overlooking of habitable space within the neighbouring Mecklenburgh terraces. A 600mm frosted light strip roof will be accommodated within the chamfered section of roof at the rear. This will ensure that each kitchen dining area is served with sufficient levels of natural light.

At the lower ground level, existing extensions to nos. 195 and 197 will be retained and converted to form open air lightwells. Existing windows to the neighbours' garden would be blocked. The resulting exterior space can be utilised as a visual amenity or so as to provide useful outdoor storage space. The lower ground level of no. 199 is served by a north west facing window, inset from the boundary line. Privacy will be maintained by inward opening full height shutters.

Cycle parking is accommodated under the stair cupboard in the three houses. See drawing AL(00)52 Bike store detail.

3.3. Daylight and sunlight

The Site Layout Planning for Daylight and sunlight states:

> *2.1.8. Daylight provision in new rooms may be checked using the average daylight factor (ADF). The ADF is a measure of the overall amount of daylight in a space. BS 8206-2 Code of practice for daylighting, recommends an ADF of 5% for a well day lit space and 20% for a partly daylight space. Below 2% the room will look dull and electric lighting is likely to be turned on. In housing BS 8206-2 also gives minimum values* ***of ADF of 2% for kitchen, 1.5 % for living rooms and 1% for bedrooms.***
>
> *2.1.22. To check that adequate daylight is provided in new room, the ADF may be calculated and compared with the recommendations in BS 8206-2 Code of practice for daylighting.*

The ADF is being calculated for all the new rooms, including bedroom and living kitchen dining.

In the three new small bedrooms the results are as following:

	ADF	Required
HOUSE 195 – Bedroom 2	2.30 %	**1 %**
HOUSE 197 – Bedroom 2	1.47 %	
HOUSE 199 – Bedroom 2	2.50 %	

In the master bedroom the results are as following:

	ADF	Required
HOUSE 195 – Bedroom 1	2.83 %	**1 %**
HOUSE 197 – Bedroom 1	2.90 %	
HOUSE 199 – Bedroom 1	2.94 %	

The ADF was calculated for the living, dining and kitchen in House 195 (worse scenario) and the result is as follows:

	ADF	Required
HOUSE 195	2.79 %	**1.5-2 %**

See appendix 5.7 for full details.

It has been demonstrated that the amenities enjoyed by the adjoining residents and other neighbouring building occupiers are fully protected and enhanced, and therefore this development satisfies Core Strategy Policy CS5 (managing the impacts of growth) and DP 26 (managing the impact of development on occupiers and neighbours).

4 IMPACT ON NEIGHBOURHOOD AMENITY

The section demonstrates how the impact of this development on adjoining residents and other neighbouring building occupiers is fully protected in terms of their daylight, sunlight and privacy.

4.1 Community liaison

Prior to the submission of this application information regarding the development was circulated to:

a. The chairman of Mecklenburgh Square Residents Association.
b. The neighbouring residents of nos. 3, 4, 5, 6 and 7 Mecklenburgh Street.
c. Bloomsbury Conservation Area Advisory Committee.

a + b) Of the immediate neighbours and Residents Association there was only one respondent, the freeholder of no. 4 Mecklenburgh Street. The occupiers have voiced a general objection to the principle of development however no specific grounds have been sited. In response to this feedback we have prepared a package of information demonstrating that the proposed development has no negative impact on their residential amenity. We have invited them to discuss the matter further should their concerns remain.

c) The chairman of the Bloomsbury Conservation Area Advisory Committee responded as follows:

> *"In this particular location we have no great problems with the change of use from commercial to residential even though generally we oppose this.*
> *However, we do feel that if the use of the proposed buildings is residential then it would be best if the facade expressed this and it looked like housing rather than being disguised as shopfronts."*

We recognise BCAACs position and would advocate a similar approach ourselves were it not for the specific heritage characteristics of the site. Detailed justification of the shopfront facade is set out in the accompanying Heritage Statement.

4.2 Daylight

The height, bulk and shape of the proposal have been designed to have a minimal impact on the amount of daylight currently being received by the residential habitable rooms within the adjoining terrace at 1-8 Mecklenburgh Street.

The sunken lower ground level permits an additional storey of accommodation within an overall height increase of only 1 m. The impact of this increase is greatly diminished by the treatment of massing to the rear of the building. A strip of pitched roof chamfers the top edge of the development which acts to reduce the disposition of bulk along the rear boundary. The rear parapet will be reconstructed to its current existing level and the perception of additional sense of enclosure will be negligible.

1) Daylight angle 25 °

The Site Layout Planning for Daylight and sunlight states:

> *2.2.5. If this angle less than 25 for the whole of the development then it is unlikely to have a substantial effect on the diffuse skylight enjoyed by the existing building.*

Figure 4.1: Existing and proposed impact on daylight levels**: lower ground floor is not affected**

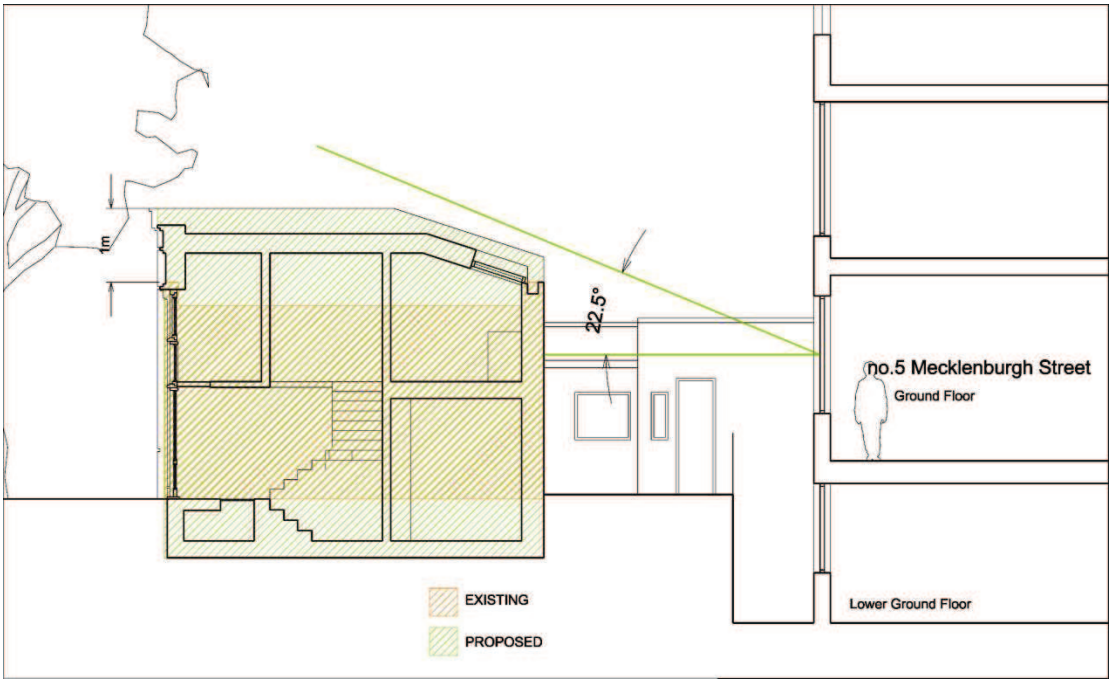
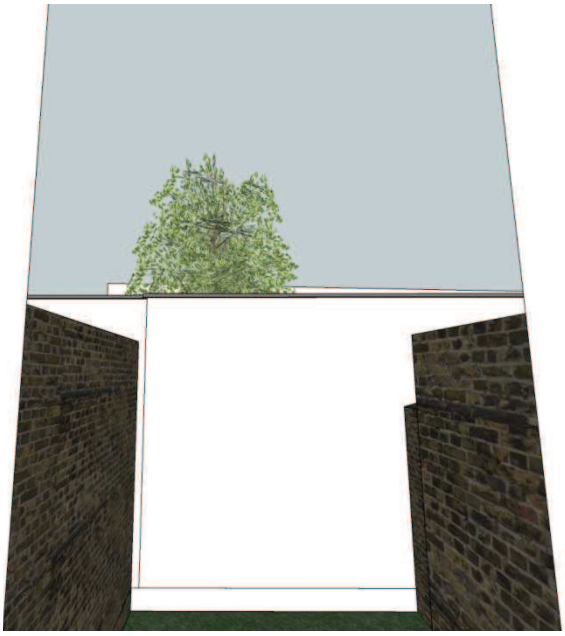
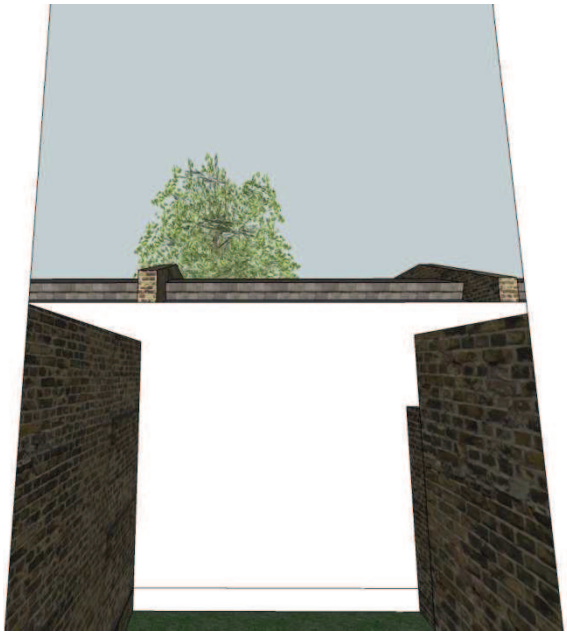


Figure 4.2: Existing and proposed view from no.4 Mecklenburgh Street.

Existing



Proposed



2) **Vertical Sky Component**

A BRE Vertical Sky Component test has been produced to demonstrate that the windows at the back of Mecklenburgh Street do not suffer from any material impact to daylight.

The VSC of the proposed scheme is greater than 27% which indicates that a sufficient amount of sky light will still reach the windows of the existing building.

The Site Layout Planning for Daylight and sunlight states:

> *2.2.7. If the VSC is greater than 27 % then enough skylight should be reaching the window of the existing building. (…) If the VSC, with the new development in place, is both less that 27% and less than 0.8 times its former value, occupants of the existing building will notice the reduction in the amount of skylight.*

Accordingly, the proposal will have no material impact on the daylight levels to the rear of Mecklenburgh Street.

See appendix 5.5 for full details

4.2. Sunlight

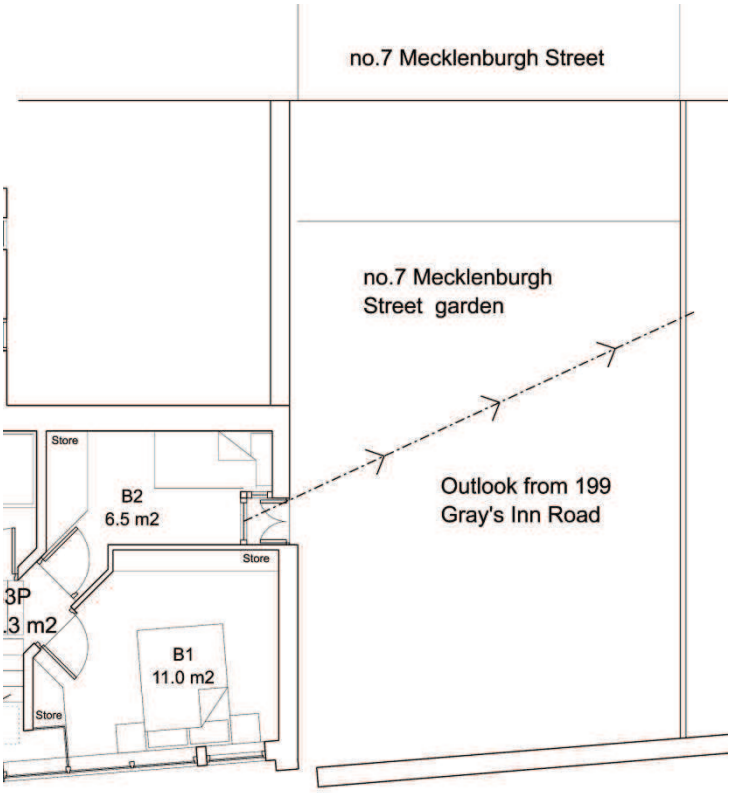
A sunlight study has been carried out to assess the impact of the development on the extension of Mecklenburgh Street. The key dates chosen for the tests are the summer and winter solstices and equinoxes; 20th March, 22nd September, 21st June and 21 December. We have chosen those dates as a reference to show the amount of sun that reach extensions garden in different times of the year.

See Appendix 5.6 for full details.

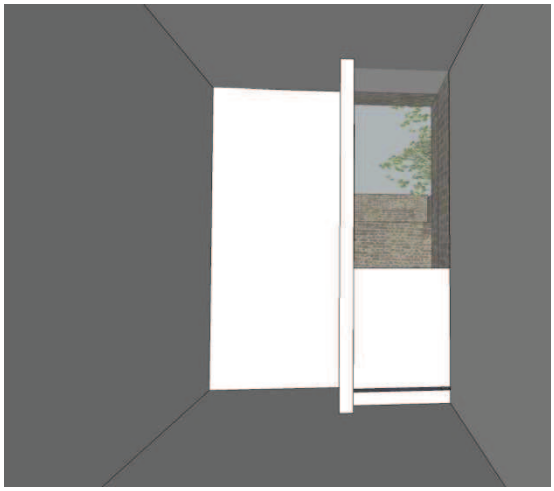
4.3. Overlooking

There is no impact at all on overlooking to the habitable rooms of the rear terraces. Proposed rear windows in units 195/197 look onto generous lightwells which are, in both cases, fully enclosed by existing brick walls. No.199 is served by a north west facing window. Overlooking of no. 7 Mecklenburgh is prohibited due to the orientation of the window being at 90 degree angle to the neighbouring rear elevation. Its positioning within a setback alcove tightly limits the field of view onto the adjacent garden (which is already heavily overlooked by neighbouring terraces).

Figure 4.3: Overlooking of no.7 Mecklenburgh Street, view from the bedroom.



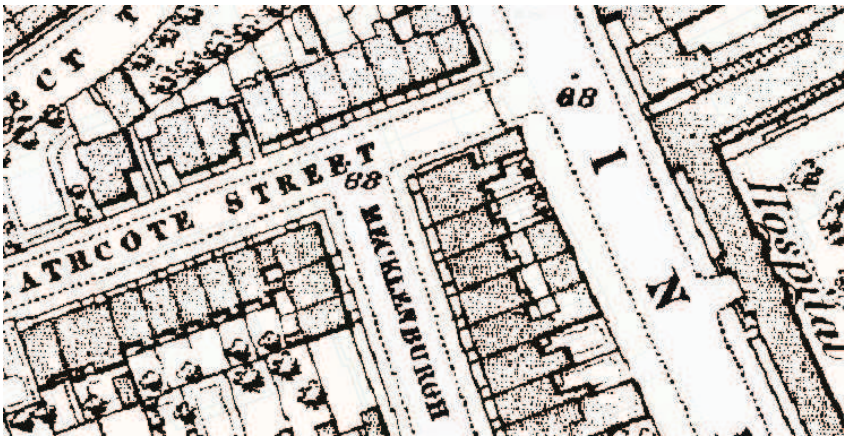
No.199 Bedroom Plan



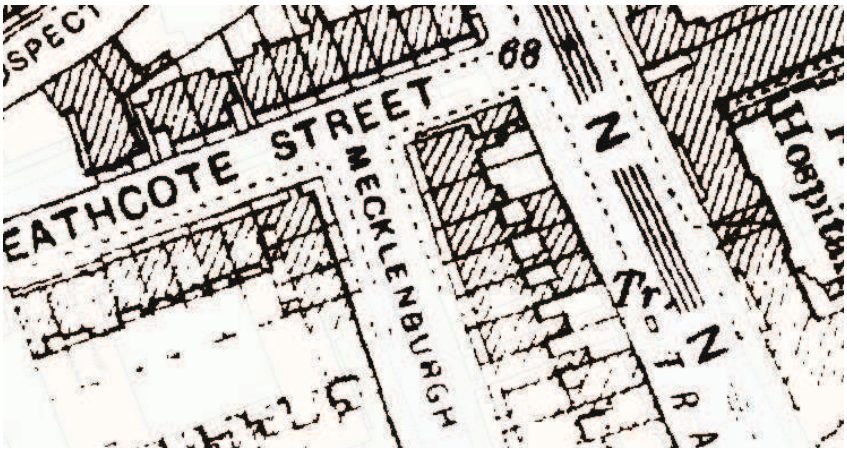
5 APPENDICES

5.1. OS map

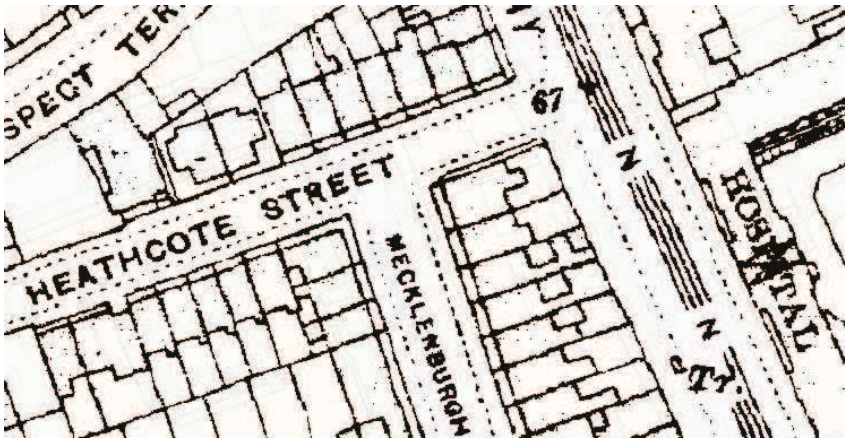
1870 OS Map



1896 OS Map



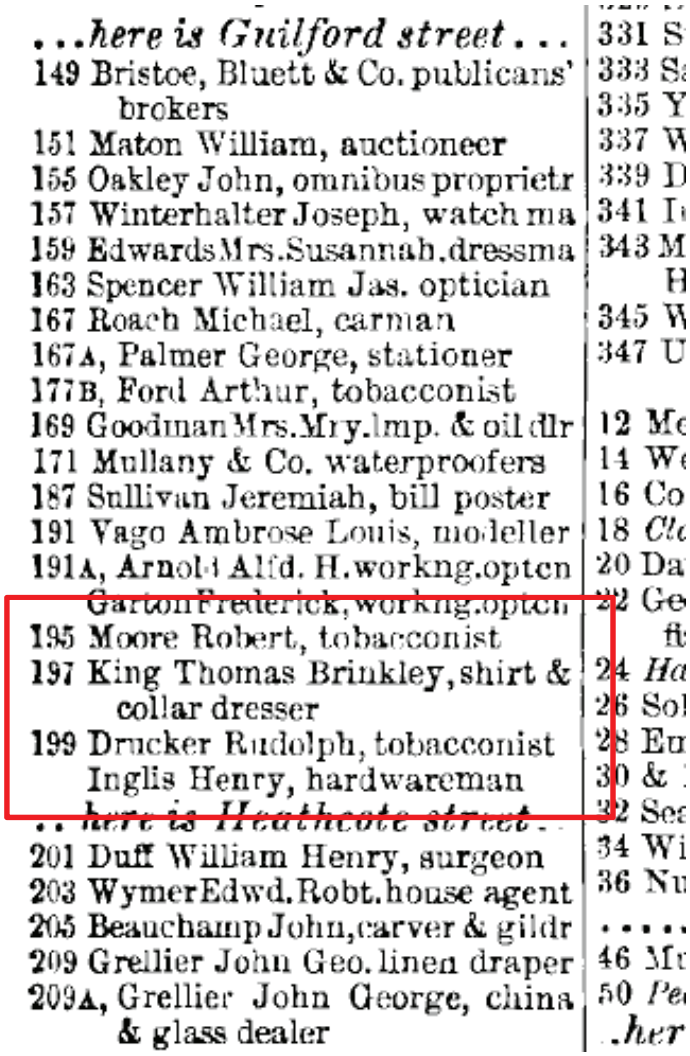
1916 OS Map



1946 Photo

5.2. 1882 Post Office Directory

195 - Tobacconist
197 - Shirt and collar dresser
199 - Tobacconist

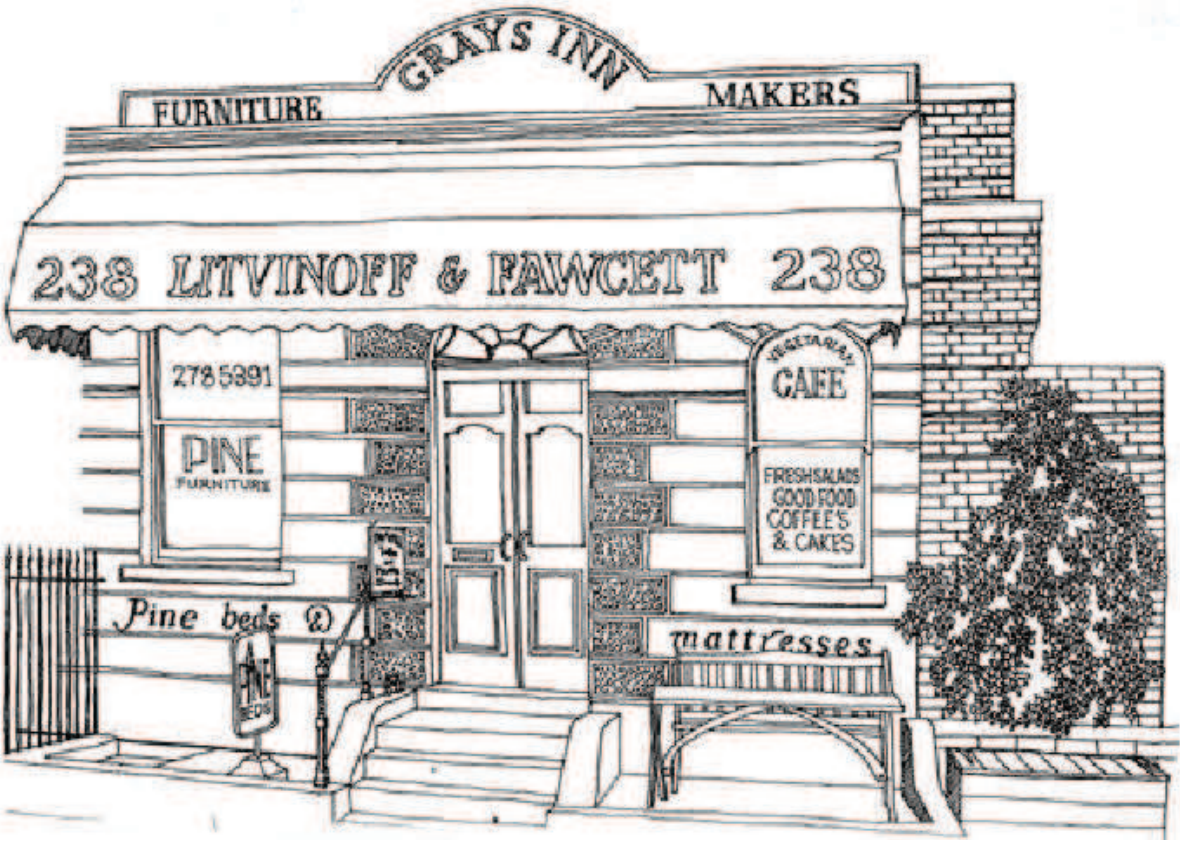


...here is Guilford street...
149 Bristoe, Bluett & Co. publicans' brokers
151 Maton William, auctioneer
155 Oakley John, omnibus proprietr
157 Winterhalter Joseph, watch ma
159 Edwards Mrs. Susannah, dressma
163 Spencer William Jas. optician
167 Roach Michael, carman
167A, Palmer George, stationer
177B, Ford Arthur, tobacconist
169 Goodman Mrs. Mry. lmp. & oil dlr
171 Mullany & Co. waterproofers
187 Sullivan Jeremiah, bill poster
191 Vago Ambrose Louis, modeller
191A, Arnold Alfd. H. workng. opten
Garton Frederick, workng. opten
195 Moore Robert, tobacconist
197 King Thomas Brinkley, shirt & collar dresser
199 Drucker Rudolph, tobacconist
Inglis Henry, hardwareman
...here is Heathcote street...
201 Duff William Henry, surgeon
203 Wymer Edwd. Robt. house agent
205 Beauchamp John, carver & gildr
209 Grellier John Geo. linen draper
209A, Grellier John George, china & glass dealer

5.3. Historical photographs

Kino's Cross Bridge C1912 & 2013 (3/3)


TOILET CLUB
ROWCLIFFE
Rowntree's
PLAYERS
MEDIUM · NAVY · CUT
CIGARETTES


GRAYS INN
FURNITURE
MAKERS
238 LITVINOFF & FAWCETT 238
2785391
PINE
FURNITURE
CAFE
FRESH SALADS
GOOD FOOD
COFFEE'S
& CAKES
Pine beds
mattresses


AMERICANA COSMETICS
Report a problem


CLOSING DOWN SALE
SALE....SALE.....SALE..SALE.....SALE..!
Lee's Pots
LILY'S


147
D.&A.ABRAHAMS.
147
L-DIWAN GRILL
MASTER CHEF
A

5.4. Extract from Camden website

Catherine Bond Bloomsbury CA Sub Area12 Townscape

5.5. BRE Vertical Sky Component Test

Source - "Site layout planning for daylight and sunlight: a guide to good practice, 1991, P J Littlefair"

This test has been carried out on the ground windows at the rear of no. 4 Mecklenburgh Street.
The test has been carried out on the ground floor window of no. 4 Mecklenburgh Street which will be the same scenario for nos. 5 & 6.

The test calculates the percentage of daylight that will be received by the neighbouring window, as a result of the development, by plotting the obstruction on a series of diagrams as explained below and illustrated below.

Methodology

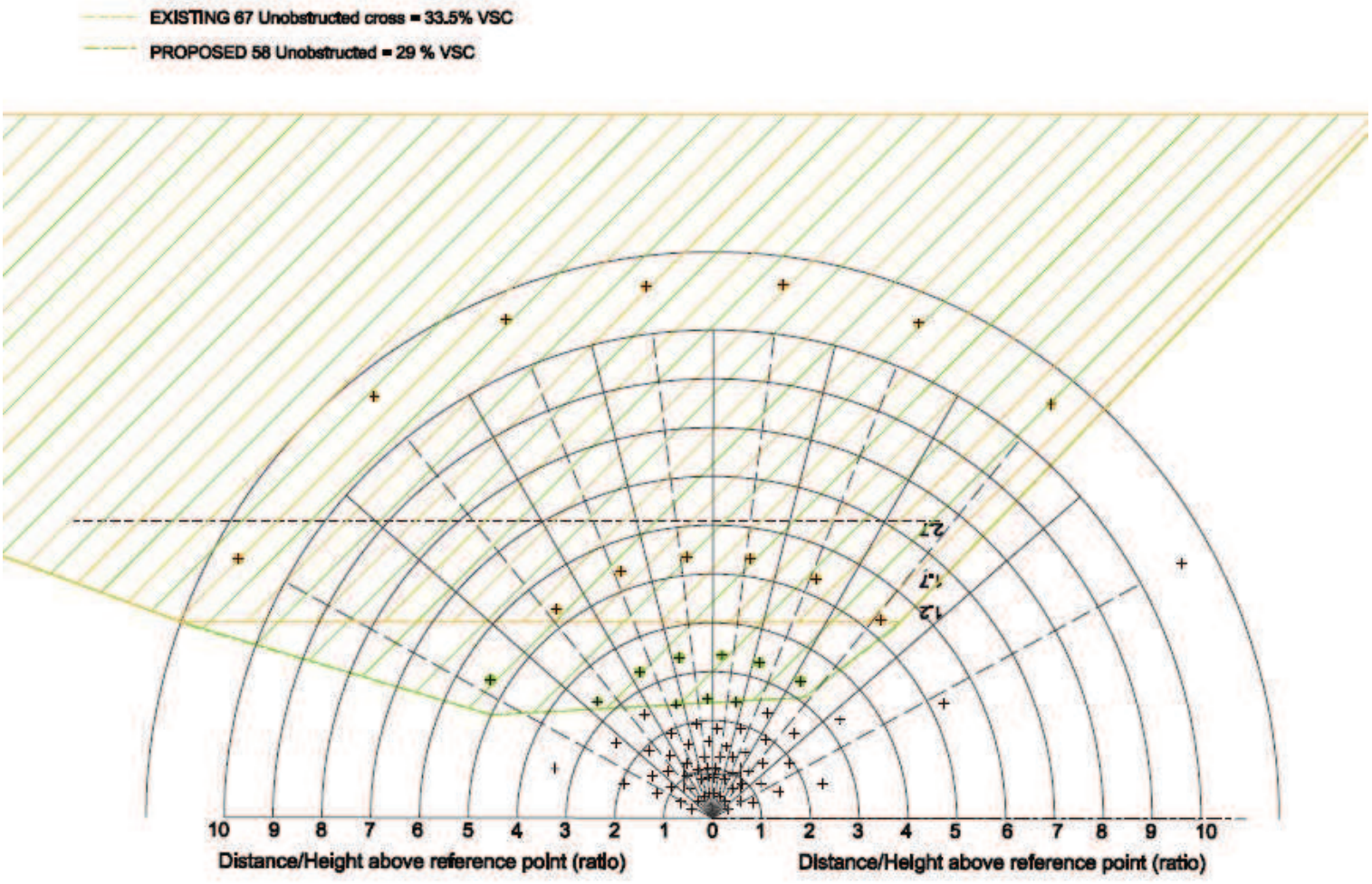
1. A plan of the proposed obstructions is marked on the Direction Finder diagram supplied by the BRE with its origin at the centre of the window in question.
2. Points are marked on the direction finder which represents the distance-height ratio of each point of the obstruction from the window.
3. The resultant graphic is placed over a Skylight Indicator diagram.
   **Note: The Skylight Indicator diagram contains 80 markers, each of which represents 0.5% of the vertical sky component*
4. The vertical sky component (VSC) is found by counting all the markers which are unobstructed by the proposal and dividing the total by two. (NB if a marker lies on the line of the obstructed boundary, then that marker may be counted as a half towards the total figure).

Results

The VSC of the existing window is 33.5%. The proposed building reduces the VSC to 29 %.
BRE guidelines state that occupants of an existing building will notice the reduction in the amount of daylight they receive if the new VSC is less than 0.8 times its former value which the test demonstrates it is not. Therefore, the minor in skylight will not materially impact upon the neighbouring properties.

The VSC of the proposed scheme is greater than 27% then enough sky light still be reaching the windows of the existing building

Diagram rev. a

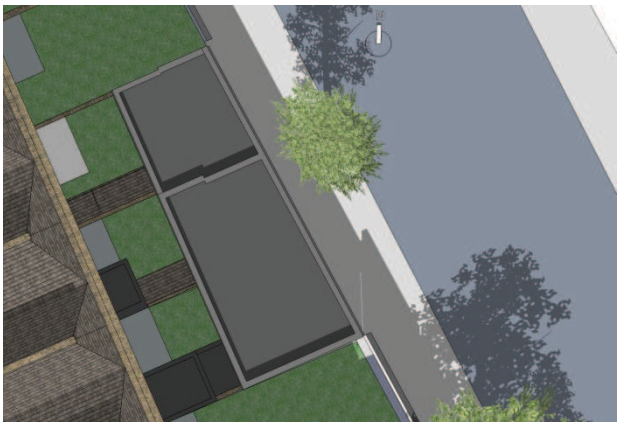


5.6. Sunpath diagrams

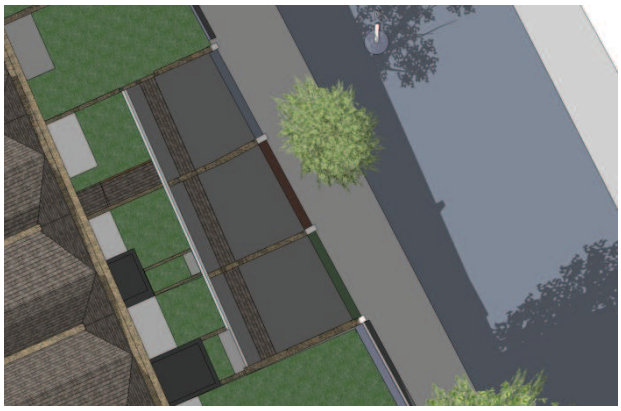
As demonstrated in the diagrams, the proposed scheme has no impact on the amount of sunlight currently being received on the rear extension of Mecklenburgh Street.

20th March 2013 Hours: 12:00 am Sunrise: 06:03 & Sunset: 18:14

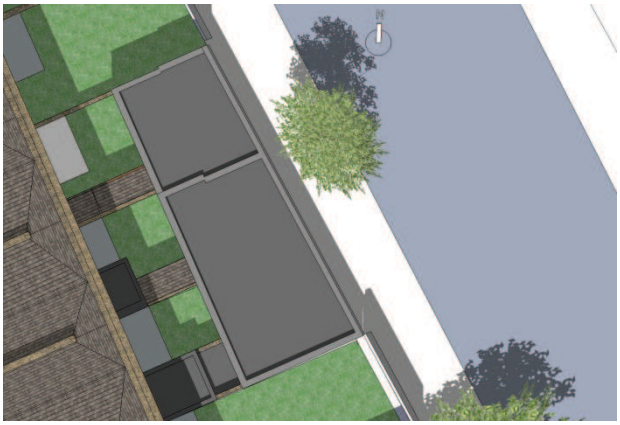
EXISTING

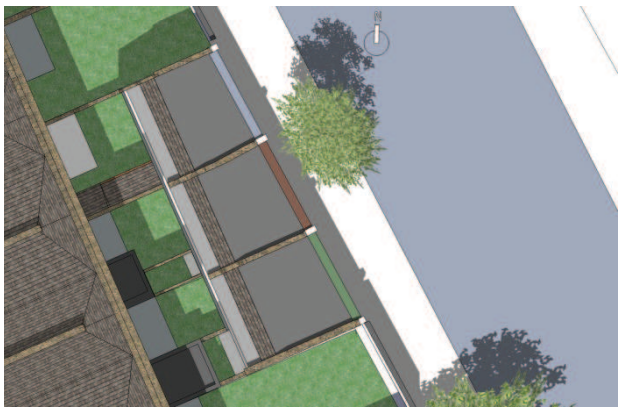


PROPOSED

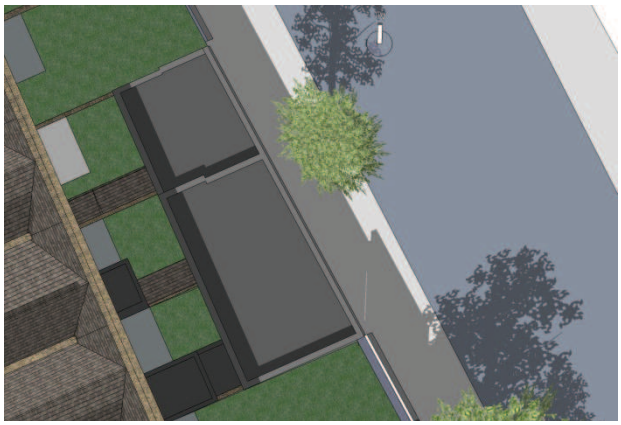


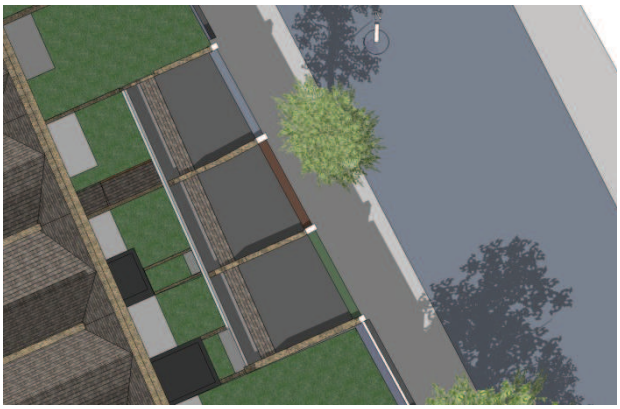
21st June 2013 Hours: 12:00 am Sunrise: 04:43 & Sunset: 21:21



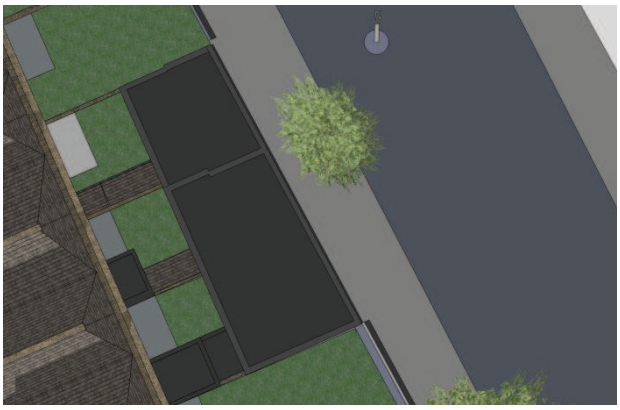


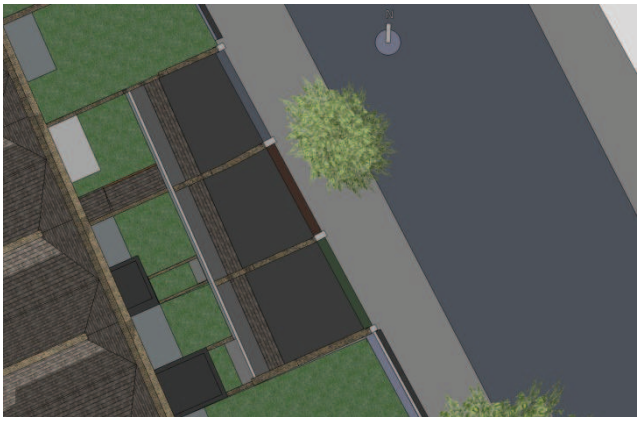
22nd September 2013 Hours: 12:00 am Sunrise: 06:47 & Sunset: 18:59





21st December 2013 Hours: 12:00 am Sunrise: 08:04 & Sunset: 15:53





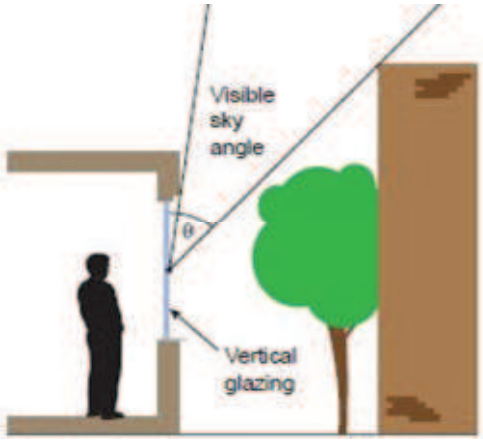
5.7. ADF Calculation

AVERAGE DAYLIGHT FACTOR

$$ADF = \frac{T \quad M \quad A_w \quad \Theta}{A\,(1-R^2)}$$

Where

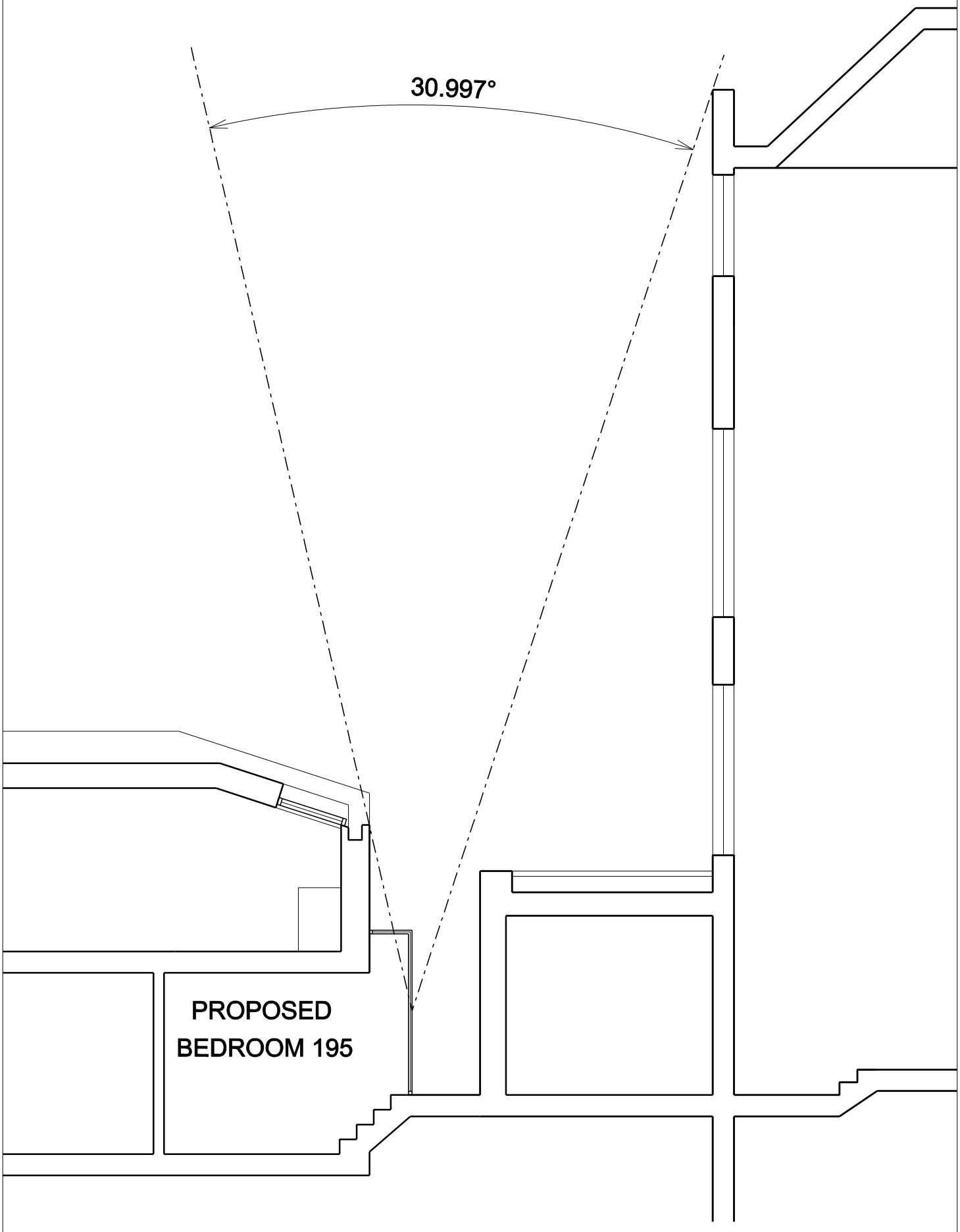
- T — Is the diffuse visible transmittance of the glazing including corrections for dirt on glass and any blinds or curtains.
  For clean, clard double glazing with a low emissitivty coating, a value of 0.68 can be used.
- M — Maintenance factor
- A_w — net glazed area of the window (m^2)
- A — Total area of the room surfaces: ceiling, floor, walls and windows (m^2)
- R — Average reflectante
  For fairly light-coloured rooms a value of 0.5 can be taken.
- Θ — Is the angle of visible sky in degrees measured from the centre of the windows, in a Figure 6 from Site Layout Planning for Daylight and Sunlight



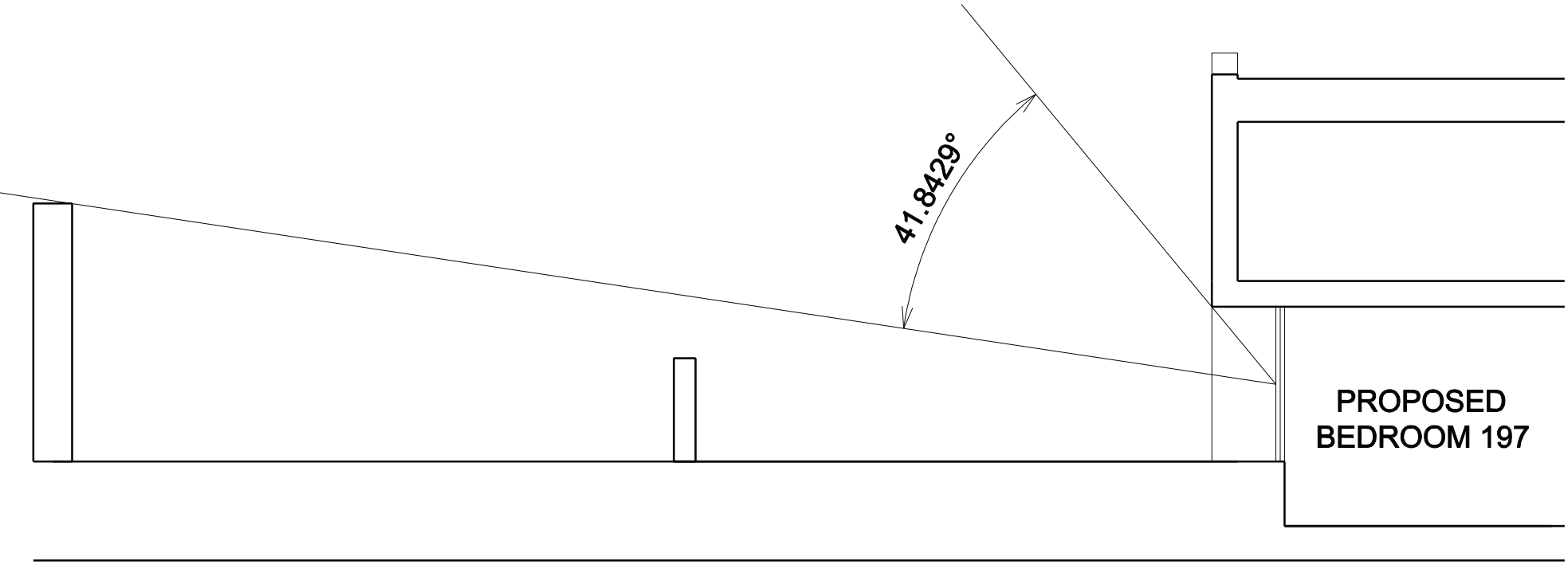
Based on the formula above we calculated the ADF for the second room of each of the houses.

The following calculations are based on tables on appendix 5.8: Tables from BS 8206-2:2008

VISIBLE SKY ANGLE PROPOSED SECOND BEDROOM
HOUSE no. 195-197

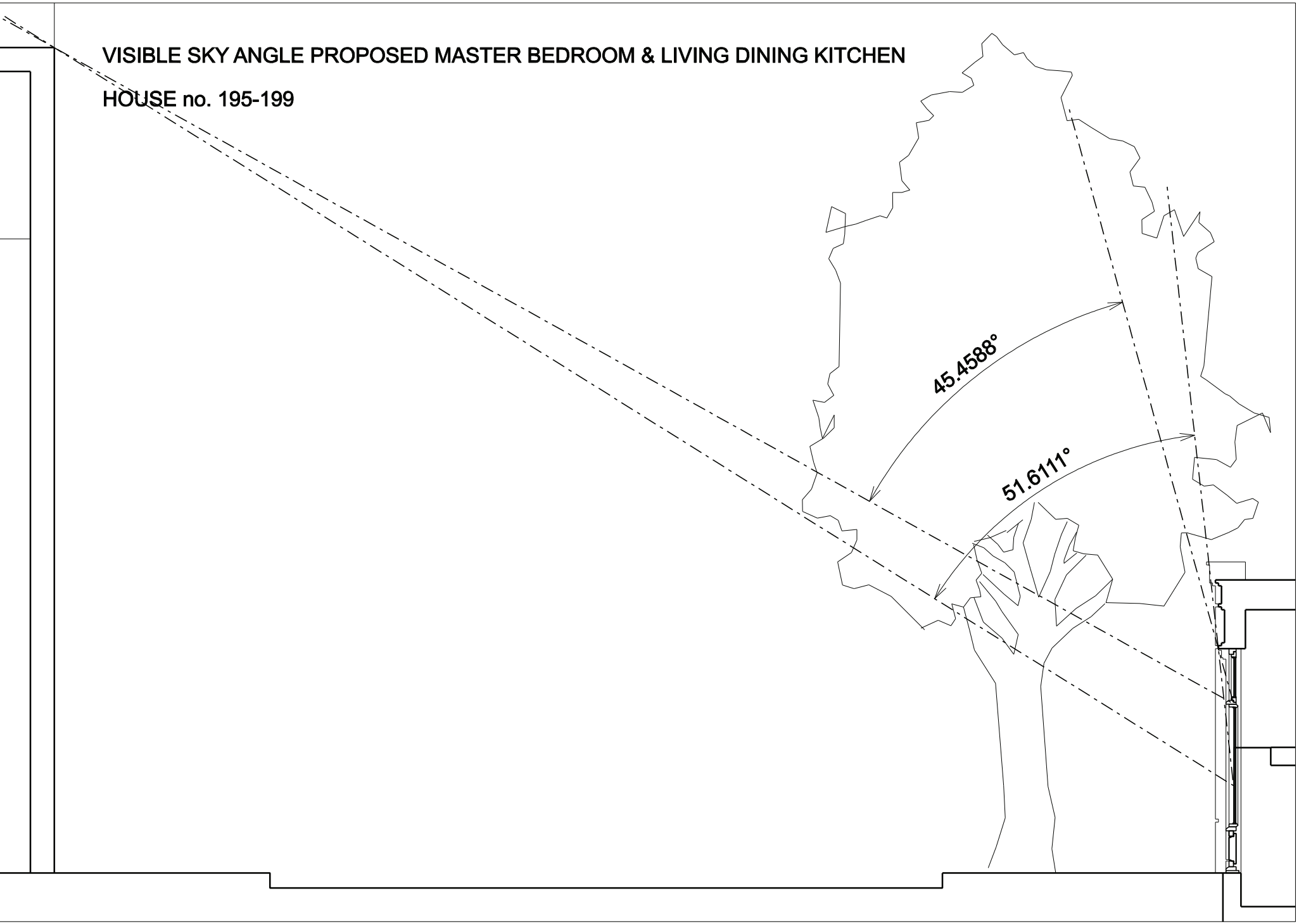


VISIBLE SKY ANGLE PROPOSED SECOND BEDROOM
HOUSE no. 199



VISIBLE SKY ANGLE PROPOSED MASTER BEDROOM & LIVING DINING KITCHEN

HOUSE no. 195-199



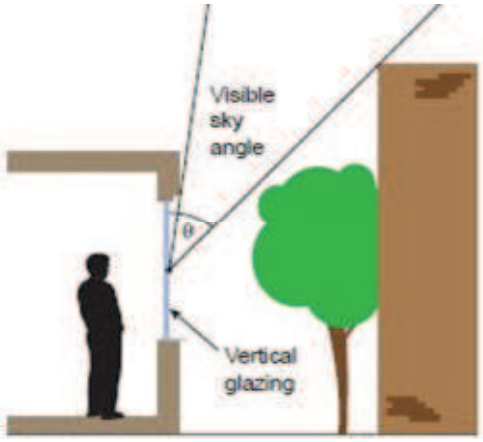
5.7. ADF Calculation

AVERAGE DAYLIGHT FACTOR

$$ADF = \frac{T \quad M \quad A_w \quad \Theta}{A\,(1-R^2)}$$

Where

- T — Is the diffuse visible transmittance of the glazing including corrections for dirt on glass and any blinds or curtains.
  For clean, clard double glazing with a low emissitivty coating, a value of 0.68 can be used.
- M — Maintenance factor
- A_w — net glazed area of the window (m^2)
- A — Total area of the room surfaces: ceiling, floor, walls and windows (m^2)
- R — Average reflectante
  For fairly light-coloured rooms a value of 0.5 can be taken.
- Θ — Is the angle of visible sky in degrees measured from the centre of the windows, in a Figure 6 from Site Layout Planning for Daylight and Sunlight



Based on the formula above we calculated the ADF for the second room of each of the houses.

The following calculations are based on tables on appendix 5.8: Tables from BS 8206-2:2008

AVERAGE DAYLIGHT FACTOR

BEDROOM 1 HOUSE no. 195

$$ADF = \frac{0.65 \quad 0.92 \quad 2.36 \quad 51.61}{53.36 \ (1\text{-}R^2)} = \frac{72.84}{25.70}$$

2.83 %

Where

T	**Transmitance of glazzing**	**0.65**		
	See Annex A			
M	**Maintenance factor**	**0.92**		
	See Annex A	8%*1%=	8%	100-8=92
A_w	**Glazed area**	**2.36**		
A	**Area of enclosing room surfaces**	**53.36**		
	ceiling	11.2 m²		
	floor	11.2 m²		
	walls	28.6 m²		
	window	2.36 m²		
	TOTAL	53.36 m²		

R **Average reflectante** **0.72**

The room reflectance is an area-weighted mean. That is, each surface area is multiplied by the corresponding reflectance, and the total of this is then divided by the total area.

The room reflectance is based on white painted wall and ceiling and carpet floor.

See Annex A			R	TOTAL
ceiling	11.2 m²	white paint	0.85	9.52
floor	11.2 m²	Carpet (cream)	0.4	4.48
walls	28.6 m²	white paint	0.85	24.31
window	2.36 m²	Window glass	0.1	0.236
				0.72

Θ **Visible sky angle** **51.61**

AVERAGE DAYLIGHT FACTOR

BEDROOM 1 HOUSE no. 197

$$ADF = \frac{0.65 \quad 0.92 \quad 2.36 \quad 51.61}{52.36 \ (1\text{-}R^2)} = \frac{72.84}{25.09}$$

2.90 %

Where

T **Transmitance of glazzing** **0.65**

See Annex A

M **Maintenance factor** **0.92**

See Annex A 8%*1%= 8% 100-8=92

A_w **Glazed area** **2.36**

A **Area of enclosing room surfaces** **52.36**

ceiling	11	m²
floor	11	m²
walls	28	m²
window	2.36	m²
TOTAL	52.36	m²

R **Average reflectante** **0.72**

The room reflectance is an area-weighted mean. That is, each surface area is multiplied by the corresponding reflectance, and the total of this is then divided by the total area.

The room reflectance is based on white painted wall and ceiling and carpet floor.

See Annex A				R	TOTAL
ceiling	11	m²	white paint	0.85	9.35
floor	11	m²	Carpet (cream)	0.4	4.4
walls	28	m²	white paint	0.85	23.8
window	2.36	m²	Window glass	0.1	0.236
					0.72

Θ **Visible sky angle** **51.61**

AVERAGE DAYLIGHT FACTOR

BEDROOM 1 HOUSE no. 199

$$ADF = \frac{0.65 \quad 0.92 \quad 2.36 \quad 51.61}{51.16 \ (1\text{-}R^2)} = \frac{72.84}{24.74}$$

2.94 %

Where

T **Transmitance of glazzing** **0.65**

See Annex A

M **Maintenance factor** **0.92**

See Annex A 8%*1%= 8% 100-8=92

A_w **Glazed area** **2.36**

A **Area of enclosing room surfaces** **51.16**

ceiling	11	m²
floor	11	m²
walls	26.8	m²
window	2.36	m²
TOTAL	51.16	m²

R **Average reflectante** **0.72**

The room reflectance is an area-weighted mean. That is, each surface area is multiplied by the corresponding reflectance, and the total of this is then divided by the total area.

The room reflectance is based on white painted wall and ceiling and carpet floor.

See Annex A				R	TOTAL
ceiling	11	m²	white paint	0.85	9.35
floor	11	m²	Carpet (cream)	0.4	4.4
walls	26.8	m²	white paint	0.85	22.78
window	2.36	m²	Window glass	0.1	0.236
					0.72

Θ **Visible sky angle** **51.61**

AVERAGE DAYLIGHT FACTOR

BEDROOM 2 HOUSE no. 195

$$ADF = \frac{0.65 \quad 0.92 \quad 2.6 \quad 30.99}{43.54 \ (1\text{-}R^2)} = \frac{48.18}{20.97}$$

2.30 %

Where

T **Transmitance of glazzing** **0.65**

See Annex A

M **Maintenance factor** **0.92**

See Annex A 8%*1%= 8% 100-8=92

A_w **Glazed area** **2.6**

A **Area of enclosing room surfaces** **43.54**

ceiling	8.4 m²
floor	8.4 m²
walls	24.14 m²
window	2.6 m²
TOTAL	43.54 m²

R **Average reflectante** **0.72**

The room reflectance is an area-weighted mean. That is, each surface area is multiplied by the corresponding reflectance, and the total of this is then divided by the total area.

The room reflectance is based on white painted wall and ceiling and carpet floor.

See Annex A			R	TOTAL
ceiling	8.4 m²	white paint	0.85	7.14
floor	8.4 m²	Carpet (cream)	0.4	3.36
walls	24.14 m²	white paint	0.85	20.519
window	2.6 m²	Window glass	0.1	0.26
				0.72

Θ **Visible sky angle** **30.99**

AVERAGE DAYLIGHT FACTOR

BEDROOM 2 HOUSE no. 197

$$ADF = \frac{0.65 \quad 0.92 \quad 1.4 \quad 30.99}{39.9 \ (1-R^2)} = \frac{25.94}{17.64}$$

1.47 %

Where

T	**Transmitance of glazzing**		**0.65**	
	See Annex A			
M	**Maintenance factor**		**0.92**	
	See Annex A		8%*1%= 8%	100-8=92
A_w	**Glazed area**		**1.4**	
A	**Area of enclosing room surfaces**		**39.9**	
	ceiling	6.8 m²		
	floor	6.8 m²		
	walls	24.9 m²		
	window	1.4 m²		
	TOTAL	39.9 m²		

R **Average reflectante** **0.75**

The room reflectance is an area-weighted mean. That is, each surface area is multiplied by the corresponding reflectance, and the total of this is then divided by the total area.

The room reflectance is based on white painted wall and ceiling and carpet floor.

See Annex A			R	TOTAL
ceiling	6.8 m²	white paint	0.85	5.78
floor	6.8 m²	Carpet (cream)	0.4	2.72
walls	24.9 m²	white paint	0.85	21.165
window	1.4 m²	Window glass	0.1	0.14
				0.75

Θ **Visible sky angle** **30.99**

AVERAGE DAYLIGHT FACTOR

BEDROOM 2 HOUSE no. 199

$$ADF = \frac{0.65 \quad 0.92 \quad 1.8 \quad 41.84}{40.34 \ (1\text{-}R^2)} = \frac{45.04}{18.02}$$

2.50 %

Where

T **Transmitance of glazzing** **0.65**

See Annex A

M **Maintenance factor** **0.92**

See Annex A 8%*1%= 8% 100-8=92

A_w **Glazed area** **1.8**

A **Area of enclosing room surfaces** **40.34**

ceiling	6.52	m²
floor	6.52	m²
walls	25.5	m²
window	1.8	m²
TOTAL	40.34	m²

R **Average reflectante** **0.74**

The room reflectance is an area-weighted mean. That is, each surface area is multiplied by the corresponding reflectance, and the total of this is then divided by the total area.

The room reflectance is based on white painted wall and ceiling and carpet floor.

See Annex A				R	TOTAL
ceiling	6.52	m²	white paint	0.85	5.542
floor	6.52	m²	Carpet (cream)	0.4	2.608
walls	25.5	m²	white paint	0.85	21.675
window	1.8	m²	Window glass	0.1	0.18
					0.74

Θ **Visible sky angle** **41.84**

LIVING DINING AND KITCHEN no. 197

$$ADF = \frac{0.65 \quad 0.92 \quad 5.2 \quad 45.48}{105.2 \ (1\text{-}R^2)} = \frac{141.42}{50.66}$$

2.79 %

Where

T	**Transmitance of glazzing**	**0.65**		
	See Annex A			
M	**Maintenance factor**	**0.92**		
	See Annex A	8%*1%=	8%	100-8=92
A_w	**Glazed area**	**5.2**		

A	**Area of enclosing room surfaces**	**105.2**	
	ceiling	34 m²	
	floor	24 m²	
	walls	42 m²	
	window	5.2 m²	
	TOTAL	105.2 m²	

R **Average reflectante** **0.72**

The room reflectance is an area-weighted mean. That is, each surface area is multiplied by the corresponding reflectance, and the total of this is then divided by the total area.

The room reflectance is based on white painted wall and ceiling and carpet floor.

See Annex A			R	TOTAL
ceiling	34 m²	white paint	0.85	28.9
floor	24 m²	Carpet (cream)	0.4	9.6
walls	42 m²	white paint	0.85	35.7
window	5.2 m²	Window glass	0.1	0.52
				0.71

Θ **Visible sky angle** **45.48**

5.8: Tables from BS 8206-2:2008

Annex A (informative) Data for daylight and sunlight calculations

A.1 Values of reflectance and transmittance

A.1.1 Reflectances

The reflectance of a building material in use is affected by weathering, dirt and moisture. The overall reflectance of a surface is also affected by its shape: a deeply corrugated surface reflects less light than a smooth surface of the same material. Glossy surfaces have a slightly higher reflectance than matt materials of the same body colour, but the distribution of reflected light and the appearance of the surface is more significant than the change in total reflectance. Approximate reflectance values are given in Table A.1.

Table A.1 **Approximate values of the reflectance of light**

Material	Reflectance
Ground	
Snow (new)	0.8
Sand	0.3
Paving	0.2
Earth (dry)	0.2
Earth (moist)	0.1
Grass	0.1
Green vegetation	0.1
Other external materials	
Brickwork (white glazed)	0.7
Portland stone	0.6
Medium limestone	0.4
Concrete	0.4
Brickwork (London stock)	0.3
Brickwork (red)	0.2
Granite	0.2
Window glass	0.1
Tree foliage	0.1
Materials used internally	
White paper	0.8
Stainless steel	0.4
Cement screed	0.4
Carpet (cream)	0.4
Wood (light veneers)	0.4
Wood (medium colours)	0.2
Wood (dark oak)	0.1
Quarry tiles	0.1
Window glass	0.1
Carpet (deep colours)	0.1

Table A.1 **Approximate values of the reflectance of light** (*continued*)

Material	Reflectance
Paint colours (with BS 4800 colour code) [A)]	
White 00E55	0.85
Pale cream 10C31	0.81
Light grey 00A01	0.68
Strong yellow 10E53	0.64
Mid-grey 00A05	0.45
Strong green 14E53	0.22
Strong red 04E53	0.18
Strong blue 18E53	0.15
Dark grey 10A11	0.14
Dark brown 08C89	0.10
Dark red-purple 02C39	0.10
Black 00E53	0.05

[A)] References given are values for gloss paint. BS 4800 lists approximate Munsell references for paint colours for building purposes, and gives a useful method for deriving reflectances from Munsell references.

A.1.2 Transmittances

With the proliferation of glazing materials, it is no longer possible to recommend particular correction factors for tinted, reflecting or diffusing glazing. Table A.2 gives approximate values, but these should be taken only for guidance. Information about specific materials should be obtained from the manufacturer. Where a manufacturer can only supply the direct transmittance values, the diffuse transmittance values can be estimated by multiplying these by 0.91.

Table A.2 **Mean light transmittance of glazing materials**

Material	Diffuse light transmittance
Clear 6 mm glass	0.80
Body-tinted 6 mm glass	
bronze	0.40
grey	0.39
green	0.66
Strongly-reflecting 6 mm glass	0.18
Sealed unit (2 × 6 mm clear glass)	0.65
Sealed unit (6 mm clear glass + 6 mm low-emissivity neutral)	0.63
Sealed unit (6 mm reflecting + 6 mm clear)	0.26
Sealed unit (6 mm strongly-reflecting + 6 mm clear)	0.15
Wired cast glass, 6 mm	0.74

A.1.3 Maintenance factors

The maintenance factor allows for the reduction of daylight transmittance due to dirt.

To determine the maintenance factor for a particular situation it is necessary to first find the value for the percentage loss of light in the particular building type from Table A.3, and then multiply it by the special factors given in Table A.4 and Table A.5 if necessary, and subtract the result from 100%.

Table A.3 **Percentage losses of light in particular types of buildings**

Building type	Percentage loss of daylight compared with clean glazing	
	Rural/suburban	Urban
Residential: private and communal. Rooms with few occupants, good maintenance	4	8
Commercial, educational. Rooms used by groups of people, office equipment	4	8 to12
Polluted atmosphere. Gymnasia, swimming pools	12 to 24	12 to 24

Table A.4 **Exposure multiplying factors**

Exposure	Exposure multiplier		
	Vertical glazing	Inclined glazing	Horizontal glazing
Normal exposure for location	×1	×2	×3
Exposed to heavy rain	×0.5	×1.5	×3
Exposed to snow	×1	×3	×4

Table A.5 **Special exposure multiplying factors**

Condition	Multiplying factor
Vertical glazing sheltered from rain	×3
Weathered or corroded glazing	×3 (no correction for rain exposure)
Leaded glazing	×3

For example, considering vertical leaded glazing in a rural house. The loss of light will be $4\% \times 1 \times 3 = 12\%$. The maintenance factor will be $100\% - 12\% = 88\% = 0.88$.

5.9. Planning statement

The Planning Statement produced by Alliance Planning, has been submitted as a separate document.

The conclusions are:

- The principle of development is acceptable
- The proposal accords with the Development Plan Policies;
- The proposal will have a positive impact on the Conservation Area through improved design;
- The proposal will improve the street frontage;
- The proposed scale, design and use are appropriate for this location.

5.10. Structural statement

The Structural Statement produced by Michael Horrigan associates, has been submitted as a separate document. The statement confirms that the construction of the building:

- Maintain the structural stability of the building and neighbouring properties
- Avoid cumulative impacts upon structural stability or the water environment in the local area.

5.11. Sustainable statement

The Sustainability Statement, produced by McBains Cooper, has been submitted as a separate document.

The conclusions are:

- The dwelling will achieve Code Level 4 in all of the proposed homes.

5.12. Heritage Impact Assessment

The **Heritage Impact Assessment**, produced by Kristian Kaminski MA (Architectural History), has been submitted as a separate document.

Their conclusions are:

- It has been shown that the proposed building should not considered 'overly tall' in the context of Victorian shopfronts in London or this specific site, that the loss of street front activity is negligible, that the reduction in visibility of the rear of the listed terrace on Mecklenburgh Street will be negligible and imperceptible by the average passerby and that visual impact of the split-level visible within the shops has been reduced as much as possible and will not have an unacceptable visual impact.

- The existing building makes a negative contribution to the character and appearance of the Bloomsbury Conservation Area by virtue of its poor quality modern design and materials. It has been demonstrated that the design of the proposed building sensitively responds to its historic context and will enhance the character and appearance of the conservation area and the setting of the listed buildings. For these reasons the proposal complies with national and local policy and guidance regarding the historic built environment.

5.13. Statement on the loss of retail land use

The Statement on the loss of retail land use, produced by David Shapiro, has been submitted as a separate document.

The conclusions are:

- Justification for the loss of retail on site has been demonstrated in this statement.
- The premises should not be prevented from changing in land use from retail use, as there is not the market demand for retail use at the site, unlike premises in the surrounding area.
- The Subject Property is an anomaly, principally due to its commercially isolated location, being neither King's Cross nor Holborn.
- While the current retail offer for office furniture continues a little further along Grays Inn Road in the other retail showroom occupied by the former owner.
- Whilst The Subject Property has been occupied by the former owner as an office furniture showroom, in my opinion, it is ill suited for ongoing retail use due to its position and the limited lack of passing foot trade.

5.14. Arboricultural Assessment

The Arboricultural Statement, produced by ACS Consulting, has been submitted as a separate document.

The conclusions are:

- The scheme proposes to excavate within the footprint to create a shallow basement. Although this result in a minor ingress within the trees uniform RPA, this is with the existing footprint, which will be free of roots. As a consequence there are no development issues relating to below ground construction.
- The proposed elevations fall below the existing canopy and I do not predict any additional pressure or management requirements will be placed on the tree