## **REPORT**

## 52 Holmes Road London NW5 3AB

Daylight and Sunlight Report to Neighbouring Buildings and Proposed Light Industrial Accommodation

**JUNE 2016** 



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Drafted by:

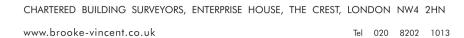
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9<sup>th</sup> June 2016

#### 52 Holmes Road, London NW5 3AB

### **Daylight & Sunlight**

Brooke Vincent + Partners (BVP) are instructed to provide a report on the daylight and sunlight aspects of this Planning Application with regard to neighbouring residential properties and the replacement of light industrial accommodation.

This report is based upon the scheme drawings prepared by GML Architects, survey information, photographs and a 3D Model, together with daylight and sunlight studies prepared by BVP.

#### 1.0 SUMMARY

- 1.1 This report has been drafted by reference to the Building Research Establishment (BRE) publication (2011): Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice and local planning policy.
- 1.1 Our studies have confirmed that the daylight and sunlight to neighbouring residential properties would be retained to a level that satisfies BRE criteria.
- 1.2 Similarly, the levels of daylight within the proposed light industrial accommodation would satisfy the good practice daylight criteria.
- 1.3 In summary, BRE's recommendations and criteria have been satisfied and therefore the relevant policies within Camden Council's Core Strategy and Development Policies.



#### 2.0 PLANNING POLICY

## 2.1 London Borough of Camden

### Core Strategy (2010)

2.2 Camden's *Local Development Framework (LDF), November 2010*, sets out the key elements of the Council's vision for the Borough through its Core Strategy. The relevant policies are listed below.

### POLICY CS5 – Managing the impact of growth and development

The second part of this Policy confirms:

"The Council will protect the amenity of Camden's residents and those working in and visiting the Borough by:

(e) Making sure that the impact of developments on their occupiers and neighbours is fully considered."

In the explanatory notes following this Policy, item 5.8 confirms:

"We will expect development to avoid harmful effects on the amenity of existing and future occupiers and nearby properties or, where this is not possible, to take appropriate measures to minimise potential negative impacts."

## **Development Policies (2010)**

# POLICY DP26 - Managing the impact of development on occupiers and neighbours

"The Council will protect the quality of life of occupiers and neighbours by only granting permission for development that does not cause harm to amenity. The factors we will consider include;

(c) Sunlight, daylight and artificial light levels."

## The London Plan 2015 (Including Housing Standards minor alterations - March 2016)

- 2.3 The London Plan forms part of Camden's Development Plan. The Housing Supplementary Planning Guidance 2012, defined in greater detail the London Plan's Housing requirements and standards. These were replaced by the House Supplementary Planning Guidance 2016 in March of this year.
- 2.4 Inevitably the proposed development at 52 Holmes Road site was designed by reference to the 2012 guidance which is detailed below. Thereafter the 2016 guidance is detailed and confirms that the expectations with regard to Daylight and Sunlight within proposed accommodation have remained very similar to the 2012 Guidance. However, the notes that follow the new (2016) standard 32 state "BRE good practice guidelines methodology can be used to assess the levels of daylight and sunlight achieved within new developments". This had not been stated in the previous SPG (2012), although the BRE good practice guidelines had in any case, been the basis upon which daylight and sunlight values were considered during the design process. These guidelines and the method of calculation are more fully detailed later.

## **Housing Supplementary Planning Guidance 2012**

2.5 This SPG define baseline standards and good practice standards as further detailed below.

Baseline Standards are those endorsed by the Mayor as addressing issues of particular strategic concern.

Good Practice Standards are those put forward by the Mayor as representing general good practice.

The standards that are relevant to daylight and sunlight are detailed below:

#### Baseline

Standard 5.2.1 - developments should avoid single aspect dwellings that are north facing, exposed to noise exposure Categories C or D, or contain three or more bedrooms.

Note: "north facing is usually defined as an orientation less than 45° either side of due north".

#### **Good Practice**

Standard 5.5.1 - glazing to all habitable rooms should be not less than 20% of the internal floor area of the room.

Standard 5.5.2 - all homes should provide for direct sunlight to enter at least one habitable room for part of the day. Living areas and kitchen dining spaces should preferably receive direct sunlight.

#### **Housing Supplementary Planning Guidance – March 2016**

## 2.6 HOUSING QUALITY AND DESIGN POLICY

#### Policy 3.5 Quality and design of housing developments

#### **Daylight and Sunlight**

Standard 32 – All homes should provide for direct sunlight to enter at least one habitable room for part of the day. Living area and kitchen/dining spaces should preferable receive direct sunlight.

2.3.45 ..."In addition to the above standards, BRE good practice guidelines and methodology can be used to assess the levels of daylight and sunlight achieved within new developments, taking into account guidance below and in Section 1.3".

2.3.46 ... "Where direct sunlight cannot be achieved in line with standard 32, developers should demonstrate how the daylight standards proposed within a scheme and individual units would achieve good amenity for residence".

2.3.47 ..."BRE guidelines on assessing daylight and sunlight should be applied sensitively too high a density development in London, particularly in central and urban settings, recognising the London Plan strategic approach to optimising housing supply and locations with good accessibility for higher density development (Policy 3.3). Quantitative standards on daylight and sunlight should not be applied rigidly without carefully considering the location and context and standards experienced in broadly comparable housing typologies in London".

#### 3.0 METHOD OF CALCULATION

#### **Building Research Establishment**

#### 3.1 BRE Guidelines

3.1.1 The calculations and considerations within this report are based upon the BRE publication 2011: Site Layout Planning to Daylight and Sunlight. A Guide to Good Practice. BRE confirm that the Guide does not contain mandatory requirements and in the Introduction provides a full explanation of its purpose:

"The Guide is intended for building designers and their clients, consultants and planning officials."

"The advice given here is not mandatory and this document should not be seen as an instrument of planning policy."

"It aims to help rather than constrain the designer."

"Although it gives numerical guidelines these should be interpreted flexibly since natural lighting is only one of many factors in site layout design."

"In special circumstances the developer or planning authority may wish to use different target levels. For example, in an historic city centre, or in an area with high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings."

## 3.2 Modelling and Results

- 3.2.1 Our analysis and subsequent results are produced by the application of our specialist software on our three-dimensional model, images of which are included in Appendix 1. This is based upon survey information, photographs, and the architect's planning drawings also included in Appendix 1.
- 3.2.2 In this model, the neighbouring buildings are defined in green, the existing site buildings in blue and the Proposed Development in magenta.

## 3.3 Daylight

- 3.3.1 Daylight is not specific to a particular direction, as it is received from the dome of the sky.
- 3.3.2 Reference is made in the BRE report to various methods of assessing the effect a development will have on diffused daylight.
- 3.3.3 The simplest methods are not appropriate in an urban environment, where the built form is invariably complex. Vertical Sky Component (VSC) is the calculation most readily adopted, as the principles of calculation can be established by relating the location of any particular window to the existing and proposed, built environment.

#### 3.3.4 The BRE Guide states:

"If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffused daylighting of the existing building may be adversely affected.

This will be the case if the Vertical Sky Component measured at the centre of an existing main window is less than 27% and less than 0.8 times its former value."

3.3.5 Where the VSC calculation has been used, BRE also seeks to consider daylight distribution (DD) within neighbouring rooms, once again defining an adverse effect as a

result that is less than 0.8 the former value. DD measures the portion of a room that has a sight of the sky from a reference plane set 0.85m above floor level. Access is rarely available and we have therefore taken a reasoned approach.

- 3.3.6 The method of calculation for proposed accommodation is known as Average Daylight Factor (ADF). This is the most comprehensive of daylight calculations defined by BRE and is appropriate to proposed accommodation, because all relevant information is available.
- 3.3.7 The initial calculation is Vertical Sky Component which measures the value of daylight received at the centre of the window face. The area of glazing through which the light is transmitted and the transmission value of the glazing is then considered. Within the room the total surface area is calculated and a degree of reflection applied. The outcome is then compared to the values recommended by BRE. Modern BREEAM requirements recommend that a 2% daylight factor would be provided across 80% of the lettable commercial space.
- 3.3.8 Where a room is served by more than one window, ADF calculations are made in relation to each window and the individual results added together to provide the true ADF for that room.
- 3.3.9 With regard to the ADF calculations for proposed commercial accommodation daylight, the following assumptions have been made with regard to the various elements that together are computed to produce the ADF value:
  - Glazing transmittance: 0.68 for the double glazing (BRE default reading)
  - Net glazed area of the window: 0.8 (BRE default reading)
  - Interior surface reflectance Light industrial: 0.5 (BRE default reading)
    (BREEAM's method of calculation assumes rectangular plan room shapes. The
    proposal could suggest that either 0.5 or 0.6 is used as the default reading for
    interior surface reflectance. For the avoidance of doubt we have used the lower
    reflectance value).

## 3.4 Sunlight

#### 3.4.1 The BRE *Guide to Good Practice* confirms:

- (i) Sunlight is only relevant to neighbouring residential windows which have a view of the Proposed Development and face within 90° of south, i.e. south of the eastwest axis.
- (ii) If any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of the main living room window, a vertical section perpendicular to the window, then the sun lighting in the existing dwelling may be adversely affected.
- (iii) Similarly, the sunlight availability to an existing dwelling may be adversely affected if the APSH, when measured at the centre of the window is reduced by more than 4%.
- (iv) Should the loss be greater than 4%, then sunlight availability may be adversely affected if the centre of the window receives less than 25% of the annual probable sunlight hours, of which 5% of the annual total should be received between 21 September and 21 March (winter) and less than 0.8 times its former sunlight hours during either period.
- (v) Kitchens and bedrooms are less important, although care should be taken not to block too much sun.

#### 4.0 DAYLIGHT ANALYSIS

## **Neighbouring Buildings**

North and East

4.1 To the north and east of the site, there is no current residential accommodation to consider.

South

#### 4.2 55 Holmes Road

- 4.2.1 To the south on the other side of Holmes Road is a mixed used development with commercial units at ground floor and residential above. Several planning consents have been granted to convert a number of commercial units into residential use.
- 4.2.2 The VSC results in Appendix 2 confirms the existing VSC figure in most locations are below BRE's threshold of 27% VSC and the value in the proposed condition inevitably follows suit. BRE provides the appropriate advice, which we have reiterated in item 3.3.4 of our report. This states that an adverse effect would occur if the proposed value was not only less than 27% VSC but also less than 0.8 of the former (existing) value. This would not occur, with all results well above 0.8 and there would be no adverse effect.
- 4.2.3 The Daylight Distribution results follow the VSC results we have just referred to in Appendix2. The results confirm that the proposed conditions would remain the same as or, close to, the existing condition and there would be no adverse effect. BRE criteria has been satisfied.

#### 4.3 61-63 Holmes Road

- 4.3.1 This new residential development with commercial use at ground floor stands opposite to the proposed site. Windows W1 from first to third floor level serving residential habitable rooms have been tested.
- 4.3.2 The results in Appendix 2 confirm VSC in the proposed condition would fall beneath 0.8 the existing value at first and second floor level, probably due to the existence of balconies.

BRE recognises that where balconies and other overhangs are above the existing windows, they inevitably receive less daylight.

- 4.3.3 Where this occurs, BRE recommends an additional calculation, this defines the VSC without the overhang in place and the results are shown within Appendix 2. When this test is carried out, the results confirm all the windows that were previously under 0.8 times the existing value, are improved to above the required value of 0.8. When this occurs BRE confirms that the major obstruction to daylight is the presence of the existing overhang rather than the proposed development. BRE criteria would be satisfied.
- 4.3.4 Daylight Distribution results also show the overhang is the major obstruction to daylight within these rooms and once it is removed, the proposed figures would be above 0.8 the existing value. BRE criteria would be satisfied and there would be no adverse effect.

West

#### 4.4 54-74 Holmes Road

- 4.4.1 To the west and adjacent to the development site, is a building providing student accommodation. The design of the building leaves much to be desired in relation to daylight availability. The building itself creates deep lightwells with some poorly lit rooms and seems to testify to the fact that daylight is not considered to be an important element of the building design. For the purposes of this report, we have analysed the closest windows with a view of the site.
- 4.4.2 Student accommodation is conventionally designed to provide the study areas adjacent to the windows in order to gain the best of natural light. It is these areas that have been analysed. BRE recommends a value of 1.5% for living rooms and this value has been assumed for the study element of each room.
- 4.4.3 Only three study areas would fall beneath BRE recommended value of 1.5% ADF. These windows are located on the inside corner of a lightwell and directly facing a blank wall as shown in Appendix 4. This shows that daylight was not a principal consideration at the time of design. It does however make any development of the neighbouring site that much more difficult.

- 4.4.4 Two of these study areas are below the recommended value in the existing condition, but only these two and one other would not remain compliant with the recommended values. The additional room would have an ADF is 1.46%, just a small margin below BRE recommended value of 1.5%
- 4.4.5 This confirms that despite the poor daylighting design of 54-74 Holmes the proposed building has been designed with every possible consideration and there would be almost no further effect.

## **Proposed Light Industrial Accommodation**

- 4.6.1 Daylight within the light industrial open space at the lower ground and ground floor levels has been tested and compared with the daylight within the existing commercial space. We use the term "commercial" to identify the light industrial space. The results are included in Appendix 3.
- 4.6.2 The ADF results confirm daylight within the commercial space at lower ground floor of the proposed building would improve compared to the daylight level within the light industrial area at ground floor level in the existing building (ADF would increase from 0.90% in the existing building to ADF=0.96% in the proposed light industrial accommodation).
- 4.6.3 The daylight within commercial areas at ground and mezzanine floor level would be retained well above 2%. In other words, above 2% average across the whole floor area, which more than satisfies BREEAM's recommendation for 2% across 80% of the floor area. This is achieved through conventional windows which provide an outlook. There would be no adverse effect at either floor commercial levels and the good practice daylight criteria would be meet.
- 4.6.4 This makes the proposed accommodation superior to the existing accommodation which relies upon skylight to provide daylight.

## 4.7 **Daylight Summary**

4.7.1 Our analysis has confirmed that neighbouring buildings would retain daylight at levels that satisfy BRE criteria. In only three locations the daylight level would be slightly below the recommended value. Two of these were not compliant in the existing condition and the proposed would only have a minor effect on one room. Overall there would be no adverse effect.

4.7.2 Within the proposed commercial accommodation, the architect has designed these in a manner that ensures the light industrial space would receive the benefit of good daylight from conventional windows and this has been confirmed by the results.

#### 5.0 SUNLIGHT AVAILABILITY

### 5.1 **Neighbouring Residential Buildings**

- 5.1.1 The sunlight results are defined by the two right hand columns in Appendix 2 and adjacent to VSC results. Windows that do not face within 90° degrees of south are classified as 'north facing'. In these circumstances there is no criterion to meet.
- 5.1.2 Windows that face within 90° degrees of south would retain both annual and winter sunlight availability with proposed values similar to the existing. There would be no adverse effect.
- 5.1.3 BRE state, which we have reiterated in item 3.3.4 of our report, kitchens and bedrooms are less important and therefore windows serving student accommodation require no further consideration for the purposes of this report.

#### **Proposed Light Industrial Accommodation**

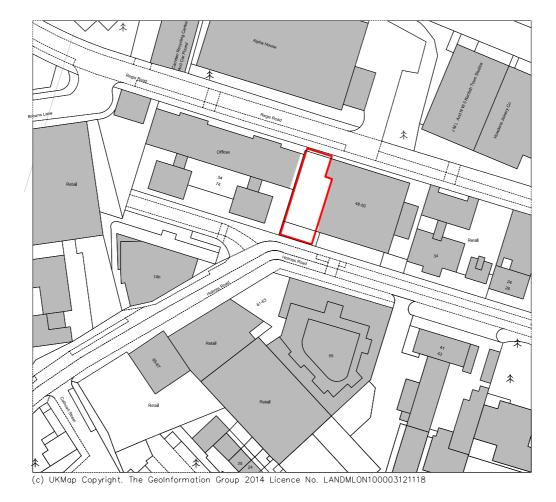
5.2 BRE also stated at paragraph 3.1.3 "Sunlight is also valued in non-domestic buildings. However, the requirement for sunlight will vary according to the type of non-domestic building, the aims of the designer and the extent to which the occupants can control their environment". There are no criteria to meet for the proposed commercial accommodation.

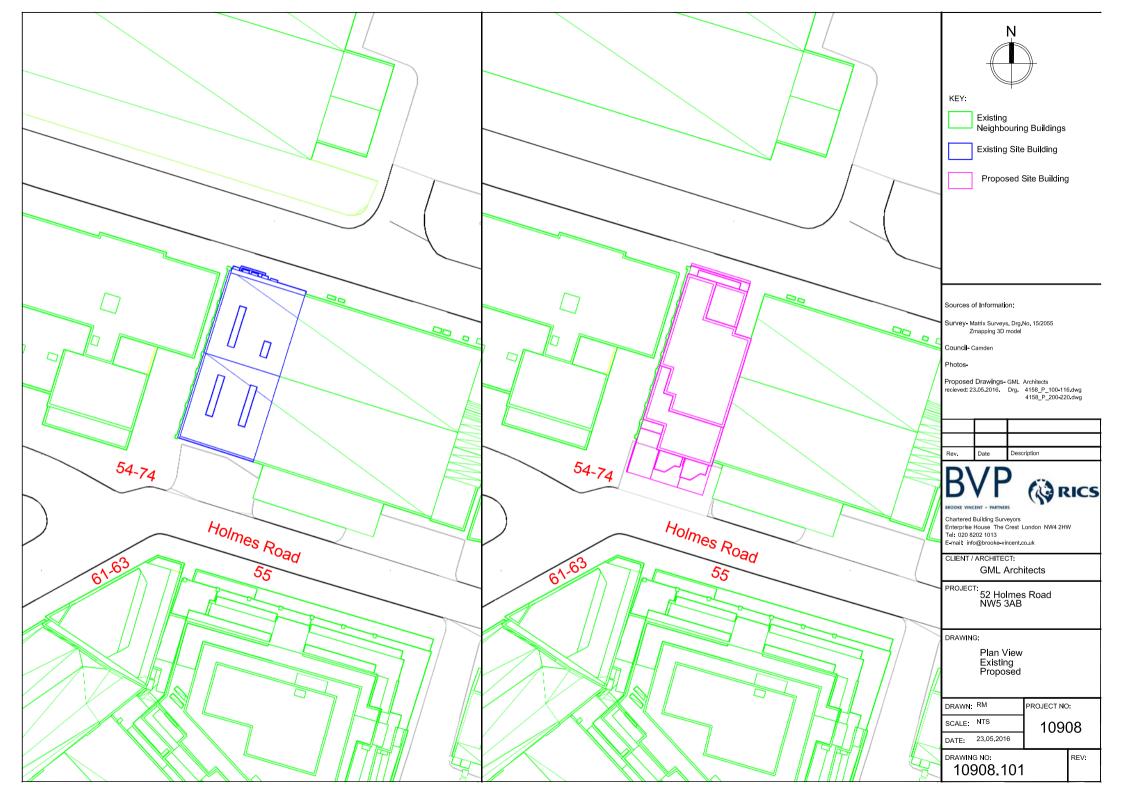
## 5.9 **Sunlight Summary**

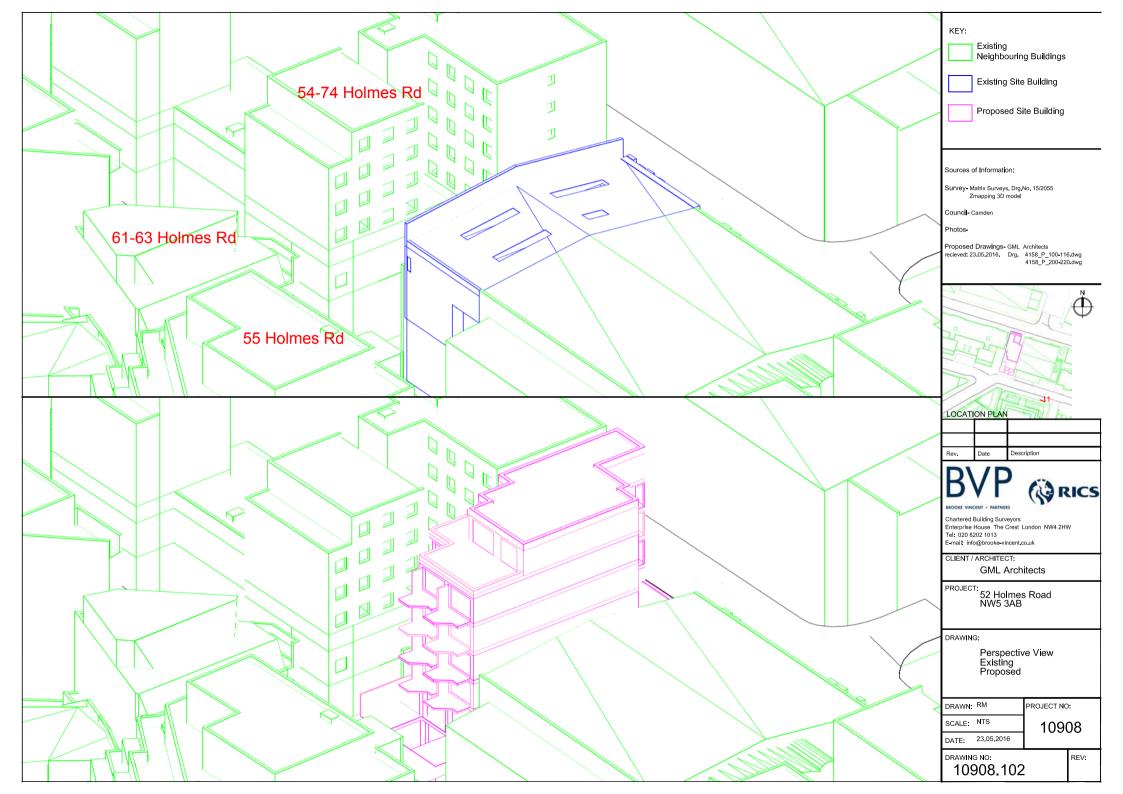
5.9.1 Sunlight availability to neighbouring buildings would be BRE-compliant.

## **APPENDIX 1**

**Location Plan and CAD Model** 







## **APPENDIX 2**

Daylight and Sunlight Results: Neighbouring Properties

Project No: 1908 Architect: GML Architects

Iteration Description: VSC APSH neighbouring buildings

Date of Analysis: 16/05/2016 00:00:00

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
						61-63 H	Iolmes Ro	oad							
First	R1	Residential	Livingroom	W1	Existing	16.54	0.74		16°N		*North*			*North*	
					Proposed	12.21									
Second	R1	Residential	Livingroom	W1	Existing	16.57	0.75		16°N		*North*			*North*	
					Proposed	12.35									
Third	R1	Residential	Livingroom	W1	Existing	17.94	0.82	YES	16°N		*North*			*North*	
					Proposed	14.76									
						55 Ho	lmes Roa	d							
Below Ground	R1	Residential	Bedroom	W1	Existing	7.52	1.00	YES	286°N		*North*			*North*	
					Proposed	7.52									
	R2	Residential	Livingroom	W2	Existing	15.77	0.95	YES	16°N		*North*			*North*	
					Proposed	15.00									
	R3	Residential	Bedroom	W3	Existing	16.94	0.95	YES	16°N		*North*			*North*	
					Proposed	16.14									
	R4	Residential	Livingroom	W4	Existing	15.93	0.95	YES	16°N		*North*			*North*	
					Proposed	15.11									
First	R1	Residential	LKD	W1	Existing	12.41	1.00	YES	106°	6	1.00	YES	0	0.00	YES
				W2	Proposed Existing	12.41 33.50	0.95	YES	16°N	6	*North*		0	*North*	
				W3	Proposed Existing	31.73 10.17	0.91	YES	286°N		*North*			*North*	
					Proposed	9.27									
	R2	Residential	Bedroom	W4	Existing	20.97	0.90	YES	16°N		*North*			*North*	
					Proposed	18.94									
	R3	Residential	Bedroom	W5	Existing	20.17	0.89	YES	16°N		*North*			*North*	
					Proposed	17.87									
Second	R1	Residential	Livingroom	W1	Existing	13.44	1.00	YES	106°	6	1.00	YES	0	0.00	YES
				W2	Proposed Existing	13.44 36.40	0.96	YES	16°N	6	*North*		0	*North*	
				W3	Proposed Existing	35.02 11.42	0.94	YES	286°N		*North*			*North*	
					Proposed	10.76									
	R2	Residential	Bedroom	W4	Existing	23.37	0.93	YES	16°N		*North*			*North*	
					Proposed	21.78									
	R3	Residential	Bedroom	W5	Existing	22.58	0.92	YES	16°N		*North*			*North*	
				W6	Proposed Existing	20.77 10.83	0.98	YES	286°N		*North*			*North*	
					Proposed	10.58									
	R4	Residential	Bedroom	W7	Existing	21.57	0.92	YES	16°N		*North*			*North*	
				W8	Proposed Existing	19.95 9.44	0.99	YES	286°N		*North*			*North*	
				۷VO	Proposed	9.33	0.55	ILJ	200 N		NOTH			NOTUL	

Project No: 10908

Architect: GML Architects Iteration Description: DD neighbouring buildings Date of Analysis: 23/05/2016 00:00:00

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
				61-63 Holmes Road						
First	R1		Residential	Livingroom	Area m2	20.35	20.33	15.31		
11130					% of room		100%	75%	0.75	
Second	R1		Residential	Livingroom	Area m2	20.35	20.33	15.61		
					% of room		100%	77%	0.77	
Third	R1		Residential	Livingroom	Area m2	20.35	20.33	17.68		
					% of room		100%	87%	0.87	YES
				55 Holmes Road						
	R1		Residential	Bedroom	Area m2	12.25	7.78	7.70		
	IVI		Residential	bearoom	% of room	12.23	63%	63%	0.99	YES
	R2		Residential	Livingroom	Area m2	14.02	10.13	9.19	0.55	1123
	112		nesidential	Livingroom	% of room	14.02	72%	66%	0.91	YES
Below Ground	R3		Residential	Bedroom	Area m2	12.81	6.81	6.25	0.51	1123
	113		Residential	bearoom	% of room	12.01	53%	49%	0.92	YES
	R4		Residential	Livingroom	Area m2	21.14	12.07	11.87	0.52	ILJ
	114		Residential	Livingroom	% of room	21.14	57%	56%	0.98	YES
	R1		Residential	LKD	Area m2	30.22	30.20	30.20	0.50	1123
	111		Residential	LKD	% of room	30.22	100%	100%	1.00	YES
	R2		Residential	Bedroom	Area m2	16.83	16.83	16.83	1.00	123
First	112		Nesidential	Deuroom	% of room	10.03	10.83	10.83	1.00	YES
	R3		Residential	Bedroom	Area m2	23.83	23.83	23.83	1.00	1123
	113		Acsideritial	bearoom	% of room	25.05	100%	100%	1.00	YES
	R1		Residential	Livingroom	Area m2	43.99	43.99	43.99	2.00	
					% of room	.3.33	100%	100%	1.00	YES
	R2		Residential	Bedroom	Area m2	15.11	15.11	15.11		
				564.66	% of room	15.11	100%	100%	1.00	YES
Second	R3		Residential	Bedroom	Area m2	15.84	15.84	15.84	00	725
					% of room		100%	100%	1.00	YES
	R4		Residential	Bedroom	Area m2	17.79	16.53	16.53	2.00	, 25
	***				% of room		93%	93%	1.00	YES

Project No: 10908 Architect: GML Architects

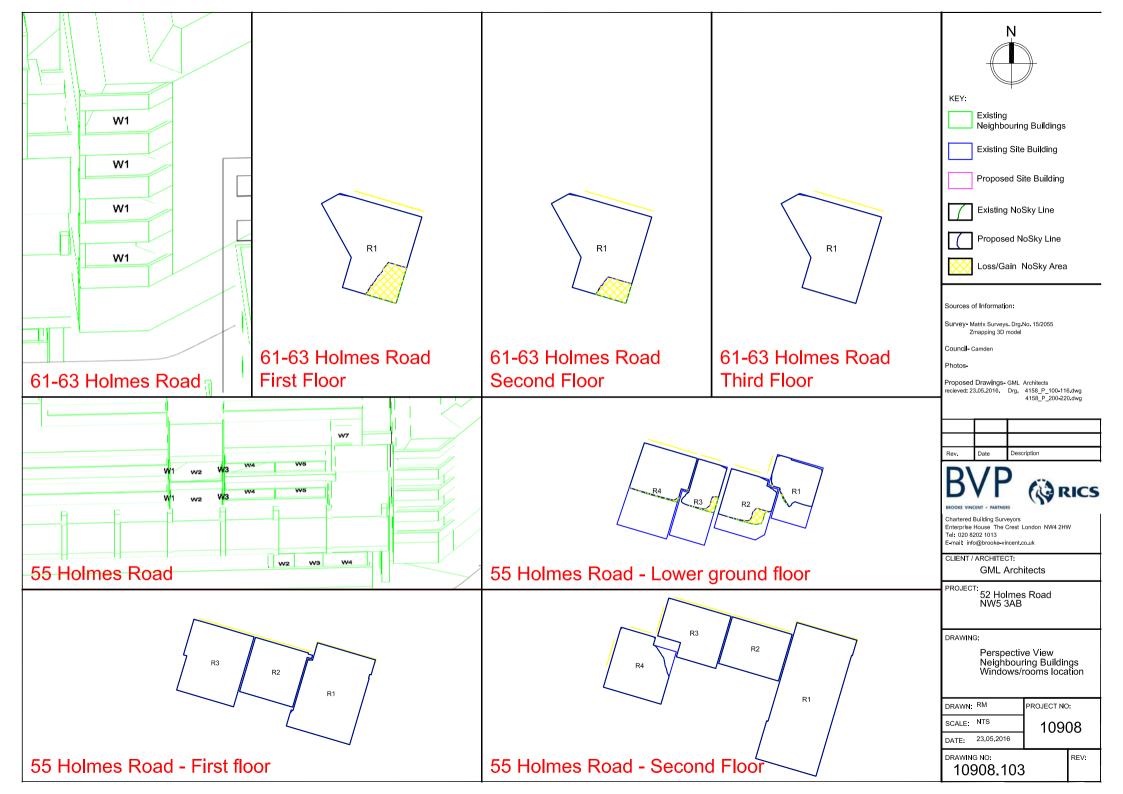
Iteration Description: VSC APSH neighbouring buildings - no overhang

Date of Analysis: 16/05/2016 00:00:00

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
					61-63	Holmes I	Road								
First	R1	Residential	Livingroom	W1	Existing Proposed	29.46 25.13	0.85	YES	16°N		*North*			*North	*
Second	R1	Residential	Livingroom	W1	Existing Proposed	33.13 28.92	0.87	YES	16°N		*North*			*North	*
Third	R1	Residential	Livingroom	W1	Existing Proposed	35.03 31.84	0.91	YES	16°N		*North*			*North	*

Project Name: 52 Holmes Road Project No: 10908 Architect: GML Architects

Iteration Description	n: DD neighbourir	ng buildings - no overha	ang								
Date of Analysis: 2	3/05/2016 00:00:	00									
Floor Ref.	Room Ref.	Property Type	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria		
61-63 Holmes Road  R1 Residential Livingroom Area m2 20.35 20.33 17.37											
First	R1	Residential	Livingroom	Area m2	20.35	20.33	17.37				
FIISL				% of room		100%	85%	0.85	YES		
Second	R1	Residential	Livingroom	Area m2	20.35	20.33	18.54				
Second				% of room		100%	91%	0.91	YES		
Third	R1	Residential	Livingroom	Area m2	20.35	20.33	20.33				
Tilliu				% of room		100%	100%	1.00	YES		

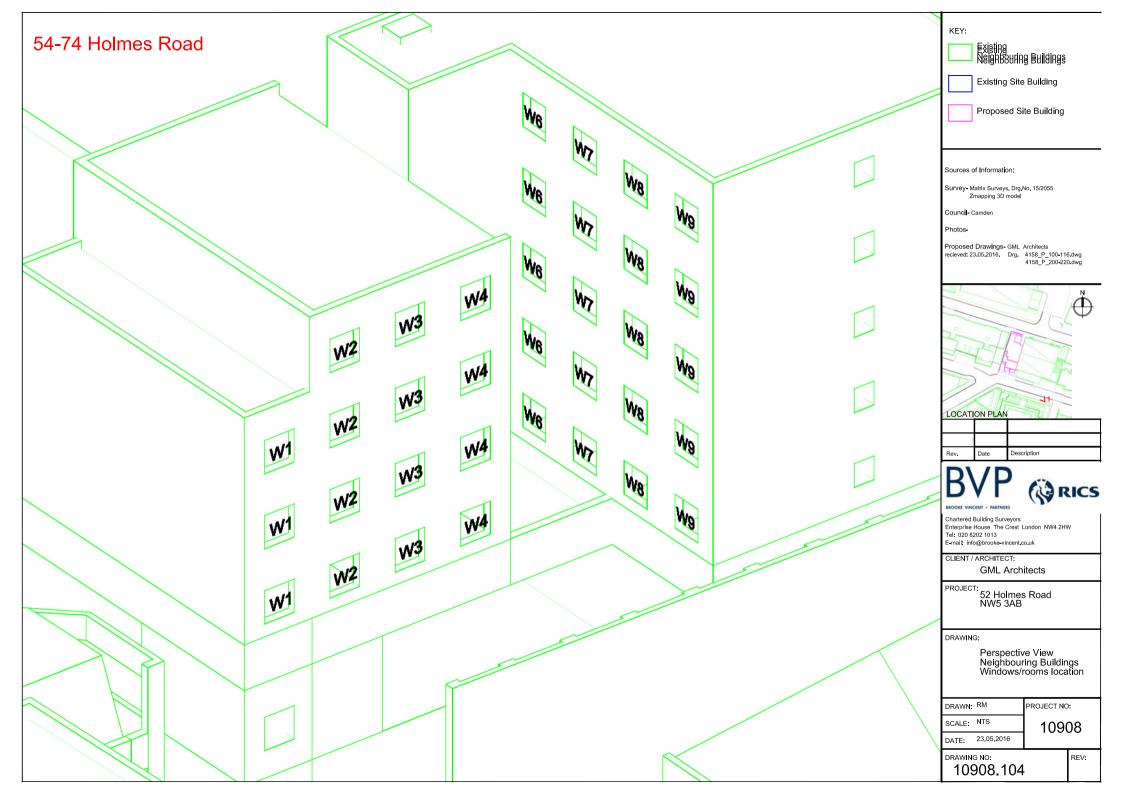


Project No: 10908 Architect: GML Architects

Iteration Description: ADF neighbouring buildings

				- 3		5	
Date	of A	Analysis:	23/05/2	2016 0	0:00:0	00	

Floor Ref.	Room Ref.	00:00 Property Type	Room Use.	Window Ref.	Glass Transmittance	Glazed Area	Clear Sky Angle Existing	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Existing	ADF Proposed	Req'd Value	Pr/Ex
					54	4-74 Hol	mes Road	I							
First	R11	G. deal	Study	W1	0.68	1.20	65.31	50.02	39.69	0.50	1.00	1.78	1.37		
		Student Accommodation		W2	0.68	1.20	60.48	43.77	39.69	0.50	1.00	1.65	1.20		
First	D12	7100071111100011011	Carrador	W/2	0.60	1.20	F2 02	27.25	20.60	0.50	1.00	3.44	2.56	1.5	0.75
First	R12	Student	Study	W3 W4	0.68 0.68	1.20 1.20	53.93 48.78	37.35 31.46	39.69 39.69	0.50 0.50	1.00 1.00	1.47 1.33	1.02 0.86		
		Accommodation		***	0.00	1.20	40.70	31.40	33.03	0.50	1.00	2.81	1.88	1.5	0.67
First	R16	Student	Study	W6	0.68	1.20	23.26	17.84	21.45	0.50	1.00	1.18	0.91		
		Accommodation									4.00	1.18	0.91	1.5	0.77
First	R17	Student Accommodation	Study	W7	0.68	1.20	33.95	28.63	21.45	0.50	1.00	1.73	1.46 1.46	1.5	0.84
First	R18	Student	Study	W8	0.68	1.20	42.31	36.50	21.45	0.50	1.00	2.15	1.86		
		Accommodation										2.15	1.86	1.5	0.86
First	R19	Student Accommodation	Study	W9	0.68	1.20	41.50	36.61	21.45	0.50	1.00	2.11	1.86 1.86	1.5	0.88
Second	R11	Student	Study	W1	0.68	1.20	73.93	56.48	21.48	0.50	1.00	3.73	2.85	1.5	0.00
		Accommodation										3.73	2.85	1.5	0.76
Second	R12	Student	Study	W2	0.68	1.20	72.90	50.31	21.48	0.50	1.00	3.68	2.54		0.50
Second	R13	Accommodation Student	Study	W3	0.68	1.20	69.73	43.82	21.48	0.50	1.00	3.68 3.52	2.54 2.21	1.5	0.69
Second	1113	Accommodation	Study	***3	0.00	1.20	03.73	43.02	21.40	0.50	1.00	3.52	2.21	1.5	0.63
Second	R14	Student	Study	W4	0.68	1.20	65.04	37.55	21.48	0.50	1.00	3.28	1.90		
Cocond	R16	Accommodation Student	Study	W6	0.68	1.20	28.55	23.64	21.45	0.50	1.00	3.28 1.45	1.90 1.20	1.5	0.58
Second	KIO	Accommodation	Study	VVO	0.00	1.20	26.55	23.04	21.45	0.50	1.00	1.45	1.20	1.5	0.83
Second	R17	Student	Study	W7	0.68	1.20	40.00	34.02	21.45	0.50	1.00	2.03	1.73		
		Accommodation										2.03	1.73	1.5	0.85
Second	R18	Student Accommodation	Study	W8	0.68	1.20	50.85	42.23	21.42	0.50	1.00	2.59	2.15 2.15	1.5	0.83
Second	R19	Student	Study	W9	0.68	1.20	54.37	42.22	21.42	0.50	1.00	2.77	2.15	1.5	0.03
		Accommodation										2.77	2.15	1.5	0.78
Third	R11	Student	Study	W1	0.68	1.20	77.99	64.18	21.48	0.50	1.00	3.94	3.24 3.24	1.5	0.82
Third	R12	Accommodation Student	Study	W2	0.68	1.20	77.75	58.99	21.48	0.50	1.00	3.92	2.98	1.5	0.62
		Accommodation	,									3.92	2.98	1.5	0.76
Third	R13	Student	Study	W3	0.68	1.20	76.37	52.91	21.48	0.50	1.00	3.85	2.67	4.5	0.00
Third	R14	Accommodation Student	Study	W4	0.68	1.20	72.63	46.50	21.48	0.50	1.00	3.85 3.67	2.67 2.35	1.5	0.69
111110	1124	Accommodation	Study	***	0.00	1.20	72.03	40.50	21.40	0.50	1.00	3.67	2.35	1.5	0.64
Third	R16	Student	Study	W6	0.68	1.20	36.76	33.69	21.42	0.50	1.00	1.87	1.72		
Third	R17	Accommodation Student	Study	W7	0.68	1.20	48.28	43.83	21.42	0.50	1.00	1.87 2.46	1.72 2.23	1.5	0.92
mila	N17	Accommodation	Study	**/	0.00	1.20	40.20	43.03	21.42	0.50	1.00	2.46	2.23	1.5	0.91
Third	R18	Student	Study	W8	0.68	1.20	59.59	51.76	21.42	0.50	1.00	3.03	2.64		
<b>TI</b> 1 1	D40	Accommodation	Ct. d	14/0	0.50	1.20	CC 44	54.04	24.42	0.50	4.00	3.03	2.64	1.5	0.87
Third	R19	Student Accommodation	Study	W9	0.68	1.20	66.41	51.04	21.42	0.50	1.00	3.38	2.60 2.60	1.5	0.77
Fourth	R12	Student	Study	W2	0.68	1.20	80.13	69.28	21.48	0.50	1.00	4.04	3.50		
	242	Accommodation	0. 1	1110			=0.04					4.04	3.50	1.5	0.86
Fourth	R13	Student Accommodation	Study	W3	0.68	1.20	79.01	64.80	21.48	0.50	1.00	3.99	3.27 3.27	1.5	0.82
Fourth	R14	Student	Study	W4	0.68	1.20	75.70	59.20	21.48	0.50	1.00	3.82	2.99	1.5	0.62
		Accommodation										3.82	2.99	1.5	0.78
Fourth	R16	Student	Study	W6	0.68	1.20	52.69	51.38	21.42	0.50	1.00	2.68	2.62	1.5	0.00
Fourth	R17	Accommodation Student	Study	W7	0.68	1.20	65.01	62.69	21.42	0.50	1.00	2.68 3.31	2.62 3.19	1.5	0.98
		Accommodation	,									3.31	3.19	1.5	0.96
Fourth	R18	Student	Study	W8	0.68	1.20	72.34	67.57	21.42	0.50	1.00	3.68	3.44		2.5-
Fourth	R19	Accommodation Student	Study	W9	0.68	1.20	76.06	65.01	21.42	0.50	1.00	3.68 3.87	3.44 3.31	1.5	0.93
rourth	KIS	Accommodation	Study	***5	0.00	1.20	70.00	05.01	21.72	0.50	1.00	3.87	3.31	1.5	0.85
Fifth	R16	Student	Study	W6	0.68	1.20	65.40	65.11	21.42	0.50	1.00	3.33	3.31		
Fifth	R17	Accommodation Student	C+d.,	W7	0.68	1.20	78.84	78.11	21.42	0.50	1.00	3.33 4.01	3.31 3.98	1.5	1.00
riitii	LT\	Accommodation	Study	vv /	0.08	1.20	76.84	/0.11	21.42	0.50	1.00	4.01	3.98	1.5	0.99
Fifth	R18	Student	Study	W8	0.68	1.20	81.81	80.07	21.42	0.50	1.00	4.17	4.08		
		Accommodation					07					4.17	4.08	1.5	0.98
Fifth	R19	Student Accommodation	Study	W9	0.68	1.20	82.56	77.65	21.42	0.50	1.00	4.20 4.20	3.95 3.95	1.5	0.94
		Accommoddion	-									4.20	3.33	1.3	0.34



## **APPENDIX 3**

Daylight Results: Existing Light Industrial Accommodation Proposed Light Industrial Accommodation

Project No: 10908 Architect: GML Architects

Iteration Description: ADF existing commercial accommodation

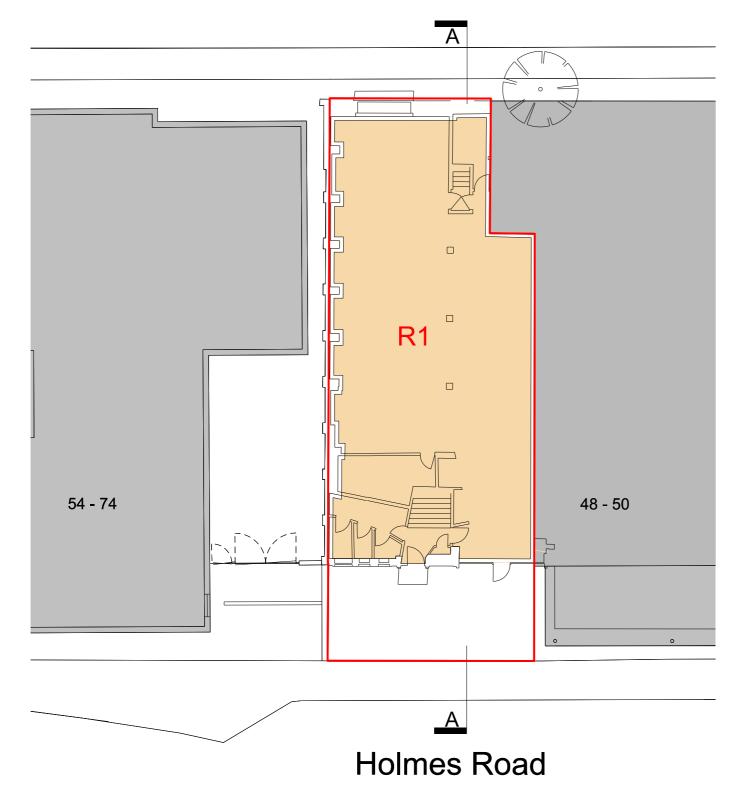
Date of Analysis: 23/05/2016 00:00:00

e or Arialysis:	23/03/2016 00:0	0:00											
Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Glazed Area	Clear Sky Angle Existing	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Existing	Req'd Value	Meets E Criter
					Existi	ng							
Ground	R1	Commercial	Light	W1-L	0.68	2.31	50.94	833.05	0.50	0.15	0.02		
			Industrial	W1-U	0.68	10.19	56.26	833.05	0.50	1.00	0.62		
				W2	0.68	3.77	63.68	833.05	0.50	1.00	0.26		
											0.90	2	
First	R1	Commercial	Light	W1	0.68	4.66	130.50	569.40	0.50	1.00	0.97		
			Industrial	W5	0.68	4.66	142.89	569.40	0.50	1.00	1.06		
				W9	0.68	1.79	146.71	569.40	0.50	1.00	0.42		
				W13	0.68	4.66	114.43	569.40	0.50	1.00	0.85		
				W18	0.68	0.58	54.30	569.40	0.50	1.00	0.05		
											3.35	2	Υ
First	R2	Commercial	Light	W17-L	0.68	0.83	70.88	100.70	0.50	0.15	0.08		
			Industrial	W17-U	0.68	3.20	67.99	100.70	0.50	1.00	1.96		
											2.04	2	YI

Room R1 at first floor level is mainly served by rooflights. It is appropriate to consider a reduction to the daylight transmittance applying a maintenance factor. This depends on room use, location and window position as per Appendix A1 "Supplementary Data" - Paragraph A1.2 of the CISBE Lighting Guide LG10. Once the factor is applied ADF to R1 at first floor would reduce to a value between 2.56% and 2.82% ADF.

## Regis Road

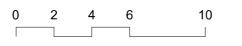
## Regis Road



Α R2 R1 1 - 74 48 - 50 **Holmes Road** 

**EXISTING GROUND FLOOR PLAN** 

**EXISTING FIRST FLOOR PLAN** 



52 HOLMES ROAD, LONDON, NW5 3AB

EXISTING GROUND/FIRST FLOOR PLAN

GML Architects

UNIT 3,1-4 Christina Street, London, EC2A 4PA
Tel: 020 7729 9595 Fax: 020 7729 1801 info@gmlarchitects.co.ul

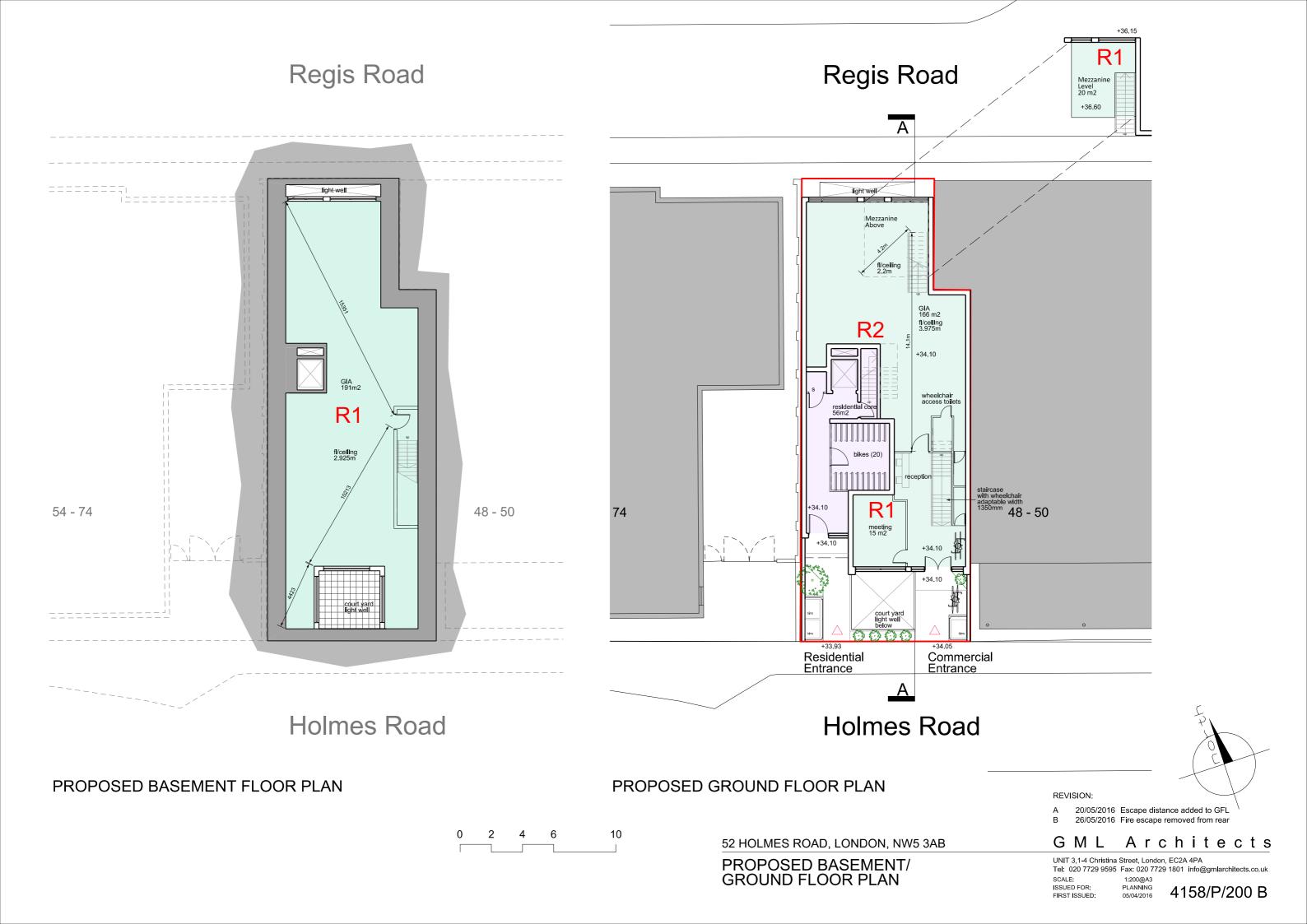
SCALE: 1:200@A3 ISSUED FOR: PLANNING FIRST ISSUED: 05/04/2016

4158/P/110

Project No: 10908 Architect: GML Architects

Iteration Description: ADF proposed light industrial accommodation Date of Analysis: 26/05/2016 00:00:00

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.	Glass Transmittance	Glazed Area	Clear Sky Angle Proposed	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF Proposed	Req'd Value	Meets BRE Criteria
					Propos	sed							
Basement	R1	Commercial	Light	W3-L	0.68	2.00	29.91	616.37	0.50	0.15	0.01		T
			Industrial	W3-U	0.68	4.96	34.78	616.37	0.50	1.00	0.25		
				W2-L	0.68	2.00	33.85	616.37	0.50	0.15	0.01		
				W2-U	0.68	4.96	40.72	616.37	0.50	1.00	0.30		
				W1-L	0.68	2.00	28.13	616.37	0.50	0.15	0.01		
				W1-U	0.68	4.97	32.38	616.37	0.50	1.00	0.24		
				W4-L	0.68	1.99	9.59	616.37	0.50	0.15	0.00		
				W4-U	0.68	4.93	13.72	616.37	0.50	1.00	0.10		
				W5-L	0.68	1.49	9.34	616.37	0.50	0.15	0.00		
				W5-U	0.68	3.71	13.23	616.37	0.50	1.00	0.07		
											1.01	2	
Ground	R1	Commercial	Light	W1-L	0.68	2.18	44.72	94.48	0.50	0.15	0.14		
			Industrial	W1-U	0.68	7.96	31.09	94.48	0.50	1.00	2.38		
											2.52	2	YES
Ground	R2	Commercial	Light	W4-L	0.68	1.99	32.32	444.84	0.50	0.15	0.02		
			Industrial	W4-U	0.68	2.86	58.30	444.84	0.50	1.00	0.34		
				W5	0.68	3.48	68.47	444.84	0.50	1.00	0.49		
				W6	0.68	2.63	72.65	444.84	0.50	1.00	0.39		
				W7	0.68	4.82	73.73	444.84	0.50	1.00	0.72		
				W10-L	0.68	1.50	31.85	444.84	0.50	0.15	0.01		
				W10-U	0.68	3.05	63.99	444.84	0.50	1.00	0.40		
											2.37	2	YES
Mezzanine	R1	Commercial	Light	W6-L	0.68	0.82	70.82	78.14	0.50	0.15	0.10		
			Industrial	W6-U	0.68	1.80	72.99	78.14	0.50	1.00	1.53		
				W7-L	0.68	1.51	72.05	78.14	0.50	0.15	0.19		
				W7-U	0.68	3.31	73.87	78.14	0.50	1.00	2.83		
											4.65	2	YES



## **APPENDIX 4**

54-74 Holmes Road - Lightwell

