Inglewood Mansions

Daylight and Sunlight Assessment

Emer Ltd

August 2018

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1.0 Introduction

1.1 This report considers the effects of the proposed development at Inglewood Mansions, 287-289 West End Lane, West Hampstead, NW6 1RE, on the levels of daylight and sunlight received by the existing neighbouring properties. It also considers the levels of natural light that will be experienced within the existing residential units on the second and third floors at Inglewood Mansions as well as within the new residential units on the proposed rooftop extension floor forming the development. The assessment has been prepared on behalf of Emer Ltd.

1.2 The proposed development comprises a single-story rooftop extension to the existing four-storey building at the site to provide 13 new single-occupancy bedsit units with two communal kitchens. The design of the development has been informed by the daylight and sunlight considerations and, as a result, the massing of the proposed extension has been set back from the existing roofline of the building's front façade as well as the central lightwell that serves the existing building. Additionally, skylights have been added to the most sensitive units on the third floor of the building in order to avoid adverse impacts on their existing daylight and sunlight levels.

1.3 The quantitative assessment has been undertaken in accordance with the guidelines set out in the Building Research Establishment (BRE) report "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice" (October 2011). The Guide is intended to be advisory and does not contain mandatory standards. The introduction states:

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not an instrument of planning policy; its aim is 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 values. For example, in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings."

1.4 Lichfields is aware that Camden Council understands the need for a flexible approach to the numerical targets of the BRE guide in relation to new developments in the Borough due to its higher density urban nature. The Council states in the Camden Planning Guidance ('CPG 6: Amenity', adopted in March 2018):

"While we strongly support the aims of the BRE methodology for assessing sunlight and daylight we will consider the outcomes of the assessments flexibility where appropriate, taking into account site specific circumstances and context. For example, to enable new development to respect the existing layout and form in some historic areas, it may be necessary to consider exceptions to the recommendations cited in the BRE guidance."

1.5 This assessment has been carried out using the following information:

- The final planning application drawings, received from *AS Studio* on 19.06.18;
- The architect's drawings for the existing third floor at Inglewood Mansions;
- Ordnance Survey Superplan digital mapping of the area;
- Photogrammetric survey of the site and surroundings;
- Comprehensive photographic survey of the site and surroundings; and
- Aerial photography.

1.6 The report is divided into the following subsequent sections:

- Section 2.0 provides a brief description of the site and the nature of the proposed development, highlighting features of relevance to the assessment of daylight and sunlight levels;
- Section 3.0 outlines the scope of the assessment;
- Section 4.0 sets out relevant planning policy considerations;
- Section 5.0 provides an assessment of the impacts of the proposal on levels of daylight;
- Section 6.0 considers the proposal's impacts in terms of sunlighting;
- Section 7.0 provides a summary of the assessment and our conclusions are drawn.

1.7 The assessment is supported by a series of reference plans and results tables at Appendices 1-6.

2.0 Site, Surroundings and the Proposal

Site and Surroundings

2.1 The application site comprises a four-storey building known as Inglewood Mansions, located at 287-289 West End Lane, West Hampstead NW6 1RE. The building forms part of a terrace of buildings fronting onto West End Lane and stretching between Inglewood Road to the south and West Cottages to the north.

2.2 The surrounding areas is characterised by a mix of residential and commercial properties. The buildings on the other side of West End Lane, to the east of Inglewood Mansions, as well as the buildings adjacent to the site, have commercial premises on the ground floor and residential dwellings above. The buildings along Inglewood Road and West Cottages are fully residential in use. The site is located within the West End Green Conservation Area, characterised by homogenous Victorian/Edwardian architecture. Therefore, the results of this daylight and sunlight assessment should be considered in the historic urban context of the area and its intrinsic site constraints.

2.3 The site and its context are illustrated in the images of the assessment model contained at Appendix 1. A complete description of the site and surroundings, and the area's historic character, is provided in the submitted Planning, Heritage, Townscape and Visual Statement.

The Proposal

2.4 The proposed development comprises a single-storey rooftop extension to provide 13 new single-occupancy bedsit units and two kitchens.

2.5 The proposed extension will replace the current butterfly roof form with a uniform mansard roof. The existing building is served by a central lightwell and two side lightwells shared with the property at 283-285 West End Lane to the south and the property at 291 West End Lane to the north.

2.6 As noted in the preceding section, the design of the mansard roof extension has been informed by daylight and sunlight considerations. Lichfields' daylight and sunlight team has undertaken a series of massing analyses in collaboration with the project architect in order to (a) minimise the adverse daylight and sunlight effects on neighbouring buildings and (b) ensure that the current compromised levels of natural light reaching the existing residential units facing the central lightwell are not further reduced. As a result of the iterative design development process, the proposed massing has been set back from the existing roofline of the building's front façade as well as the central lightwell serving four units on each floor. Additionally, skylights have been added to two most sensitive units on the third floor and certain internal alterations have been applied to all the units on that floor, including necessary changes to the floor-to-ceiling heights and introduction of lighter internal surfaces to improve perceived lighting condition within the rooms.

2.7 Overall, it can be concluded that the proposed development is sensitive to the historic character of the area and the residential amenity of current and future residents of both neighbouring properties and Inglewood Mansions building itself. As explained within the Planning, Heritage, Townscape and Visual Statement, the layout, scale and massing of the rooftop extension accords with the neighbouring context while delivering new high-quality housing stock to the Borough of Camden.

2.8 The layout, scale and massing of the proposed development and its relationship with surrounding properties are illustrated at Appendix 1.

3.0 Scope of Assessment

3.1 This section of the report provides an overview of the scope of the assessment in terms of the neighbouring residential properties, existing residential accommodation at Inglewood Mansions and proposed residential accommodation forming the proposed development itself. It also sets out the development scenarios that have formed the basis of the assessment.

3.2 The locations of the window reference points and rooms assessed are illustrated at Appendices 2 and 3.

Neighbouring Accommodation Assessed

3.3 As outlined in the preceding section, the assessment has focused on the development's effects on the existing residential accommodation above the ground-floor commercial premises on the eastern side of West End Lane (nos. 236-246) and within the lightwell of the One Bourbon Tavern building at 291 West End Lane, directly adjoining the property to north. The corner Alice House building at 283-285 West End Lane, abutting the property to the south, was considered at the initial stages of the project; however, it has not been included in the technical assessment because the massing of the proposed extension does not rise above the brick boundary wall separating Inglewood Mansions from the building. The residential properties at 2 and 6 Inglewood Road as well as the recently extended property at 25 West Cottages and residential accommodation at 1-4 Salmon Mews, all having windows positioned in proximity to the rear of Inglewood Mansions, have also been assessed.

3.4 Other properties in the vicinity of the site are either non-residential in use or are situated at a sufficient distance from the site to be unaffected in daylight and sunlight terms. Furthermore, due to the character of the proposed development, there will be no effect on the existing neighbouring amenity spaces in terms of overshadowing.

3.5 The following table provides a summary of the neighbouring properties assessed.

Table 3-1 Neighbouring Properties Assessed

Neighbouring Properties	No. Windows Assessed	
	Daylight	Sunlight*
236 West End Lane	4 windows	4 windows*
238 West End Lane	4 windows	4 windows*
240 West End Lane	4 windows	4 windows*
242 West End Lane	4 windows	4 windows*
244 West End Lane	4 windows	4 windows*
246 West End Lane	4 windows	4 windows*
One Bourbon Tavern, 291 West End Lane	11 windows	8 windows*
2 Inglewood Road	6 windows	n/a
6 Inglewood Road	2 windows	n/a
25 West Cottages	6 windows	5 windows*
1-4 Salmon Mews	9 windows	9 windows*
Total	*58 windows*	*46 windows**

[*windows orientated within 90 degrees of due south]

3.6 Overall, the assessment has considered the effects of the development on the daylight levels experienced by 58 windows serving the existing neighbouring residential properties.

3.7 The windows assessed that are orientated within 90° of due south have also been assessed in terms of sunlight. This comprises 46 windows serving the neighbouring properties.

3.8 The locations of the window reference points tested are illustrated on the window maps contained at Appendix 2.

Existing and Proposed Accommodation at Inglewood Mansions Assessed

3.9 The assessment has considered the levels of natural light that will be received within all of the proposed residential dwellings and communal kitchen areas on the proposed rooftop extension floor. This comprises 31 windows serving 13 bedsit units and 2 kitchens. The windows have been assessed in terms of Vertical Sky Component (VSC) and the rooms they serve have been assessed in terms of Average Daylight Factor (ADF). The latter is considered to be the most comprehensive daylight test and it is recommended for testing new accommodation by the BRE guide. Of the tested windows, 17 are orientated within 90° of due south and also required assessment in terms of sunlight availability.

3.10 As explained in the preceding section, the proposed development also entails minor internal alterations to the units on the third floor (the current top floor of the building), including changes to the floor-to-ceiling heights and adding skylights to two most sensitive units facing the central lightwell (existing Units Nos. 32 and 308, referred to as rooms 'R32' and 'R8' in the assessment).

3.11 Adding the skylights has been made possible by introducing a setback to the massing of the proposed units directly above (proposed Units Nos. 3 and 10, also referred to as rooms 'R3' and 'R10' in the assessment). Therefore, we first tested the current levels of daylight and sunlight enjoyed by windows and habitable rooms (eight windows and eight rooms) within the lightwell-facing residential dwellings on that floor, and then tested the levels of daylight to these units in the proposed altered condition (ten windows and eight rooms) and with the rooftop extension in place. All the other dwellings on the third floor are outward-looking with largely unobstructed view of sky, and are therefore considered to be unaffected by the proposed development in the context of the BRE guidance. Furthermore, we have also tested the windows serving the existing residential units facing the central lightwell on the second floor (four windows) for completeness, even though their existing daylight levels are very compromised and they understandably receive virtually no direct sunlight as a result of their low-level location within the lightwell.

3.12 The window and room references for Inglewood Mansions are illustrated at Appendix 3.

Development Scenarios

3.13 We have considered the daylight and sunlight assessment under the following two scenarios:

- ***Scenario 1*:** Effects of the Inglewood Mansions development on the existing neighbouring properties and existing accommodation on the second and third floors at Inglewood Mansions; and
- ***Scenario 2***: Effects of the Inglewood Mansions development on the altered existing third floor and proposed rooftop extension fourth floor at Inglewood Mansions.

4.0 Planning Policy Context

4.1 The revised National Planning Policy Framework (July 2018), which replaces the NPPF published in March 2012, sets out national planning policies and how they should be applied. It provides a framework within which Local Authorities can produce their local plans. In relation to daylight, sunlight and overshadowing, the NPPF states that *"when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they would otherwise inhibit making efficient use of a site"*.

4.2 The statutory development plan covering the proposal site is formed by the London Plan (Further Alterations to the London Plan, March 2016), new Draft London Plan (December 2017), London Housing SPG (March 2016), Camden Local Plan (2017) and Camden Planning Guidance (March 2018).

4.3 The London Plan addresses the residential amenity effects of development. Policy 7.6 states that proposals for buildings should, amongst other things, *"not cause unacceptable harm to the amenity of surrounding land and buildings, particularly residential buildings, in relation to privacy, overshadowing, wind and microclimate"*. Amenity in this case is considered to include access to adequate daylight and sunlight.

4.4 The current 2016 London Plan is still the adopted Development Plan; however, the new Draft London Plan was published in December 2017 and is a material consideration in planning decisions. The Draft London Plan states in Policy D4 ('Housing Quality and Standards') that *"the design of development should provide sufficient daylight and sunlight to new housing that is appropriate for its context, whilst avoiding overheating, minimising overshadowing and maximising the usability of outside amenity space"*. The Draft London Plan also states that a development should be carefully designed to avoid unacceptable harm to the amenity of surrounding buildings and not compromise *"comfort and enjoyment of open spaces"*.

4.5 The Housing SPG (March 2016) provides guidance on a range of strategic policies including housing supply, residential density and housing standards. It states that *"an appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight impacts of new development on surrounding properties as well as within new developments themselves"*. The document further states that *"the degree of harm on adjacent properties and the daylight targets within a proposed scheme should be assessed drawing on broadly comparable residential typologies within the area and of a similar nature across London"*.

4.6 At the local level, Camden Local Plan sets out the Council's planning policies and it is a key document in Camden's development plan. The Council's decisions on planning applications should be taken in line with the development plan.

4.7 Policy A1 ('Managing the impact of the development') of Camden Local Plan states that the Council *"will seek to protect the quality of life of occupiers and neighbours"* and *"will grant permission for development unless this causes unacceptable harm to amenity"*, which includes "*sunlight, daylight and overshadowing"*. The Policy further states in paragraph 6.6:

"Loss of daylight and sunlight can be caused if spaces are overshadowed by development. To assess whether acceptable levels of daylight and sunlight are available to habitable, outdoor amenity and open spaces, the Council will take into account the most recent guidance published by the Building Research Establishment (currently the Building Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011)."

4.8 The Council has also prepared a number of other documents which provide advice and guidance on how planning policies should be applied, known as Supplementary Planning Guidance (SPG). Camden Planning Guidance (CPG) is one of these documents.

4.9 The Council stresses in the Planning Policy Guidance that the reported daylight and sunlight results *"will be considered flexibly taking into account site-specific circumstances and context"*. Therefore, the Council understands the need for a flexible approach to the numerical targets of the BRE guide in relation to new developments in the Borough. In fact, in paragraph 3.23 of Chapter 3 ('Daylight and Sunlight'), it states:

"While we strongly support the aims of the BRE methodology for assessing sunlight and daylight we will consider the outcomes of the assessments flexibility where appropriate, taking into account site specific circumstances and context. For example, to enable new development to respect the existing layout and form in some historic areas, it may be necessary to consider exceptions to the recommendations cited in the BRE guidance."

4.10 It can be confirmed that the latest methodology and guidance outlined by the BRE guide have formed the basis of this assessment.

5.0 Daylight

5.1 This section of the assessment considers the effects of the proposed development on:

- the levels of ambient daylight (VSC) received at the windows within the existing neighbouring properties and the residential units on the second floor at Inglewood Mansions; and
- the levels of both ambient daylight (VSC) and interior daylight (ADF) within the existing/altered residential accommodation on the third floor and the proposed units on the rooftop extension fourth floor forming the proposed development at Inglewood Mansions.

Methodology

5.2 The daylight assessment is based on two separate analyses. The Vertical Sky Component (VSC) at each of the windows identified for analysis has been assessed. The existing and altered third-floor rooms and the proposed fourth-floor rooms at Inglewood Mansions served by the windows assessed have also been considered in terms of Average Daylight Factor (ADF).

5.3 The following sets out the methodology for calculating VSC and ADF.

Vertical Sky Component

5.4 The level of ambient daylight received by a window is quantified in terms of its Vertical Sky Component (VSC), which represents the amount of vertical skylight falling on a vertical window. The daylight assessment has been based on a three-dimensional AutoCAD model constructed for the site and surroundings as existing and with the proposed development in place. The heights and locations of the surrounding buildings and the proposed development have been taken from a photogrammetric survey, Ordnance Survey digital plan data, site observations, aerial photography of the site and surroundings, architect's drawings for the existing third floor at the site and the planning application drawings for the proposed scheme as well as the neighbouring properties where possible.

5.5 The VSC level at each of the windows requiring assessment has been quantified using Waldram Tools daylight and sunlight software (MBS Software Ltd).

5.6 The BRE good practice guide outlines numerical guidelines that represent flexible targets for new developments in relation to the vertical sky component at nearby reference points. The document states that:

*"If the vertical sky component, with the new development in place, is **both** less than 27% **and** less than 0.8 times its former value, then the loss of light is likely to be noticeable."*

5.7 The guidelines therefore require that either the VSC target or the degree of change in daylighting are met (i.e. if the 27% target is adhered to, there is no requirement under the BRE guidelines for the resultant VSC level to remain at 0.8 times the former VSC level).

Average Daylight Factor

5.8 The BRE guide advises that the calculation of Average Daylight Factor (ADF) provides an alternative means of assessing the level of daylight received by the interior of the room served by a window. It is an appropriate means of assessment for proposed accommodation and recently constructed neighbouring development where the parameters required for the ADF calculations are known. We are also aware that this is a preferred method of calculating the interior daylight levels by Camden Council.

5.9 The calculation of ADF again provides a more accurate method of calculating the daylight level experienced within a room than VSC as it takes into account the size and reflectance of room's surfaces and the number, size and transmittance of its window(s), as well as the ambient daylight level (VSC) received at the window(s).

5.10 The Average Daylight Factor (df) is defined as the average internal illuminance as a percentage of the unobstructed external illuminance under standard overcast conditions.

5.11 ADF can be calculated using the following formula:

$$df = \frac{TMAW\ \theta}{A(1-R2)}\ \%$$

Where:

- T is the diffuse visible transmittance of the glazing (a value of 0.65 is typical for double glazed clear glass);
- M is the maintenance factor allowing for the effects of dirt (a percentage loss of 8% is typical for residential accommodation in urban areas)
- Aw is the net glazed area of the window (m2);
- θ is the angle of visible sky in degrees;
- A is the total area of the room surfaces: ceiling, floor, walls and windows (m2);
- R is the average reflectance (a standard value of 0. 5 is recommended by the BRE guide; a bespoke value of 0.7 is applicable for new/proposed accommodation with light internal surface treatments1).

5.12 The BRE guide contains a separate procedure for floor to ceiling windows and glazed doors. It states that areas of glazing below the working plane should be treated as a separate window and an extra factor is applied to it to take account of the reduced effectiveness of low level glazing in lighting the room. The BRE states that a value equivalent to the floor reflectance can be taken for this factor or, if this is not known, then a value of 0.15 can be used.

5.13 The approach to assessing internal daylighting using the ADF method is set out at Appendix C of the BRE guide. The BRE guide and British Standard BS8206 set the following minimum recommended ADF levels for different room types:

- Kitchens: 2%;
- Living rooms: 1. 5%;
- Bedrooms: 1%.

5.14 Due to the nature and expected use of the proposed bedsit units forming the development, the ADF target of 1.5% has been applied while the target of 2% of ADF has been applied to the proposed communal kitchens.

Significance of Effects

5.15 In addition to the application of the BRE guide levels outlined above, minor breaches of the BRE guide levels have also been identified where the degree of change in daylighting arising from the development or the residual daylight level with the scheme in place is within a margin of 20% of the respective guide levels. This reflects certain site constraints posed by the historic character

[1] A 0.7 reflectance value assumes white painted walls and ceiling (0.85) and a medium wooden floor (0.3) [BS 8206-2: 2008]

of the surrounding area and the location of several windows within three tight lightwells serving the existing/proposed residential units at Inglewood Mansions.

5.16 In such circumstances, the BRE guide levels, which are predicated on a lower density, suburban, scale of development, are of limited practical relevance and their strict application would unreasonably inhibit otherwise acceptable development.

5.17 Consequently, while the subsequent analyses have been based on the BRE guidance and are considered in the context of its guide levels, where breaches of the VSC and ADF guide levels are experienced, they have been classified as 'minor effects' where daylight levels are within 20% of the guide levels.

Daylight Results – Existing Neighbouring Properties

5.18 The development has been designed to ensure that the effects on the current levels of daylight within the neighbouring properties are minimised. The following table provides a summary of the VSC results obtained for the existing neighbouring properties. The results are set out in full at Appendix 4.

Table 5-1 Neighbouring Properties – Summary of Ambient Daylight (VSC) Results

VSC Summary	Windows assessed	Above BRE Guide		Below BRE Guide		Minor Effects*
236 West End Lane	4 windows	4	100%	0	0.%%	n/a
238 West End Lane	4 windows	4	100%	0	0.%%	n/a
240 West End Lane	4 windows	4	100%	0	0.%%	n/a
242 West End Lane	4 windows	4	100%	0	0.%%	n/a
244 West End Lane	4 windows	4	100%	0	0.%%	n/a
246 West End Lane	4 windows	4	100%	0	0.%%	n/a
One Bourbon Tavern, 291 West End Lane	11 windows	8	c. 73%	3	c. 27%	3
2 Inglewood Road	6 windows	6	100%	0	0.%%	n/a
6 Inglewood Road	2 windows	2	100%	0	0.%%	n/a
25 West Cottages	6 windows	6	100%	0	0.%%	n/a
1-4 Salmon Mews	9 windows	9	100%	0	0.%%	n/a
Total	*58 windows*	*55*	*c. 95%*	*3*	*c. 5%*	*3*

[*Marginal Impact: Within 20% of BRE Guide Level]

5.19 The results of the daylight analysis demonstrate that c. 95% of the windows serving the properties in the vicinity of the site will retain the VSC levels above the BRE guidelines with the proposed rooftop extension in place. Furthermore, the three remaining windows at 291 West End Lane will fall only marginally below the numerical target values for VSC. It also needs to be noted here that the existing levels of sky visibility on the face of these windows are already limited due to its outlook onto the tight lightwell shared with Inglewood Mansions (refer to the assessment model images shown at Appendix 1). Therefore, it can be said that the impacts on

this property are primarily a result of the historic urban character of the area and constraints posed by the layout and form of the neighbouring property itself.

5.20 Overall, the effects of the proposed development on the daylight levels experienced by the existing neighbouring properties tested are acceptable in the context of the site, BRE guidance and relevant planning policy.

Daylight Results – Inglewood Mansions

5.21 In terms of the impact of the proposed development on levels of daylight within the existing residential accommodation on the second and third floors of the Inglewood Mansions property itself, and the anticipated levels of daylight within the proposed accommodation, it is important to reiterate here that the scheme has been informed by a series of daylight and sunlight analyses carried out in coordination with the project architect. The aim of the iterative design development process has been to not only minimise the adverse effects on the neighbouring properties but also to maximise the levels of daylight within the proposed residential accommodation while at the same time avoiding further reductions to the already compromised daylight levels within the existing lightwell-facing residential units at Inglewood Mansions.

5.22 As a result, the proposed rooftop extension massing has been set back from the perimeter of the central lightwell to maintain the current levels of sky visibility to the third-floor units located beneath. This has also allowed for two skylights to be added to two most sensitive units on the third floor (existing Units Nos. 32 and 308, referred to as rooms 'R32' and 'R8' in the assessment) while various minor internal alterations have been applied to both the third and fourth floors. This includes necessary changes to the floor-to-ceiling heights on the third floor and introduction of lighter internal surfaces to improve perceived natural light condition within the habitable rooms on both floors.

5.23 The following tables provide a summary of the VSC and ADF results obtained for the existing and proposed accommodation at Inglewood Mansions. As outlined in Section 3.0, the lightwell-facing windows serving the existing accommodation on the second and third floors as well as the units forming the proposed development (i.e. altered third-floor units and new fourth-floor units) have been tested in terms of VSC. Furthermore, we have also modelled and tested the lightwell-facing habitable rooms on the third floor and all the habitable rooms on the proposed fourth floor in terms of the internal daylight levels as per the ADF calculations.

5.24 The daylight results are set out in full at Appendices 5a-5B and 6A-6B. Due to the fact that the third floor is altered as part of the proposed development, separate tables of results for the existing and proposed condition had to be created in relation to that floor. However, in order to summarise the results in a simple format in the body of the report, the results for the third floor under both the existing and proposed condition have been compared and are in the same tables. As outlined above, the altered third floor includes two additional skylights to two units. For consistency in comparison of the results, they have been excluded from the below summary tables for VSC and APSH/WPSH. However, they are included in the 'proposed' ADF results for those two units as they have formed part of the 'proposed' calculation formula.

Table 5-2: Inglewood Mansions – Summary of Ambient Daylight (VSC) Results for Existing Accommodation (Second and Third Floors)

VSC Summary	Windows assessed	Above BRE Guide		Below BRE Guide		Minor Effects*
2nd Floor	4 windows	2	50%	2	50%	2
3rd Floor	8 windows	2	25%	6	75%	1
Total	*12 windows*	*4*	*c. 33%*	*8*	*c. 67%*	*3*

[*Marginal Impact: Within 20% of BRE Guide Level]

Table 5-3: Inglewood Mansions – Summary of Internal Daylight (ADF) Results for Existing Accommodation (Third Floor)

ADF Summary	Rooms assessed	Above BRE Guide		Below BRE Guide		Minor Effects*
3rd Floor	8 rooms	8	100%	0	0.%%	n/a

[*Marginal Impact: Within 20% of BRE Guide Level]

Table 5-4: Inglewood Mansions – Summary of Ambient Daylight (VSC) and Internal Daylight (ADF) Results for Proposed Accommodation (Fourth Floor)

VSC Summary	Windows assessed	Above BRE Guide		Below BRE Guide		Minor Effects*
Proposed 4th Floor	31 windows	30	c. 97%	1	c. 3%	1
ADF Summary	**Rooms assessed**	**Above BRE Guide**		**Below BRE Guide**		**Minor Effects***
Proposed 4th Floor	15 rooms	15	100%	0	0.%%	n/a

[*Marginal Impact: Within 20% of BRE Guide Level]

5.25 As outlined in the above tables, two of the four tested windows which look onto the central lightwell on the second floor will meet the BRE guide levels for VSC. Furthermore, the two remaining windows will fall only marginally below the guidelines as a result of the rooftop extension. Nevertheless, as mentioned above these windows have already very compromised levels of sky visibility in the existing condition due to their location. In fact, their existing VSC values are in the region of 1%-3%, which is well below the target of 27%. Therefore, any small reduction to the current levels of daylight to the windows in absolute terms would result in large relative reductions. In the case of the two second-floor windows which fall marginally below the BRE guidelines, the absolute change in the VSC is less than 1%, which would be imperceptible to the human.

5.26 In terms of the residential dwellings on the third floor, we have compared the current daylight levels within the units looking onto the three lightwells serving the Inglewood Mansions property, and then compared them with the anticipated levels of daylight enjoyed by the units in the proposed configuration (i.e. altered floor-to-ceiling heights, added skylights to two units). The ambient daylight (VSC) results demonstrate that out of the eight windows tested, two will comply with the BRE guide levels for VSC. Furthermore, one of the remaining six windows will

fall only marginally below the target values while the majority of the windows have their retained VSC values at the level which is typical for windows located within tight lightwells in historic urban locations such as West End Lane.

5.27 Notwithstanding this, and as outlined in the Methodology section, VSC merely provides a measure of obstruction to skylight taken at the midpoint of each window. It does not take into account the size of each window aperture, the size, layout and nature of the room served by the window, or the number of windows serving a room. In contrast, the calculation of ADF provides a more sophisticated method of calculating the daylight condition experienced within a room. ADF takes into account the size and reflectance of room's surfaces and the number, size and transmittance of its window(s), as well as the ambient daylight level (VSC) received at the window(s). On this basis, the interior daylight analysis provides a better indication of the daylight conditions that will be experienced in the Inglewood Mansions units.

5.28 In this context, the ADF results for the lightwell-facing residential units on the third floor demonstrate that all the habitable rooms fully comply with the BS/BRE guide levels for ADF based on the 1.5% target applied to living rooms. It is also important to highlight the fact that six of the eight units tested will have their internal daylight levels improved as a result of the internal alterations, including the proposed light-coloured internal surfaces and addition two skylights added to two most sensitive units (existing Units Nos. 32 and 308, referred to as rooms 'R32' and 'R8' in the assessment). The improved internal daylight levels to the majority of the third-floor units are uncommon for a development in an urban context, and they are a result of the iterative design development process in collaboration with the architect.

5.29 Finally, in terms of the anticipated daylight levels within the proposed residential dwellings and associated facilities on the new fourth floor, the results demonstrate that 30 of the 31 windows tested (c. 97%) will fully comply with the BRE guide levels for VSC, with the remaining window falling only marginally below the BRE guidelines. Furthermore, all the proposed 13 units and two shared kitchens will fully comply with the BS/BRE guide levels for ADF. Again, these are very good daylight results for a development in a historic urban area, and they demonstrate the positive outcome of the iterative design development process in collaboration with the architect.

5.30 Overall, the results for the existing accommodation at Inglewood Mansions show that there will understandably be some changes to the current levels of sky visibility at the current lightwell-facing windows on the second and third floors; however, they will be minor and largely imperceptible to the human eye. Furthermore, having also calculated the ADF levels within the third-floor units, it can be confirmed that six of the eight units facing the three lightwells which serve the property will have improved interior daylight levels as a result of the proposed development, with the remaining two units experiencing changes which are within the BRE guidelines. Finally, all the proposed residential units and shared kitchen facilities on the new fourth floor will be fully compliant with the BS/BRE guide levels for interior daylight.

5.31 In conclusion, the effects of the development on the daylight levels experienced by the existing neighbouring properties, existing accommodation at Inglewood Mansions and within the proposed extension floor are acceptable in the context of the site, nature of the development, BRE guidance and relevant planning policy.

6.0 Sunlight

6.1 This section of the report assesses the effects of the proposed development on levels of sunlight at the window reference points. As noted at Section 3.0, only windows orientated within 90 degrees of due south require analysis in terms of sunlight availability. The methodology and results are discussed below.

Methodology

6.2 The levels of sunlight availability at the window reference points assessed have been calculated based on a three-dimensional AutoCAD model of the site and surroundings with the development in place, using the Waldram Tools daylight and sunlight software. The calculations provide the percentage year-round sunlight availability and the percentage of sunlight availability received during the winter months.

6.3 The BRE good practice guide notes that:

*"If [a] window reference point can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months between 21 September and 21 March, then the room should still receive enough sunlight…If the available sunlight hours are **both** less than the amount given **and** less than 0.8 times their former value, either over the whole year or just during the winter months (21 September to 21 March), then the occupants of the existing building will notice the loss of sunlight."*

6.4 As with daylighting, the guidelines require that either the sunlight availability targets or the degree of change in sunlighting are met (i.e. if the 25%/5% targets are adhered to, there is no requirement under the BRE guidelines for the resultant sunlight levels to remain at 0.8 times the former levels).

Sunlight Results – Existing Neighbouring Properties

6.5 The following table summarises the sunlight results obtained for the existing neighbouring properties. The results are again contained in full at Appendix 4.

Table 6-1: Neighbouring Properties – Summary of Annual Sunlight (APSH) Results

Annual Sunlight (APSH) Summary	Windows assessed	Above BRE Guide		Below BRE Guide		Minor Effects*
236 West End Lane	4 windows	4	100%	0	0.%%	n/a
238 West End Lane	4 windows	4	100%	0	0.%%	n/a
240 West End Lane	4 windows	4	100%	0	0.%%	n/a
242 West End Lane	4 windows	4	100%	0	0.%%	n/a
244 West End Lane	4 windows	4	100%	0	0.%%	n/a
246 West End Lane	4 windows	4	100%	0	0.%%	n/a
One Bourbon Tavern, 291 West End Lane	8 windows	6	75%	2	25%	2
2 Inglewood Road	None of the site-facing windows are orientated within 90° of due south					
6 Inglewood Road	None of the site-facing windows are orientated within 90° of due south					
25 West Cottages	5 windows	5	100%	0	0.%%	n/a
1-4 Salmon Mews	9 windows	9	100%	0	0.%%	n/a
Total	*46 windows*	*44*	*c. 96%*	*2*	*c. 4%*	*2*

[*Marginal Impact: Within 20% of BRE Guide Level]

Table 6-2: Neighbouring Properties – Summary of Winter Sunlight (WPSH) Results

Winter Sunlight (WPSH) Summary	Windows assessed	Above BRE Guide		Below BRE Guide		Minor Effects*
236 West End Lane	4 windows	4	100%	0	0.%%	n/a
238 West End Lane	4 windows	4	100%	0	0.%%	n/a
240 West End Lane	4 windows	4	100%	0	0.%%	n/a
242 West End Lane	4 windows	4	100%	0	0.%%	n/a
244 West End Lane	4 windows	4	100%	0	0.%%	n/a
246 West End Lane	4 windows	4	100%	0	0.%%	n/a
One Bourbon Tavern, 291 West End Lane	8 windows	6	75%	2	25%	0
2 Inglewood Road	None of the site-facing windows are orientated within 90° of due south					
6 Inglewood Road	None of the site-facing windows are orientated within 90° of due south					
25 West Cottages	5 windows	5	100%	0	0.%%	n/a
1-4 Salmon Mews	9 windows	9	100%	0	0.%%	n/a
Total	*46 windows*	*44*	*c. 96%*	*2*	*c. 4%*	*0*

[*Marginal Impact: Within 20% of BRE Guide Level]

6.6 As outlined in the above tables, the results of the sunlight analyses obtained for the existing neighbouring properties demonstrate that the out of the 46 site-facing windows which are orientated within 90° of due south, 44 windows (c. 96%) will fully comply with both the annual

and winter sunlight criteria. The two remaining windows serve the One Bourbon Tavern property at 291 West End Lane and are constrained in nature due to their outlook onto the lightwell shared with the Inglewood Mansions property. Therefore, the sunlight results for this adjacent property need to be considered in this context. Overall, there is a lower expectation for good sunlight levels reaching windows facing onto lightwells, especially during the winter months when sun is at a lower angle.

6.7 In conclusion, the effects of the proposed development on the sunlight levels experienced by the existing neighbouring properties are acceptable in the context of the site, BRE guidance and relevant planning policy.

Sunlight Results – Inglewood Mansions

6.8 The following table provides a summary of the sunlight results obtained for the existing and proposed accommodation at Inglewood Mansions. The results are contained in full at Appendices 5A-5B.

Table 6-3: Inglewood Mansions – Summary of Sunlight (APSH/WPSH) Results for Existing Accommodation (Second and Third Floors)

Annual Sunlight (APSH) Summary	**Windows assessed**	**Above BRE Guide**		**Below BRE Guide**		**Minor Effects***
2nd Floor	2 windows	0	0%	2	100%	n/a
3rd Floor	5 windows	0	0%	5	100%	n/a
Total	*7 windows*	*0*	*0%*	*7*	*100%*	*n/a*
Winter Sunlight (WPSH) Summary	**Windows assessed**	**Above BRE Guide**		**Below BRE Guide**		**Minor Effects***
2nd Floor	2 windows	0	0%	2	100%	n/a
3rd Floor	5 windows	0	0%	5	100%	n/a
Total	*7 windows*	*0*	*0%*	*7*	*100%*	*n/a*

[*Marginal Impact: Within 20% of BRE Guide Level]

Table 6-4: Inglewood Mansions – Summary of Sunlight (APSH/WPSH) Results for Proposed Accommodation (Fourth Floor)

Annual Sunlight (APSH) Summary	**Windows assessed**	**Above BRE Guide**		**Below BRE Guide**		**Minor Effects***
Proposed 4th Floor	17 windows	16	c. 94%	1	c. 6%	1
Winter Sunlight (WPSH) Summary	**Windows assessed**	**Above BRE Guide**		**Below BRE Guide**		**Minor Effects***
Proposed 4th Floor	17 windows	9	c. 53%	8	c. 47%	0

[*Marginal Impact: Within 20% of BRE Guide Level]

6.9 The results of the sunlight analyses for the existing accommodation on the second floor demonstrate that the two south-facing windows located within the central lightwell currently receive almost no sunlight, with one of these windows having the existing APSH value of 1%.

This is a result of their location on a low level and natural constraints to sunlight access posed by the lightwell.

6.10 In terms of the residential dwellings on the third floor (current top floor), there are currently four windows within the three lightwells which are orientated within 90° of due south and two of them currently receive adequate levels of sunlight, with one of them also meeting the winter sunlight criteria. However, it is also worth noting here that two windows receive no winter sunlight (0%) in the existing condition. As a result of the rooftop extension, all the four windows will fall below the annual and winter sunlight criteria. However, as mentioned in the preceding sections, there is a lower expectation for good sunlight within lightwells and a flexible approach in this context is acknowledged by the Council. LB Camden Planning Policy Guidance ('Amenity') states that it will *"consider the outcomes of the assessments flexibility where appropriate, taking into account site specific circumstances and context"*.

6.11 Notwithstanding this, and as outlined in the daylight section above, the levels of internal daylight to six of the eight lightwell-facing units on the third floor will improve as part of the development, including al the four units serving the central lightwell. Therefore, the occupiers of these units will either not experience any change in their current levels of natural light or they will experience an improvement.

6.12 Finally, in terms of the anticipated sunlight levels within the proposed rooftop extension floor, all but one window orientated within 90° of due south (c. 94%) will fully comply with the annual sunlight criteria, with the one remaining window falling only marginally below the BRE guidelines. Furthermore, over half of the windows (c. 53%) will fully comply with the winter sunlight criteria. Overall, these are good levels of sunlight compliance for a constrained site in an historic urban area.

6.13 In conclusion, the effects of the development on the sunlight levels experienced by the existing neighbouring properties, existing accommodation at Inglewood Mansions and within the proposed extension floor are acceptable in the context of the site, nature of the development, BRE guidance and relevant planning policy.

7.0 Summary and Conclusions

7.1 The assessment has considered the effects of the proposed development at Inglewood Mansions, 287-289 West End Lane, West Hampstead, NW6 1RE, on the levels of daylight and sunlight received by the existing neighbouring properties. It has also considered the levels of natural light that will be experienced within the existing residential units on the second and third floors at Inglewood Mansions as well as within the new residential units on the proposed rooftop extension floor forming the development.

7.2 Overall, the assessment has considered the effects of the development on the daylight levels experienced by 58 windows serving the neighbouring residential properties. 46 of these windows have also been tested in terms of sunlight availability. With regards to the existing accommodation within the Inglewood Mansions property itself, the daylight and sunlight levels to four most constrained windows on the second floor and eight windows facing three lightwells on the third floor have been tested. Furthermore, the existing eights rooms served by the aforementioned windows on the third floor have also been considered in terms of the interior daylight levels.

7.3 The proposed development for Inglewood Mansions comprises adding a new mansard roof extension floor which will provide 13 single-occupancy bedsit units with two shared kitchen facilities. All of these rooms will be served by 31 windows, 17 of which will be orientated within 90° of due south and have been tested for both daylight and sunlight. Furthermore, the proposed development entails internal alterations to the existing third floor, which include changes to floor-to-ceiling heights, internal re-configurations and introduction of light-coloured internal surfaces in order to improve the perceived amount of light within the rooms. Finally, in order to avoid adverse daylight effects to two most sensitive units on the third floor, a section of the proposed fourth-floor massing has been set back from the perimeter of the central lightwell, which has also allowed for two skylights to be introduced to those units.

7.4 Overall, the proposed scheme for Inglewood Mansions is a result of an iterative design development process in collaboration with the project architect. The design has been informed by the daylight and sunlight assessment, with an aim to minimise the adverse daylight and sunlight effects on the existing neighbouring properties and accommodation with the Inglewood Mansions property itself while maximising the internal daylight levels within the units forming the proposed development.

7.5 The following summarises the daylight and sunlight results.

Daylight

7.6 In summary, the daylight results for the neighbouring residential properties illustrate that the Inglewood Mansions development will have an acceptable level of impact on the properties' ambient daylight levels.

7.7 The results of the daylight analysis demonstrate that 55 of the 58 neighbouring windows tested (c. 95%) will retain the VSC levels above the BRE guide levels and the three remaining windows will fall only marginally below the numerical targets for VSC. Furthermore, in terms of the existing accommodation within the Inglewood Mansions property itself, the windows serving the units facing the central lightwell on the second floor will either fully comply with the BRE guide levels for VSC or will fall only marginally below the BRE guidelines. In terms of the third-floor units, the windows facing the three lightwells serving the building will experience bigger reductions to their sky visibility, which is the result of their current top-floor location and the layout and nature of the development. However, two of the eight tested windows will still fully

comply with the VSC guide levels for BRE while one window will fall only marginally below the BRE guidelines. Furthermore, as part of the aforementioned alterations to the third floor forming the development, two units will benefit from additional skylight which will be well above the BRE guidelines. Finally, we have tested the lightwell-facing units on the third floor in the existing and proposed condition, to confirm a positive change to the actual levels of daylight the occupiers of the units will experience, and the internal daylight analysis demonstrate that six of the eight units tested will have improved internal daylight levels, with the remaining two units retaining the levels which are fully compliant with the BS/BRE guide levels for ADF.

7.8 With regards to the daylight levels within the proposed units on the rooftop extension floor, the interior daylight results demonstrate that all (100%) of the proposed 13 units and two shared kitchens will fully comply with the BS/BRE guide levels for ADF.

7.9 In conclusion, it is considered that the effects of the proposed development on the daylight levels experienced by the existing neighbouring properties, existing accommodation at Inglewood Mansions and within the proposed extension floor are acceptable in the context of the site, nature of the development, BRE guidance and relevant planning policy.

Sunlight

7.10 For sunlight, the results of the analyses show that out of the 46 site-facing windows which are orientated within 90° of due south, 44 windows (c. 96%) will fully comply with both the annual and winter sunlight criteria, with the two remaining windows falling marginally below the annual sunlight criteria due to their location within a tight lightwell.

7.11 In terms of the existing accommodation within the Inglewood Mansions property itself, the current levels of sunlight to the lightwell-facing windows are compromised due to the site constraints, and Camden Council understand the need for a flexible approach to sunlight results within constrained sites such as Inglewood Mansions. Notwithstanding this, as mentioned above, the levels of internal daylight to six of the eight lightwell-facing units on the third floor will improve as part of the development, including al the four units serving the central lightwell.

7.12 The results of the sunlight analyses for the proposed units demonstrate that all but one window orientated within 90° of due south (c. 94%) will fully comply with the annual sunlight criteria, with the remaining window falling only marginally below the BRE guidelines. Furthermore, over half of the windows (c. 53%) will fully comply with the winter sunlight criteria. Overall, these are good levels of sunlight compliance for a development in an historic urban area.

7.13 In conclusion, the effects of the development on the sunlight levels experienced by the existing neighbouring properties, existing accommodation at Inglewood Mansions and within the proposed extension floor are acceptable in the context of the site, nature of the development, BRE guidance and relevant planning policy.

Overall Conclusions

7.14 The proposed development at Inglewood Mansions will deliver new accommodation in the Borough of Camden and the design development process has been closely guided by the matters of protecting the daylight and sunlight amenity enjoyed by occupiers of both the neighbouring properties and the existing accommodation within the Inglewood Mansion property itself. Furthermore, the design has also been guided by the need to maximise the internal daylight levels to the new units forming the development.

7.15 The results of the assessment demonstrate that the neighbouring residential accommodation and the proposed residential units will receive good levels of daylight and sunlight following

construction of the proposed development, while the existing accommodation at Inglewood Mansions will experience improved levels of interior daylight.

7.16 In conclusion, the proposed development will not give rise to any materially unacceptable daylight and sunlight effects in the context of the site, nature of the development, BRE guidelines and relevant planning policy.

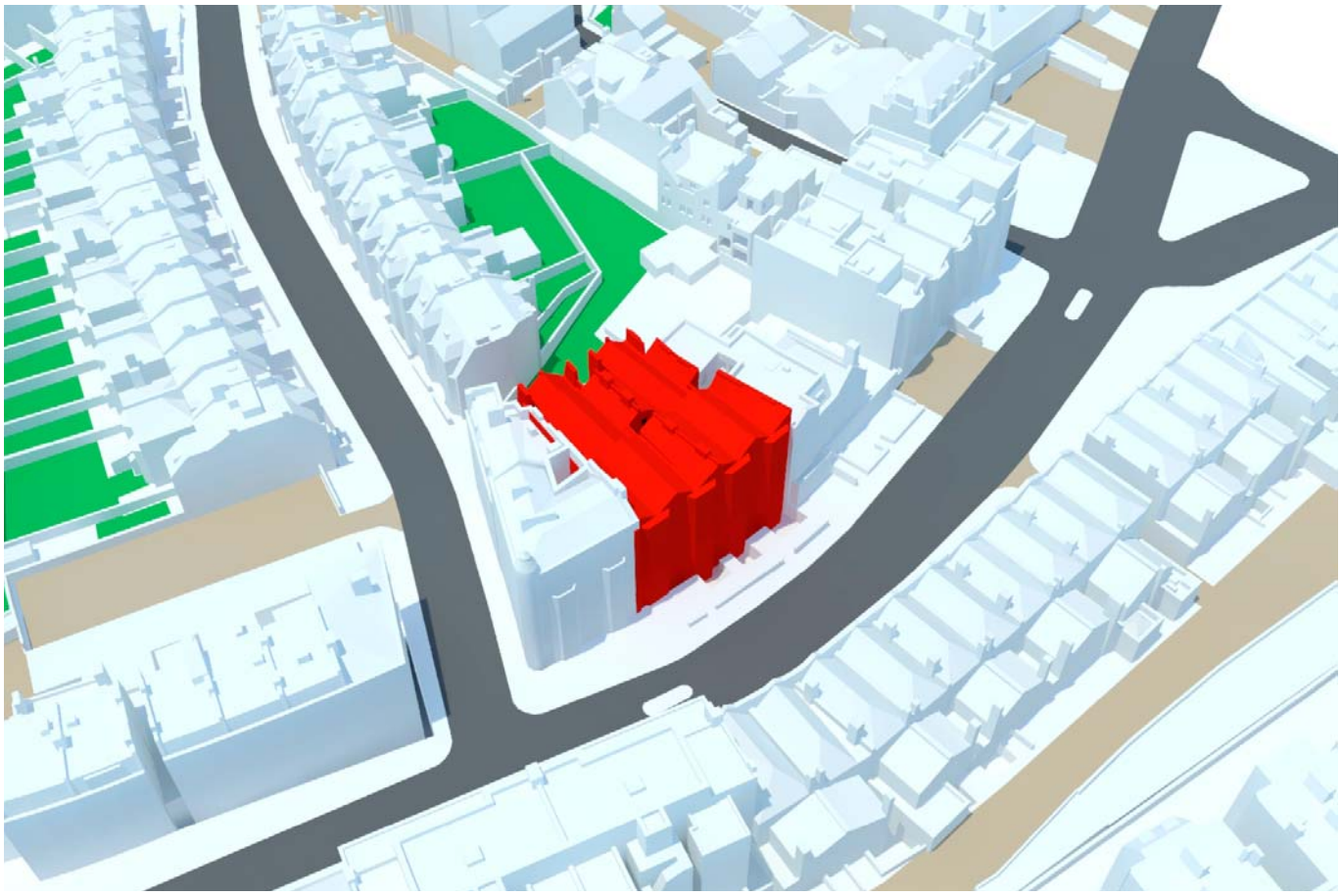
Appendix 1

Assessment Model

LICHFIELDS

ID16352/001

Existing Site Plan



Model as Existing

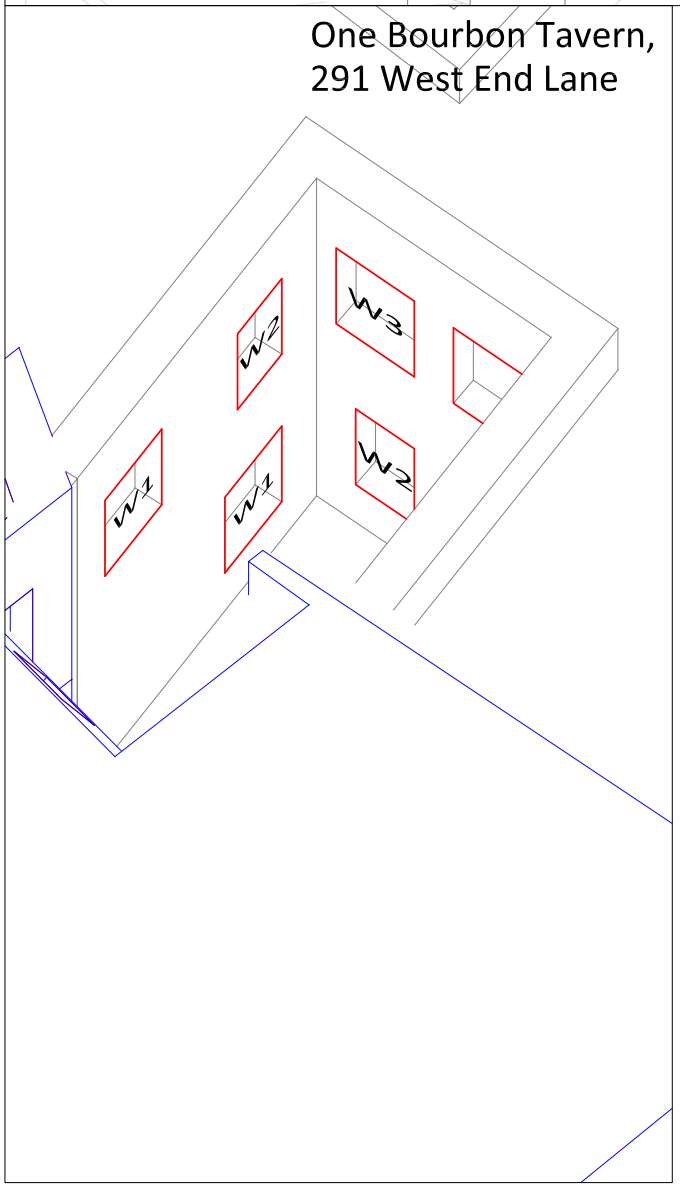
Model as Proposed

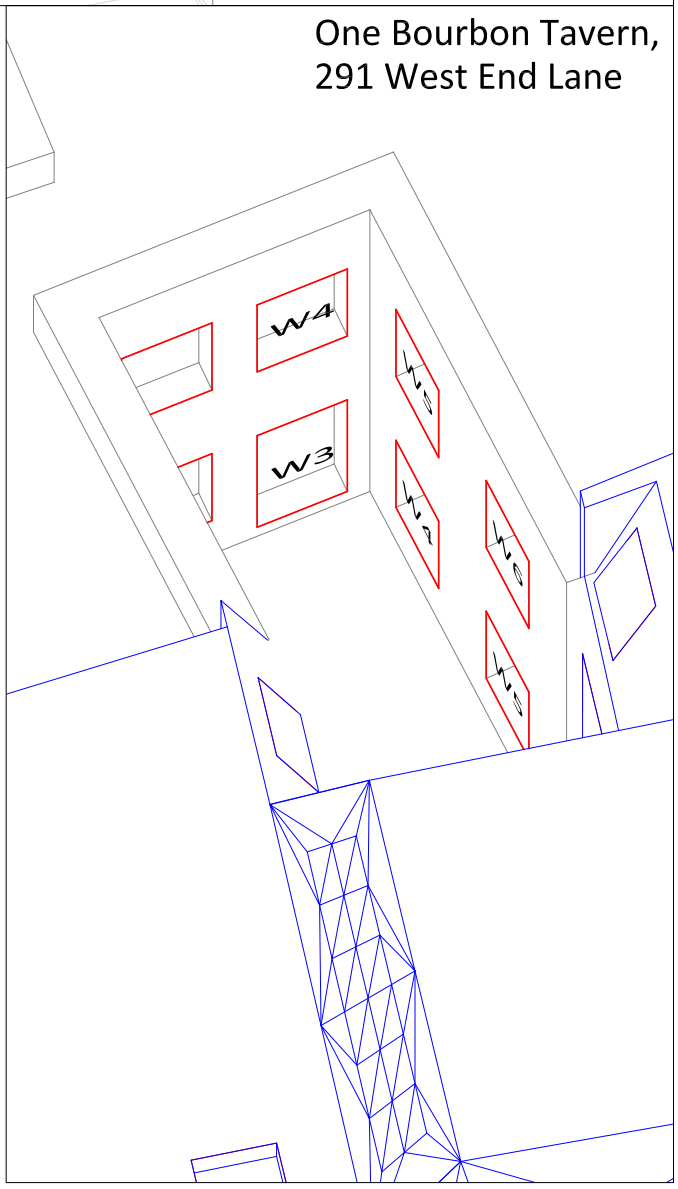
Detailed View of the Proposed Development

Appendix 2

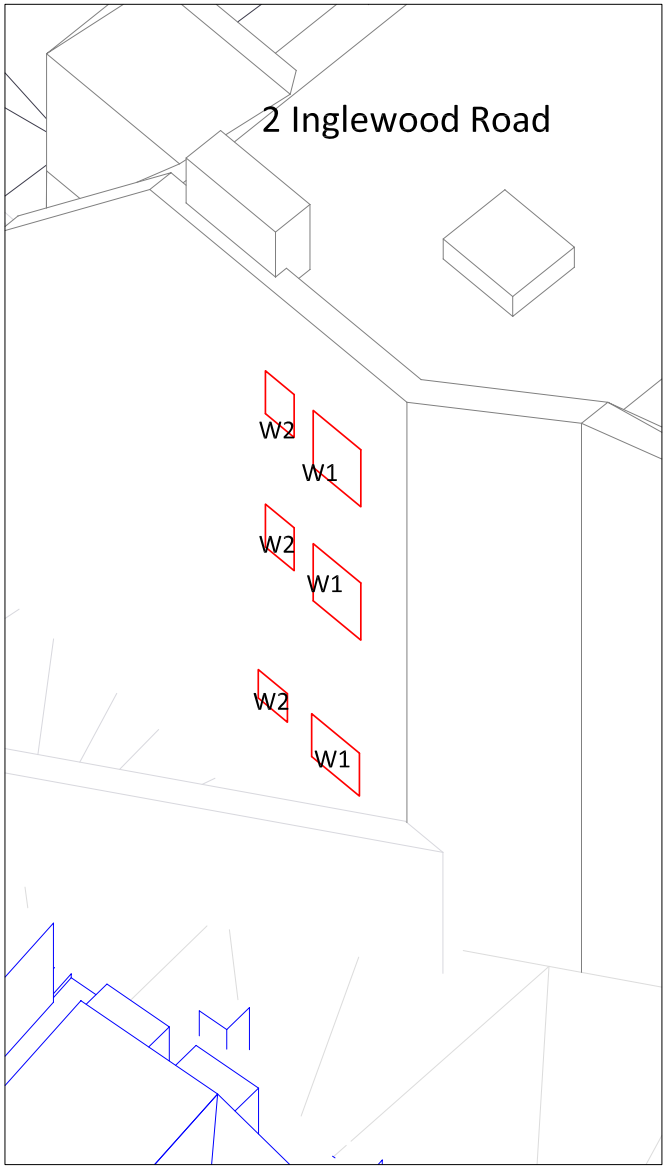
Window Maps for Existing Neighbouring Properties

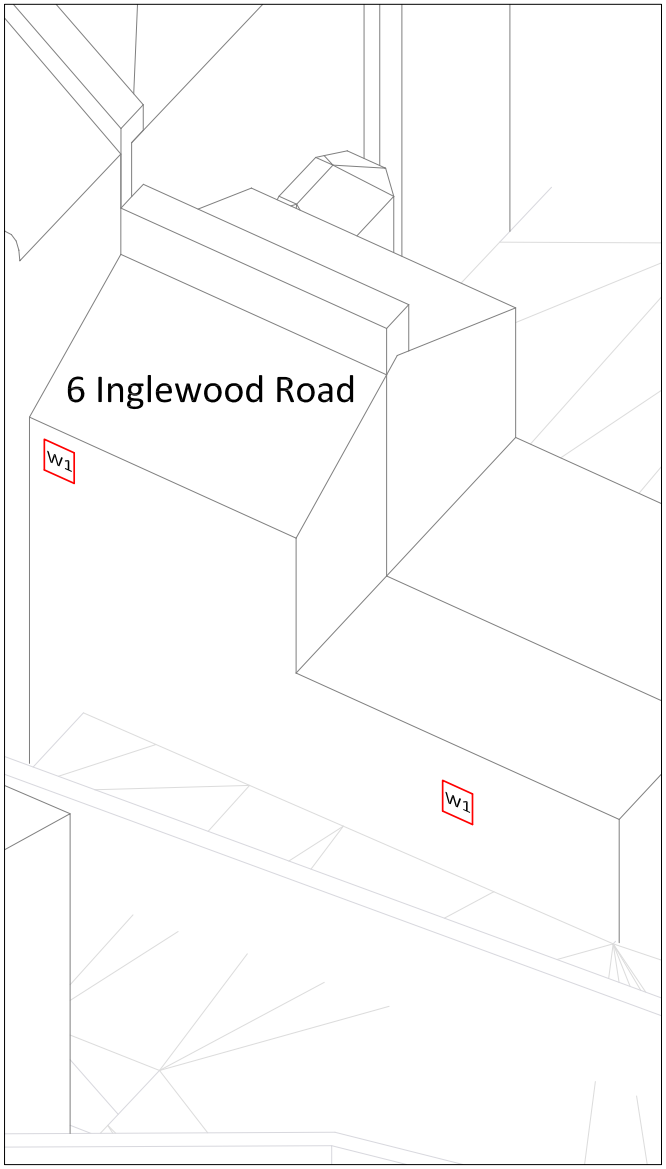
LICHFIELDS





Neighbouring Windows Assessed





Neighbouring Windows Assessed

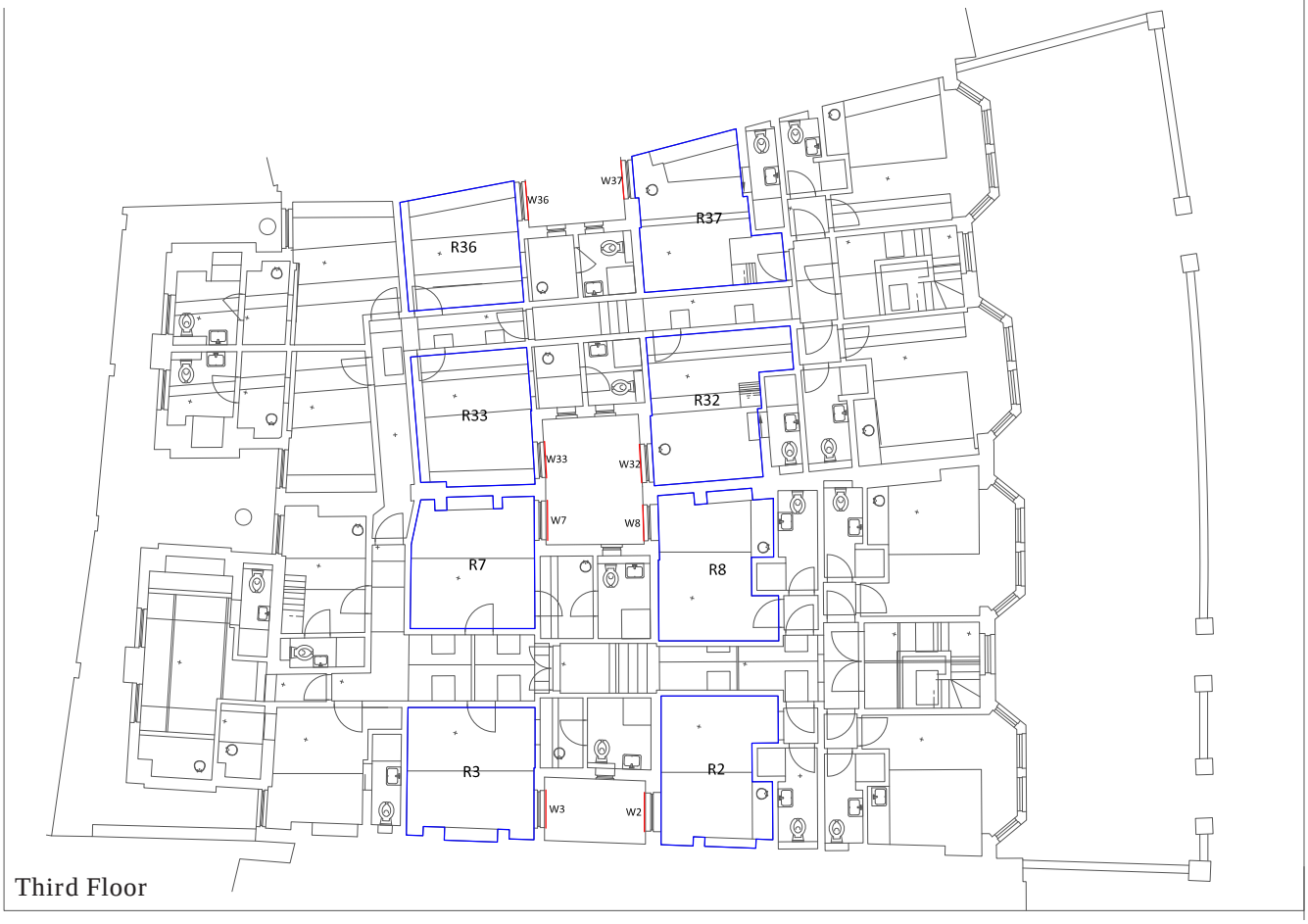
Appendix 3[A]

Room and Window Reference Plans for Existing Accommodation at Inglewood Mansions (Second and Third Floors)

LICHFIELDS

ID16352/001

Second Floor



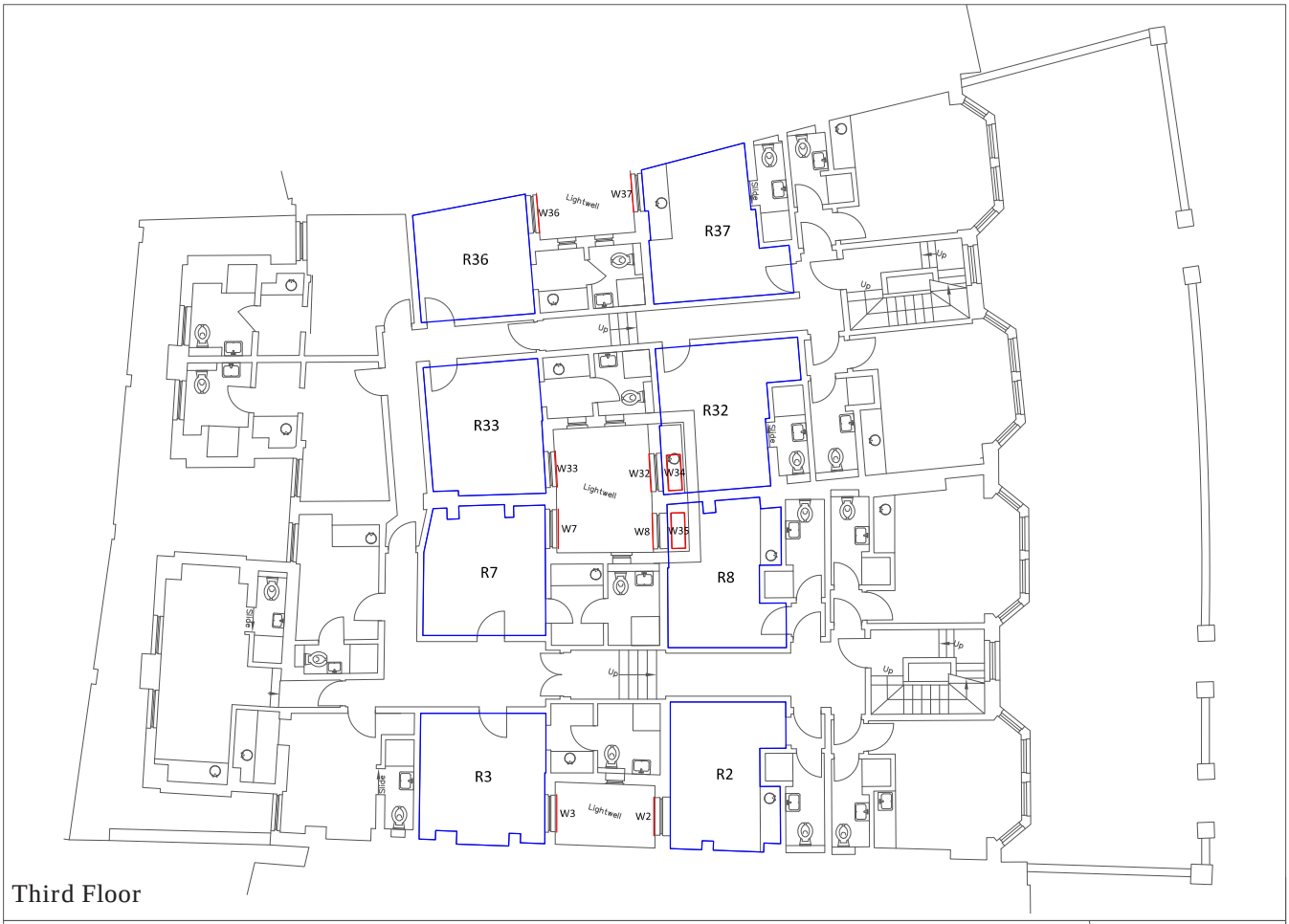
Third Floor

Existing Rooms and Windows Assessed

Appendix 3[B]

Room and Window Reference Plans for Proposed Development at Inglewood Mansions (Third and Fourth Floors)

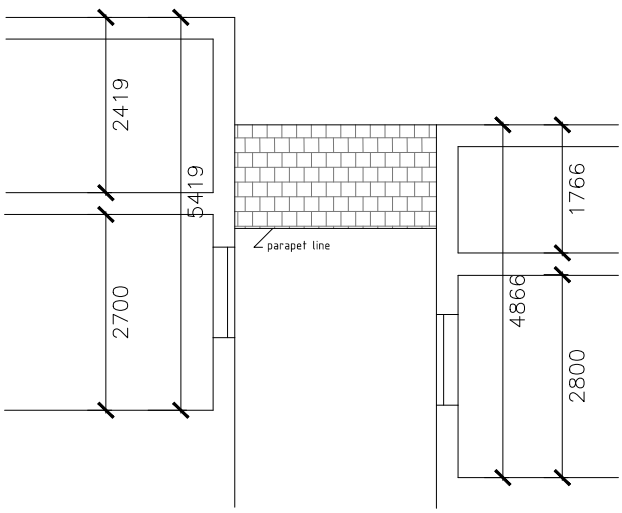
LICHFIELDS



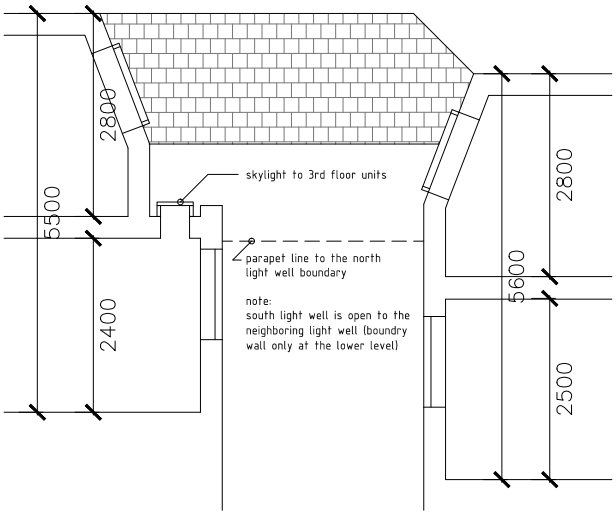
Third Floor

Fourth Floor

Proposed Rooms and Windows Assessed



EXISTING SECTION
CENTRAL LIGHT WELL



PROPOSED SECTION
CENTRAL LIGHT WELL

AS STUDIO - SKETCH 3

0 1 2 3 4 5 Metres

1:50 @ A3

Existing and Proposed Section

Appendix 4

VSC and Sunlight Results for Existing Neighbouring Properties

LICHFIELDS

Appendix 4: VSC & Sunlight Results												
Floor Ref.	Window Ref.		VSC	Difference	Meets BRE Criteria	Window Orientation	Annual	Difference	Meets BRE Criteria	Winter	Difference	Meets BRE Criteria
236 West End Lane												
First	W1	Existing	30.55	0.99	Above	255°	34	1.00	Above	9	1.00	Above
		Proposed	30.48				34			9		
	W2	Existing	30.60	0.99	Above	255°	34	1.00	Above	9	1.00	Above
		Proposed	30.55				34			9		
Second	W1	Existing	33.83	0.99	Above	255°	38	1.00	Above	9	1.00	Above
		Proposed	33.72				38			9		
	W2	Existing	33.83	0.99	Above	255°	39	1.00	Above	10	1.00	Above
		Proposed	33.75				39			10		
238 West End Lane												
First	W1	Existing	30.61	0.99	Above	255°	32	1.00	Above	7	1.00	Above
		Proposed	30.50				32			7		
	W2	Existing	30.58	0.99	Above	255°	31	1.00	Above	7	1.00	Above
		Proposed	30.49				31			7		
Second	W1	Existing	33.92	0.99	Above	255°	37	1.00	Above	8	1.00	Above
		Proposed	33.74				37			8		
	W2	Existing	33.87	0.99	Above	255°	38	1.00	Above	9	1.00	Above
		Proposed	33.72				38			9		
240 West End Lane												
First	W1	Existing	30.18	0.99	Above	246°	40	1.00	Above	9	1.00	Above
		Proposed	30.04				40			9		
	W2	Existing	30.11	0.99	Above	246°	40	1.02	Above	9	1.00	Above
		Proposed	29.98				41			9		
Second	W1	Existing	33.59	0.99	Above	246°	44	1.00	Above	10	1.00	Above
		Proposed	33.35				44			10		
	W2	Existing	33.51	0.99	Above	246°	46	0.97	Above	12	0.91	Above
		Proposed	33.30				45			11		
242 West End Lane												
First	W1	Existing	30.46	0.99	Above	246°	39	1.00	Above	8	1.00	Above
		Proposed	30.34				39			8		
	W2	Existing	30.36	0.99	Above	246°	38	1.00	Above	8	1.00	Above
		Proposed	30.23				38			8		
Second	W1	Existing	33.89	0.99	Above	246°	45	1.00	Above	11	1.00	Above
		Proposed	33.64				45			11		
	W2	Existing	33.82	0.99	Above	246°	46	0.97	Above	12	0.91	Above
		Proposed	33.57				45			11		
244 West End Lane												
First	W1	Existing	30.46	0.99	Above	247°	42	1.00	Above	10	1.00	Above
		Proposed	30.36				42			10		
	W2	Existing	30.28	0.99	Above	246°	41	1.00	Above	9	1.00	Above
		Proposed	30.18				41			9		
Second	W1	Existing	33.86	0.99	Above	247°	45	1.00	Above	11	1.00	Above
		Proposed	33.64				45			11		
	W2	Existing	33.74	0.99	Above	246°	46	0.97	Above	12	0.91	Above
		Proposed	33.51				45			11		
246 West End Lane												
First	W1	Existing	31.05	0.99	Above	246°	41	1.00	Above	8	1.00	Above
		Proposed	30.98				41			8		
	W2	Existing	30.78	0.99	Above	246°	41	1.00	Above	7	1.00	Above
		Proposed	30.70				41			7		
Second	W1	Existing	34.38	0.99	Above	246°	46	1.02	Above	11	1.09	Above
		Proposed	34.20				47			12		
	W2	Existing	34.19	0.99	Above	246°	47	0.97	Above	12	0.91	Above
		Proposed	33.98				46			11		
291 West End Lane												
Second	W1	Existing	3.38	0.96	Above	51°N	North Facing					
		Proposed	3.25									
	W2	Existing	5.00	0.79	Below (M)	143°	6	0.50	Above	0	0.00	Above
		Proposed	3.96				3			0		
	W3	Existing	4.88	0.76	Below (M)	143°	7	0.85	Above	0	0.00	Above
		Proposed	3.74				6			0		
	W4	Existing	3.98	0.87	Above	231°	3	1.00	Above	0	0.00	Above
		Proposed	3.50				3			0		
	W5	Existing	4.70	0.87	Above	231°	3	0.66	Above	0	0.00	Above
		Proposed	4.13				2			0		
Third	W1	Existing	15.92	0.95	Above	51°N	North Facing					
		Proposed	15.22									
	W2	Existing	13.27	0.97	Above	51°N	North Facing					
		Proposed	12.92									

Appendix 4: VSC & Sunlight Results												
Floor Ref.	Window Ref.		VSC	Difference	Meets BRE Criteria	Window Orientation	Annual	Difference	Meets BRE Criteria	Winter	Difference	Meets BRE Criteria
	W3	Existing	13.37	0.84	Above	143°	18	0.88	Above	2	0.00	Above
		Proposed	11.24				16			0		
	W4	Existing	14.69	0.79	Below (M)	143°	23	0.78	Below (M)	4	0.00	Below
		Proposed	11.73				18			0		
	W5	Existing	15.81	0.88	Above	231°	25	0.92	Above	3	0.33	Above
		Proposed	13.98				23			1		
	W6	Existing	18.79	0.82	Above	231°	27	0.74	Below (M)	3	0.00	Below
		Proposed	15.46				20			0		
2 Inglewood Road												
Ground	W1	Existing	38.35	1.00	Above	78°N	North Facing					
		Proposed	38.35									
	W2	Existing	38.39	1.00	Above	78°N	North Facing					
		Proposed	38.39									
First	W1	Existing	22.19	0.97	Above	78°N	North Facing					
		Proposed	21.59									
	W2	Existing	39.02	1.00	Above	78°N	North Facing					
		Proposed	39.02									
Second	W1	Existing	26.87	0.96	Above	78°N	North Facing					
		Proposed	25.90									
	W2	Existing	39.36	1.00	Above	78°N	North Facing					
		Proposed	39.36									
6 Inglewood Road												
Ground	W1	Existing	21.36	0.99	Above	79°N	North Facing					
		Proposed	21.25									
First	W1	Existing	14.89	0.99	Above	79°N	North Facing					
		Proposed	14.82									
25 West Cottages												
Ground	W1	Existing	26.48	0.99	Above	143°	42	1.00	Above	20	1.00	Above
		Proposed	26.42				42			20		
	W2	Existing	25.72	0.99	Above	143°	39	1.00	Above	18	1.00	Above
		Proposed	25.68				39			18		
First	W1	Existing	26.08	0.99	Above	143°	40	1.00	Above	17	1.00	Above
		Proposed	26.01				40			17		
	W2	Existing	28.66	0.99	Above	143°	41	1.00	Above	20	1.00	Above
		Proposed	28.61				41			20		
Second	W1	Existing	28.94	0.99	Above	143°	38	1.00	Above	14	1.00	Above
		Proposed	28.82				38			14		
	W2	Existing	16.68	0.99	Above	53°N	North Facing					
		Proposed	16.66									
1-4 Salmon Mews												
Ground	W1	Existing	32.04	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	31.94				0			0		
	W2	Existing	31.94	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	31.84				0			0		
	W3	Existing	31.65	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	31.55				0			0		
	W4	Existing	31.43	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	31.33				0			0		
	W5	Existing	30.93	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	30.84				0			0		
	W6	Existing	30.66	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	30.58				0			0		
First	W1	Existing	34.72	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	34.60				0			0		
	W2	Existing	33.67	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	33.56				0			0		
Second	W1	Existing	34.63	0.99	Above	143°	0	0.00	Above	0	0.00	Above
		Proposed	34.50				0			0		

Appendix 5[A]

Existing VSC and Sunlight Results for Inglewood Mansions (Second and Third Floors)

LICHFIELDS

ID16352/001

Appendix 5[A]: VSC & Sunlight Results									
Floor Ref.	Window Ref.		VSC	Meets BRE Criteria	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria
Inglewood Mansions									
Second	W1	Existing	1.35	Below	68°N	North Facing			
	W2	Existing	1.44	Below	65°N	North Facing			
	W3	Existing	3.11	Below	245°	1	Above	0	Above
	W4	Existing	2.84	Below	247°	0	Above	0	Above
Third	W2	Existing	14.75	Below	249°	9	Below	0	Above
	W3	Existing	5.86	Below	69°N	North Facing			
	W7	Existing	7.05	Below	68°N	North Facing			
	W8	Existing	18.88	Below	247°	17	Below	0	Above
	W32	Existing	22.72	Below (M)	245°	30	Below	6	Below
	W33	Existing	8.37	Below	65°N	North Facing			
	W36	Existing	10.17	Below	64°N	North Facing			
	W37	Existing	21.44	Below	244°	27	Below	2	Below

Appendix 5[B]

Proposed VSC and Sunlight Results for Inglewood Mansions (Second, Third and Fourth Floors)

LICHFIELDS

Appendix 5[B]: VSC & Sunlight Results								
Floor Ref.	Window Ref.	VSC	Meets BRE Criteria	Window Orientation	Annual	Meets BRE Criteria	Winter	Meets BRE Criteria
Inglewood Mansions								
Second	W1	1.86	Below	68°N	North Facing			
	W2	1.96	Below	65°N	North Facing			
	W3	2.13	Below	245°	0	Below	0	Below
	W4	1.94	Below	247°	0	Below	0	Below
Third	W2	4.63	Below	249°	1	Below	0	Below
	W3	2.72	Below	69°N	North Facing			
	W7	6.46	Below	68°N	North Facing			
	W8	7.99	Below	247°	2	Below	0	Below
	W35	43.44	Above	90° Hz	12	Below	0	Below
	W32	9.10	Below	245°	10	Below	0	Below
	W34	48.19	Above	90° Hz	30	Below	0	Below
	W33	7.16	Below	65°N	North Facing			
	W36	9.72	Below	64°N	North Facing			
	W37	15.68	Below	244°	12	Below	0	Below
Fourth	W7	68.75	Above	63°N	North Facing			
	W8	68.62	Above	63°N	North Facing			
	W5	67.40	Above	63°N	North Facing			
	W6	67.64	Above	63°N	North Facing			
	W12	51.89	Above	245°	48	Above	16	Above
	W12A	99.45	Above	90° Hz	41	Above	2	Below
	W19	39.46	Above	65°N	North Facing			
	W20	97.82	Above	90° Hz	41	Above	2	Below
	W28	37.61	Above	252°	35	Above	9	Above
	W29	38.06	Above	252°	35	Above	8	Above
	W26	39.19	Above	252°	36	Above	9	Above
	W27	39.26	Above	252°	36	Above	9	Above
	W23	29.49	Above	252°	30	Above	5	Above
	W24	98.69	Above	90° Hz	43	Above	2	Below
	W15	24.56	Below (M)	69°N	North Facing			
	W16	96.37	Above	90° Hz	44	Above	2	Below
	W17	97.62	Above	90° Hz	44	Above	2	Below
	W18	38.21	Above	68°N	North Facing			
	W11	48.76	Above	246°	40	Above	5	Above
	W11A	98.82	Above	90° Hz	43	Above	2	Below
	W9	36.58	Above	249°	20	Below (M)	2	Below
	W10	97.52	Above	90° Hz	42	Above	2	Below
	W1	62.53	Above	68°N	North Facing			
	W2	64.99	Above	68°N	North Facing			
	W3	68.01	Above	68°N	North Facing			
	W4	67.26	Above	68°N	North Facing			
	W21	54.35	Above	334°N	North Facing			
	W22	41.09	Above	64°N	North Facing			
	W25	34.70	Above	248°	35	Above	7	Above
	W13	50.35	Above	334°N	North Facing			
	W14	47.63	Above	244°	44	Above	10	Above

Appendix 6[A]

Existing ADF Results for Inglewood Mansions (Third Floor)

LICHFIELDS

Appendix 6[A]: ADF Results													
Floor Ref.	Room Ref.	Room Use.	Window Ref.	Glass Transmittance	Maintenance Factor	Glazed Area	Clear Sky Angle	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF	Req'd Value	Meets BRE Criteria
Inglewood Mansions													
Third	R2	Studio-Apt	W2	0.68	1.00	1.29	43.21	65.65	0.50	1.00	0.77		
											0.77	1.50	Below
Third	R3	Studio-Apt	W3	0.68	1.00	1.25	26.35	64.59	0.50	1.00	0.46		
											0.46	1.50	Below
Third	R7	Studio-Apt	W7	0.68	1.00	1.32	28.73	62.80	0.50	1.00	0.55		
											0.55	1.50	Below
Third	R8	Studio-Apt	W8	0.68	1.00	1.18	50.04	66.89	0.50	1.00	0.80		
											0.80	1.50	Below
Third	R32	Studio-Apt	W32	0.68	1.00	1.26	56.26	65.55	0.50	1.00	0.98		
											0.98	1.50	Below
Third	R33	Studio-Apt	W33	0.68	1.00	1.20	31.45	57.60	0.50	1.00	0.59		
											0.59	1.50	Below
Third	R36	Studio-Apt	W36	0.68	1.00	1.26	35.07	51.94	0.50	1.00	0.77		
											0.77	1.50	Below
Third	R37	Studio-Apt	W37	0.68	1.00	1.26	54.32	64.80	0.50	1.00	0.96		
											0.96	1.50	Below

Appendix 6[B]

Proposed ADF Results for Inglewood Mansions (Third and Fourth Floors)

LICHFIELDS

Appendix 6[B]: ADF Results													
Floor Ref.	Room Ref.	Room Use.	Window Ref.	Glass Transmittance	Maintenance Factor	Glazed Area	Clear Sky Angle	Room Surface Area	Average Surface Reflectance	Below Working Plane Factor	ADF	Req'd Value	Meets BRE Criteria
Inglewood Mansions													
Third	R2	Studio-Apt	W2	0.68	1.00	1.29	22.77	63.52	0.70	1.00	0.62		
											0.62	1.50	Below
Third	R3	Studio-Apt	W3	0.68	1.00	1.25	17.09	63.36	0.70	1.00	0.45		
											0.45	1.50	Below
Third	R7	Studio-Apt	W7	0.68	1.00	1.32	26.96	61.59	0.70	1.00	0.77		
											0.77	1.50	Below
Third	R8	Studio-Apt	W8	0.68	1.00	1.18	30.45	64.66	0.70	1.00	0.74		
			W35	0.68	1.00	0.30	96.32	64.66	0.70	1.00	0.60		
											1.34	1.50	Below (M)
Third	R32	Studio-Apt	W32	0.68	1.00	1.26	32.67	65.78	0.70	1.00	0.84		
			W34	0.68	1.00	0.30	104.39	65.78	0.70	1.00	0.64		
											1.48	1.50	Below (M)
Third	R33	Studio-Apt	W33	0.68	1.00	1.20	28.44	57.60	0.70	1.00	0.79		
											0.79	1.50	Below
Third	R36	Studio-Apt	W36	0.68	1.00	1.26	33.62	51.94	0.70	1.00	1.09		
											1.09	1.50	Below
Third	R37	Studio-Apt	W37	0.68	1.00	1.26	44.44	64.80	0.70	1.00	1.16		
											1.16	1.50	Below
Fourth	R1	Studio-Apt	W7	0.68	1.00	0.66	N/A	73.24	0.70	1.00	1.80		
			W8	0.68	1.00	0.66	N/A	73.24	0.70	1.00	1.81		
											3.60	1.50	Above
Fourth	R2	Studio-Apt	W5	0.68	1.00	0.67	N/A	65.06	0.70	1.00	2.03		
			W6	0.68	1.00	0.67	N/A	65.06	0.70	1.00	2.03		
											4.06	1.50	Above
Fourth	R3	Studio-Apt	W12	0.68	1.00	0.71	N/A	66.49	0.70	1.00	1.52		
			W12A	0.68	1.00	0.51	188.51	66.49	0.70	1.00	1.94		
											3.46	1.50	Above
Fourth	R4	Studio-Apt	W19	0.68	1.00	0.71	N/A	59.27	0.70	1.00	1.47		
			W20	0.68	1.00	0.51	186.65	59.27	0.70	1.00	2.15		
											3.62	1.50	Above
Fourth	R5	Studio-Apt	W28-L	0.68	1.00	0.01	71.15	64.71	0.70	0.30	0.01		
			W28-U	0.68	1.00	0.60	76.70	64.71	0.70	1.00	0.95		
			W29-L	0.68	1.00	0.01	73.01	64.71	0.70	0.30	0.01		
			W29-U	0.68	1.00	0.60	77.11	64.71	0.70	1.00	0.96		
											1.92	1.50	Above
Fourth	R6	Studio-Apt	W26-L	0.68	1.00	0.01	76.75	73.53	0.70	0.30	0.01		
			W26-U	0.68	1.00	0.60	79.16	73.53	0.70	1.00	0.86		
			W27-L	0.68	1.00	0.01	76.90	73.53	0.70	0.30	0.01		
			W27-U	0.68	1.00	0.60	79.15	73.53	0.70	1.00	0.86		
											1.74	1.50	Above
Fourth	R7	Studio-Apt	W23-L	0.68	1.00	0.01	58.65	63.66	0.70	0.30	0.01		
			W23-U	0.68	1.00	0.60	64.26	63.66	0.70	1.00	0.81		
			W24	0.68	1.00	0.51	188.46	63.66	0.70	1.00	2.02		
											2.84	1.50	Above
Fourth	R8	Studio-Apt	W15	0.68	1.00	0.71	N/A	57.52	0.70	1.00	1.08		
			W16	0.68	1.00	0.51	185.18	57.52	0.70	1.00	2.20		
											3.28	1.50	Above
Fourth	R9	Studio-Apt	W17	0.68	1.00	0.51	186.46	56.35	0.70	1.00	2.26		
			W18	0.68	1.00	0.71	N/A	56.35	0.70	1.00	1.50		
											3.76	1.50	Above
Fourth	R10	Studio-Apt	W11	0.68	1.00	0.68	N/A	63.50	0.70	1.00	1.47		
			W11A	0.68	1.00	0.51	188.19	63.50	0.70	1.00	2.02		
											3.49	1.50	Above
Fourth	R11	Studio-Apt	W9	0.68	1.00	0.73	N/A	57.46	0.70	1.00	1.38		
			W10	0.68	1.00	0.51	185.95	57.46	0.70	1.00	2.21		
											3.58	1.50	Above
Fourth	R12	Studio-Apt	W1	0.68	1.00	0.65	N/A	67.62	0.70	1.00	1.82		
			W2	0.68	1.00	0.65	N/A	67.62	0.70	1.00	1.88		
											3.70	1.50	Above
Fourth	R13	Studio-Apt	W3	0.68	1.00	0.65	N/A	63.30	0.70	1.00	2.09		
			W4	0.68	1.00	0.65	N/A	63.30	0.70	1.00	2.08		
											4.16	1.50	Above
Fourth	K1	Kitchen-Resi	W21	0.68	1.00	0.37	N/A	75.19	0.70	1.00	0.67		
			W22	0.68	1.00	0.71	N/A	75.19	0.70	1.00	1.20		
			W25-L	0.68	1.00	0.01	64.48	75.19	0.70	0.30	0.00		
			W25-U	0.68	1.00	0.60	72.24	75.19	0.70	1.00	0.77		
											2.65	1.50	Above
Fourth	K2	Kitchen-Resi	W13	0.68	1.00	0.58	N/A	47.17	0.70	1.00	1.70		
			W14	0.68	1.00	0.71	N/A	47.17	0.70	1.00	1.95		
											3.65	1.50	Above

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