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Daylight and Sunlight

Centric Close

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Appended to this report:

1.0 Executive Summary

GIA have prepared an addendum report for the Daylight/Sunlight technical assessments for the proposed development at Centric Close (the *'Proposed Development'*) in accordance with the BRE Guidelines - *Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2011 - the 'BRE Guidelines').* This report has been prepared in respect of neighbouring properties 19 and 23-27 Oval Road only in relation to updated measured survey information and internal layouts that have been obtained since the preparation and submission of our main report dated….

Analysis has been undertaken in order to assess the potential impact that the Proposed Development may have upon the properties outlined above.

Some of the windows, in some of the properties tested experience alterations in Daylight and Sunlight beyond the recommended BRE criteria, however the majority of the alterations can be attributed to mitigating factors such as existing architectural features like projecting wings that restrict the view of the sky in the existing scenario, meaning lower levels of light and therefore, the percentage reduction values are not exclusively attributable to the Proposed Development. In addition, a number of windows retain levels of VSC that could be considered commensurate with an urban environment such as this and the rooms retain good levels of daylight distribution as the rooms often have more than one window which ensures that they remain sufficiently daylit.

The conclusion of our technical assessment is that within the context of the urban locality of the Site and the nature of the Proposed Development, despite alterations in Daylight/Sunlight beyond the recommended BRE Guidelines, which is based upon a low rise suburban environment, they are not unusual in development sites such as this.

2.0 Instructions

This Daylight/Sunlight report has been prepared as an addendum to the existing GIA report dated 08 December 2017 in respect to support their planning application for the Proposed Development at Centric Close. The properties which are considered within this report are 19 and 23-27 Oval Road, for which additional survey information and internal layouts have been obtained since the production of our December Report.

The results and advice contained in this report are based upon technical analysis undertaken using the Proposed Scheme produced by AHMM and issued to GIA on the 24th November 2016. This is the same scheme as that assessed in our December 2017

This has enabled a revised evaluation of the effects that the Proposed Development may have upon neighbouring residential properties of 19 and 23-27 Oval Road, and their Daylight/Sunlight amenity in accordance with the 2011 BRE Guidelines.

3.0 Introduction

Daylight and Sunlight

The technical analysis that forms the basis of this report has been predicated against the methodologies set out within the Building Research Establishment Guidelines entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (2011)'. The guidelines in question are precisely that; guidelines which provide a recommendation to inform site layout and design. They are not mandatory nor do they form planning policy and their interpretation may be treated flexibly depending on the specifics of each site.

The BRE Guidelines provide two main methodologies for daylight assessment;

1) The Vertical Sky Component (VSC); and
2) The No Sky Line (NSL)

In addition, we have used one methodology as provided by the BRE Guidelines for sunlight assessment, denoted as Annual Probable Sunlight Hours (APSH).

Appendix 01 of this report elaborates on the mechanics of each of the above assessment criteria, explains the appropriateness of their use and the parameters of each specific recommendation.

VSC

The BRE guidelines provide two main methods of calculation for daylight. The primary method is known as the Vertical Sky Component (VSC), which considers the potential for daylight by calculating the angle of vertical sky at the centre of each of a window. The guidelines themselves are predicated upon a suburban development model and the values that they set out are based upon a suburban situation i.e. two 2 storey dwellings facing one another across a reasonable width road and the level of light that one would expect in that context. The BRE recommends that a target value of 27% should be obtained in order to achieve reasonable levels of daylight, which equates to an obstruction angle of circa 25°, as illustrated in Figure 01 below.

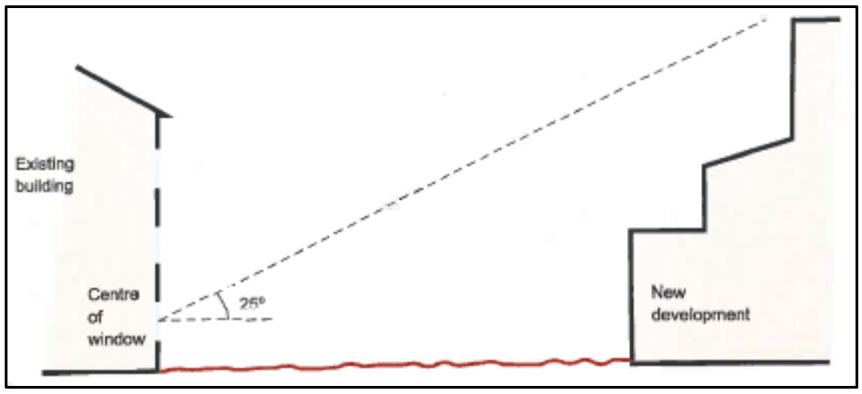


Figure 01 – BRE Target Values

It is clear that this is not a realistic target value for a dense urban environment, such as the one the Site is located in.

Interpretation of the BRE Guidelines 2011

GIA have considered the 2011 Building Research Establishment (BRE) guidelines 'Site Layout Planning for Daylight and Sunlight' when assessing the impact of the Proposed Development on neighbouring residential properties.

In essence, the BRE Guidelines must be interpreted flexibly. The Guidelines recognise that they should not form a mandatory set of criteria to which a development must adhere as that would be too restrictive for site development purposes and should be viewed in the context of other site constraints; rather they provide guidance as to what would be a noticeable alteration in the neighbour's amenity and what would be a satisfactory level of daylight and sunlight.

As previously mentioned the BRE Guidelines are predicated on a suburban type environment, when one seeks to apply the guidelines in a more urban context, where neighbouring buildings are taller or the scale of massing is generally higher, or where the existing levels of light are low, there is a disjunction between crudely adhering to the recommended criteria and the flexibility that guidelines themselves recommend. In this area, a degree of interpretation is necessary.

In view of the above, the interpretation of the daylight and sunlight results should be considered in terms of the quantum of light lost and retained, not purely upon the percentage change. The percentage value may well be misleading, particularly where the baseline values are small.

In these situations, a small change in the quantum of light could represent a high percentage change in the overall figure, implying that there would be a significant change in daylight and sunlight whereas in reality the difference may be unperceivable. In addition, the BRE criterion does not specifically relate to city locations, thus a degree of flexibility needs to be applied when assessing the significance of daylight and sunlight impacts in urban locations such as Camden.

Where neighbouring properties have architectural features such as balconies or projections which inhibit light penetration and distort their reliance upon light across the development site, we have considered their influence in accordance with the 2011 BRE guidance. Such features can restrict the sky visibility in the existing scenario making the windows and rooms within, sensitive to any new alterations in massing, which should be considered when assessing the alteration in light. Paragraphs 2.2.11 and 2.2.12 of the BRE Guidelines, acknowledges the demonstrable constraint that existing buildings with unsympathetic design can have upon the potential of a redevelopment site to satisfy the BRE criteria.

Paragraph 2.2.11 states;

> *"Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction may result in a large relative impact on the VSC, and on the area receiving direct sunlight…"*

Paragraph 2.2.12 goes on to state;

> *"A larger relative reduction in VSC may also be unavoidable if the existing window has projecting wings on one or both sides of it, or is recessed into the building so that it is obstructed on both sides as well as above."*

4.0 Sources of Information

In compiling this report we have used the following information:

GIA

Site Visit and Photographs 03.03.2015

Internal survey notes for properties as follows:

- 19 Oval Road
- 23 Oval Road (The Coach House)
- 23 Oval Road (Flats A, B, C and D)
- 25 Oval Road
- 27 Oval Road

3D Model of the Scheme

F!ND

F!ND OS Map 12.03.2015

F!ND Map 26.02.2015

Vertex Modelling

IR02-040315-VERTEX (Photogrammetry Model)

AHMM

IR24-241116-Revised latest scheme

Valuation Office Agency search

Search of residential and commercial property uses

Aerial/Street View Photography

Google Maps/Google Earth

Camden Local Authority Online Planning Portal

Planning records and floorplans for neighbouring properties

Datum Survey Services Ltd.

Measured survey received by GIA 11 May 2017

5.0 Assumptions

1) An indicative 3D contextual model of the Site and its surrounds has been produced using a Vertex photogrammetry model and site photography, which forms the basis of the technical analysis. Therefore there may be a degree of tolerance (of circa 150-250mm). The location and size of the windows in the neighbouring properties are based on floorplans where obtained, site observations, site photographs and brick counting.

2) This base model has been updated to include measured survey information.

3) Best estimates have been made as to the uses which are carried out legally within the adjoining properties in terms of commercial and residential. We have estimated these from external observation and Valuation Office Agency (VOA) searches.

4) Internal layouts for the properties within this report have been updated within our model as per the survey notes gathered on site visits to each property.

   Where we have not acquired floorplans reasonable assumptions have been made as to the internal layouts of the rooms behind the fenestration based upon the building form and architecture. This is normal practice where access to adjoining properties is not available. Unless the building form dictates otherwise, we assume a standard 4.2m deep room (14ft) for residential properties.

5) Where neighbouring elevations are not visible (but where it is likely that apertures may be present) we have inserted 'test' windows or estimated the position of apertures. The actual position may differ if closer access becomes possible and therefore the technical analysis may differ from that confirmed herein.

6.0 The Site

The Proposed Development site (the *'Site'*) is located in the London Borough of Camden and is bordered by Oval Road to the east, a railway to the west and a mixed use primarily residential development (33-35 Oval Road – The Lockhouse) to the north. The Site is indicatively outlined in red on Figure 02 below.

A VOA (Valuation Office Agency) search has indicated that the Site is surrounded by residential, commercial and mixed use properties which are highlighted on Figure 02 below.

Figure 02 – Site Location and Neighbouring Buildings – Residential/Commercial uses

Our understanding of the existing Site is shown in Figure 03 below and is also illustrated in GIA drawings 9333/01-03, located in Appendix 02.

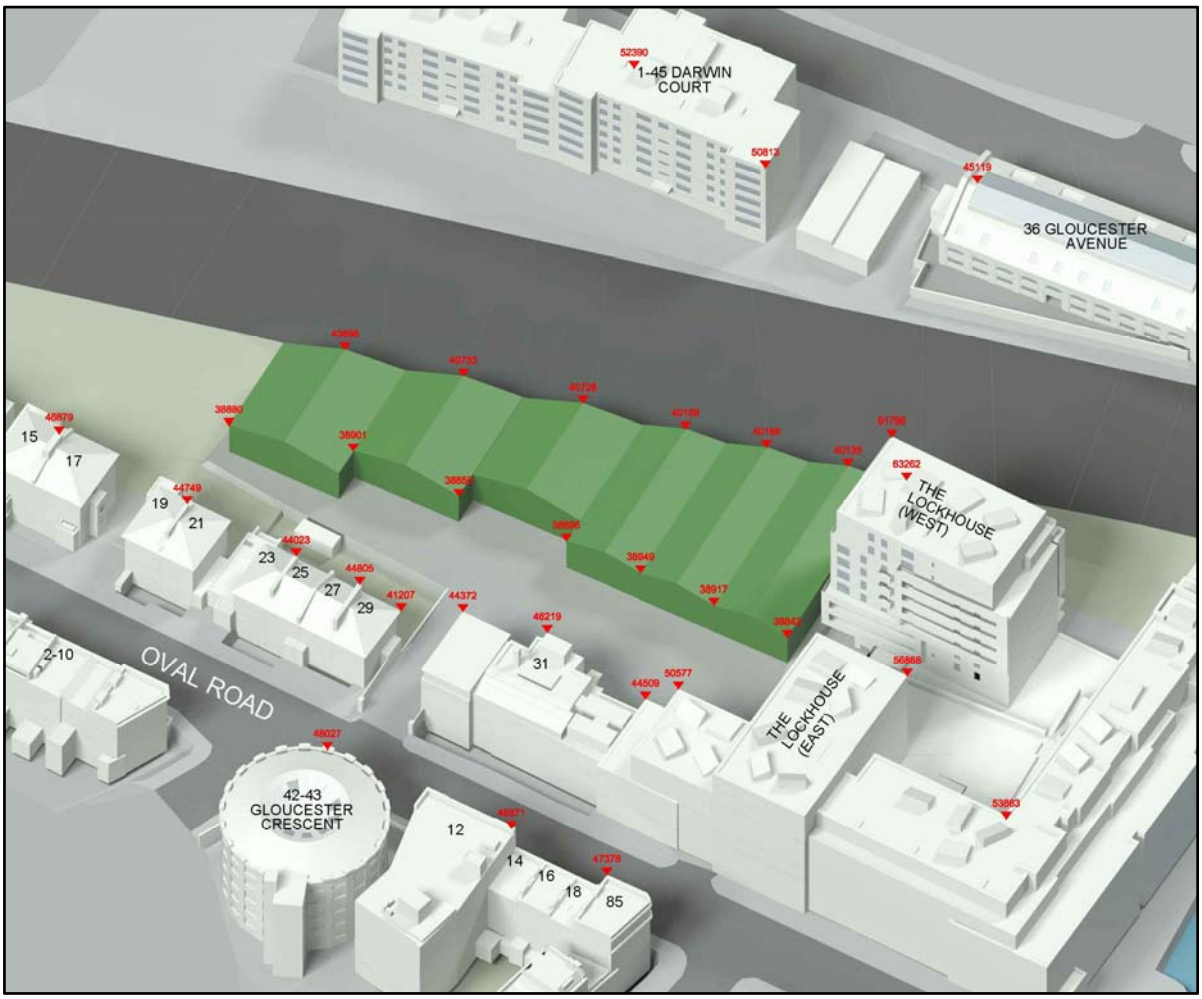


Figure 03 – The Existing Site

7.0 The Proposal

It is our understanding that the Proposed Development consists of the demolition of the existing building on the Site and the construction of a proposed scheme across the Site which increases in height towards the north, see Figure 04 below.

Our understanding of the Proposed Development is shown in Figure 04 below and is also illustrated in GIA drawings 9333/04-06, which are located in Appendix 02.

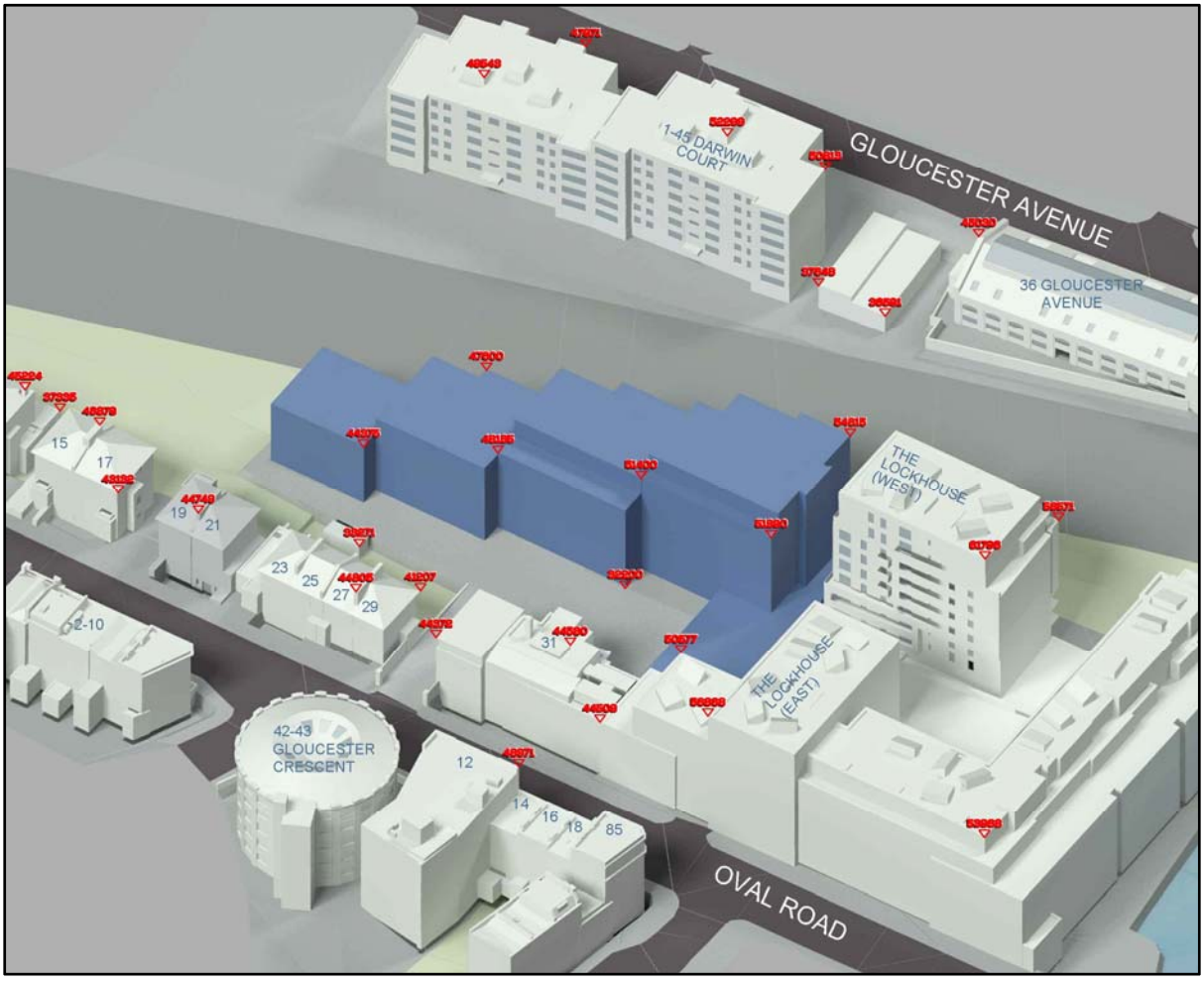


Figure 04 – The Proposed Development

8.0 Surrounding Properties

GIA have created a three-dimensional computer model of the Site and surrounding properties using photogrammetry modelling, site photography and measured survey. Sensitive windows and rooms situated within these properties have been modelled and analysed in both the existing and proposed scenarios. The resultant technical information forms the basis of this report.

The following neighbouring residential properties have been considered within this addendum report:

- 19 Oval Road;
- 23 Oval Road (The Coach House);
- 23 Oval Road (Flats, A, B, C and D);
- 25 Oval Road;
- 27 Oval Road;

Non-habitable rooms such as circulation spaces were not considered, as recommended by the 2011 BRE Guidelines. The BRE Guidelines state:

> *'Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.'* (BRE Guidelines 2011 – Site Layout Planning for Daylight and Sunlight – A guide to good practice: paragraph 2.2.2, page 7)

In relation to Sunlight analysis, only windows which are oriented within 90 degrees of due south have been considered as per the BRE Guidelines.

Full results of the Daylight and Sunlight technical analysis are included in Appendix 03.

Impacted Properties

The following properties will experience a technical breach of VSC, NSL and/or APSH to at least one or more windows and/or rooms when assessed against the 2011 BRE criteria:

27 Oval Road

This three storey residential property is located to the east of the Proposed Development on Oval Road (*see site map – Figure 02*). Accurate internal layouts have been obtained from a site visit.

Daylight – VSC & NSL

VSC and NSL daylight analysis has been undertaken against seven habitable rooms served by seven windows located between the basement and second floors, in both the existing and proposed scenario.

Technical analysis found that two of the seven windows assessed will meet the VSC daylight criteria, meaning there will be negligible alterations in light to these windows.

The remaining five windows fall below the recommended BRE criteria for daylight. However, three of these windows (*W1/700, W1/702 and W1/710 - see window map 9333/03 in Appendix 04)* serving three single aspect rooms located between the ground and second floors (*R1/700, R1/702 and R1/710*) retain a VSC above 23%, which is more typical of urban London than the 27% recommended by the BRE (*see Section 3, pages 3-5*) and could be considered commensurate within an urban environment such as this.

The remaining two windows (*W2/699 and W1/709 - see window map 9333/03 in Appendix 04*) serving two single aspect rooms (*R2/699 and R1/709*) located on the basement and ground floors experience alterations in VSC of 32% and 30% respectively, which may be noticeable. However, both windows are located next to projecting wings (*see window map 9333/03 in Appendix 04*) which reduces the quantum of sky visibility available to these windows; thus the levels of daylight entering the rooms served by these windows is already restricted. In addition, the retained levels of sky component (VSC) will be commensurate with windows located at basement and ground floor level across much of historic London.

Sunlight - APSH

In total, seven windows serving seven habitable rooms are relevant for APSH analysis as they are oriented within 90 degrees of due south and thus have been assessed against the BRE criteria.

Technical analysis found that five of the seven windows will retain sufficient levels of both annual and winter sunlight. As a result there will be a negligible alteration in sunlight to these windows.

Two windows (*W2/699 and W1/709 - see window map 9333/03 in Appendix 04*) serving two single aspect rooms (*R2/699 and R1/709*) on the basement and ground floors fall below the recommended BRE criteria for annual sunlight. Window W2/699 achieves an annual APSH of 23% in the existing context which is already below the BRE guideline (recommended 25%), and retains an annual APSH of 11% in the proposed context. Window W1/709 has an annual APSH of 25% in the existing context which falls to 13% in the proposed context.

Alterations in sunlight to these windows are heavily influenced by the existing architectural design. The projecting wing blocks a number of sunspots in the existing context and leaves a small patch of sky providing annual sunlight. Therefore, in consideration of the location of these windows next to a projecting wing and their westerly orientation restricting the amount of sunlight received; it is not surprising that the annual APSH experiences alterations that breach the BRE Guidelines to two of the seven windows assessed.

25 Oval Road

This three storey residential property is located to the east of the Proposed Development on Oval Road (*see site map – Figure 02*). Accurate internal layouts have been obtained from a site visit.

Daylight – VSC & NSL

VSC and NSL daylight analysis has been undertaken against five habitable rooms served by six windows located between the basement and second floors, in both the existing and proposed scenario.

Technical analysis found that two of the windows assessed will meet the VSC daylight criteria, meaning there will be a negligible alteration in light to these windows.

The remaining four windows fall below the recommended BRE criteria for daylight. Window *W2/800 (see window map 9333/17 in Appendix 04*) serving a single aspect room at basement level (*R1/800*) retains a VSC of 21%, which is a good level of VSC in urban London and could be considered commensurate with other urban environments such as this. Window W1/801 at first floor level (R1/801) retains a VSC of 26.8% which is just below the recommended BRE guideline of 27% (*see window map 9333/17 in Appendix 04*) and therefore we consider the loss of VSC is likely to be negligible .

The remaining two windows (*W2/799 and W1/800 - see window map 9333/17 in Appendix 04*) serving two single aspect rooms (R*1/799 and R2/800*) located on the basement and ground floors experience alterations in VSC of 32% and 25%, falling from 13.5% to 9% for W2/799 which is a bedroom and from 22.6% to 17% for window W1/800 in the proposed context. Both windows are located with projecting wings on either side (*see window map 9333/17 in Appendix 04*) which restricts the view of the sky and the potential levels of daylight entering the rooms served by these windows.

Sunlight - APSH

In total, six windows serving five habitable rooms are relevant for APSH analysis as they are oriented within 90 degrees of due south and thus have been assessed against the BRE criteria.

Technical analysis found that three of the six windows will retain sufficient levels of both annual and winter sunlight. As a result there will be a negligible alteration in sunlight to these windows.

Two windows (*W2/799 and W1/800 - see window map 9333/17 in Appendix 04*) serving two single aspect rooms (*R1/799 and R2/800*) on the basement and ground floors fall below the recommended BRE criteria for annual and winter sunlight. Window W2/799 achieves an annual APSH of 23% and a winter APSH of 4% in the existing context, which is already below the BRE guidelines (recommended 25% for annual APSH and 5% for winter APSH), and retains an annual APSH of 17% and the winter APSH falls to 2% in the proposed context. Window W1/800 retains an annual APSH of 23%, which is just below the recommended BRE guideline of 25%, and the winter APSH falls from 6% in the existing context to 2% in the proposed context.

Both windows are located with projecting wings on either side which reduces the available annual and winter APSH sunspots in the existing context. Furthermore, both windows face west and due to their orientation and the trajectory of the sun, there is a restriction in the amount of sunlight received. In consideration of the above, it can be concluded that the alterations in sunlight to two of the six windows assessed are heavily influenced by the existing architectural design.

23 Oval Road

This three storey residential property is located to the east of the Proposed Development on Oval Road (*see site map – Figure 02*). Accurate internal layouts have been obtained from site visits.

Daylight – VSC & NSL

VSC and NSL daylight analysis has been undertaken against seven habitable rooms served by eleven windows located between the basement and second floors, in both the existing and proposed scenario.

Technical analysis found that three of the eleven windows assessed will meet the VSC daylight criteria, meaning there will be a negligible alteration in light to these windows.

The remaining eight windows fall below the recommended BRE criteria for daylight. One window (*W1/901 - see window map 9333/17 in Appendix 04*) serving a single aspect room (*R1901)* located on the ground floor experiences an alteration in VSC of 26.5% of their former value. However, the window retains a VSC above 20% which is a good VSC level in urban London.

Three windows (*W1/899, W2/899 and W3/899 - see window map 9333/17 in Appendix 04*) serving room R1/899 located on the basement floor experience alterations in VSC of 36% and 37% of their former value. A review of the existing massing illustrates that a projecting wing to one side of these windows (*see window map 9333/17 in Appendix 04*) reduces the quantum of sky visibility and thus the potential levels of daylight entering the rooms served by these windows. In addition, Window W1/899 will retain a VSC of 14% and W3/899 will retain a VSC of 15% in the proposed context, which are not unusual for basement/lower ground floor rooms in urban London.

Sunlight - APSH

In total, eleven windows serving seven habitable rooms are relevant for APSH analysis as they are oriented within 90 degrees of due south and thus have been assessed against the BRE criteria.

Technical analysis found that four of the eleven windows will retain sufficient levels of both annual and winter sunlight. As a result there will be a negligible alteration in sunlight to these windows.

Three windows (*W1/899, W2/899 and W3/899 - see window map 9333/17 in Appendix 04*) serving room R1/899 on the basement floor fall below the recommended BRE criteria for annual sunlight. Window W1/899 achieves an annual APSH of 20% in the existing context, which is already below the BRE guideline of 25%, and retains an annual APSH of 9%. This room is also a bedroom.

The remaining windows (W4/899, W5/899, W3/900 and W2/900 - *see window map 9333/17 in Appendix 04*) serving bedrooms on the basement and ground floors (*R2/899 and R1/900*) fall below the recommended BRE criteria for annual and winter sunlight. However, windows W4/899 and W5/899 retain annual APSH of at least 23%, which is just below the recommended BRE guideline of 25%.

23 Oval Road – Coach House

This single storey residential property is located to the east of the Proposed Development on Oval Road (*see site map – Figure 02*). Accurate internal layouts have been obtained from site visits.

Daylight – VSC & NSL

VSC and NSL daylight analysis has been undertaken against two habitable rooms served by seven windows on the basement and ground floors, in both the existing and proposed scenario.

Technical analysis found that two of the five windows assessed will meet the VSC daylight criteria, meaning there will be a negligible alteration in light to these windows.

The remaining five windows fall below the recommended BRE criteria for daylight. Window W1/899 (*see window map 9333/17 in Appendix 04*) serves a bedroom *(R1/899)* on the basement floor which experiences an alteration in VSC of 32% and falls from 17% to 12% in the proposed context. However, bedrooms are considered less sensitive than primary habitable spaces such as living rooms or kitchens (*see – BRE Guidelines 2011 – Site Layout Planning for Daylight and Sunlight – A guide to good practice, paragraph 2.2.8*).

The remaining four windows (W1/900, W2/900, W3/900 and W4/900 - see *window map 9333/17 in Appendix 04*) serving room R1/900 on the ground floor fall below the recommended BRE criteria for daylight and experience alterations in VSC of up to 29% of their former value. However, all four windows retain a VSC of at least 23% which is considered a good level of sky visibility in urban London. Furthermore, room R1/900 benefits from two mitigating windows (*W2/910 and W1/910*) that fully adhere to the BRE Guidelines for VSC and ensure that a sufficient quantum of daylight is retained. This is demonstrated clearly by the NSL result that shows a retained NSL value of 99.3%.

Sunlight - APSH

In total, seven windows serving two habitable rooms are relevant for APSH analysis as they are oriented within 90 degrees of due south and thus have been assessed against the BRE criteria.

Technical analysis found that one of the two rooms fully accords with the BRE Guidelines and will retain sufficient levels of both annual and winter sunlight. As a result there will be a negligible alteration in sunlight to this room.

The remaining room (R1/899) located at basement level falls below the recommended BRE criteria for annual and winter sunlight. However, this is the bedroom and still retains an annual APSH value of 14% and will experience no change in its winter sun.

21 Oval Road

This three storey residential property is located to the east of the Proposed Development on Oval Road (*see site map – Figure 02*). Floorplans were obtained from public records and the 3D model was updated prior to the analysis.

Daylight – VSC & NSL

VSC and NSL daylight analysis has been undertaken against three habitable rooms served by seven windows located between the basement and second floors, in both the existing and proposed scenario.

Technical analysis found that six of the windows assessed will meet the VSC daylight criteria, meaning there will be a negligible alteration in light to these windows.

The remaining window falls below the recommended BRE criteria for daylight (W1/999 – see window map 9333/17 in Appendix 03) however this window is serving a multiple aspect room (R1/999). The VSC level for this window experiences an alteration of 22.8% of its former value which is just beyond the guideline criteria recommended by the BRE. It is considered that this will not adversely affect the overall light amenity to this room based on the fact that it benefits from four mitigating windows which do meet the BRE criteria.

Sunlight – APSH

In total, seven windows serving three habitable rooms are relevant for APSH analysis as they are oriented within 90 degrees of due south and thus have been assessed against the BRE criteria.

Technical analysis found that all three rooms fully accord with the BRE Guidelines and will retain sufficient levels of both annual and winter sunlight. As a result there will be a negligible alteration in sunlight to this property.

19 Oval Road

This three storey residential property is located to the east of the Proposed Development on Oval Road (*see site map – Figure 02)*. Accurate internal layouts have been obtained from site visits.

Daylight – VSC & NSL

VSC and NSL daylight analysis has been undertaken against six habitable rooms served by seven windows between the basement and second floors, in both the existing and proposed scenario.

Technical analysis found that all of the seven windows assessed will meet the VSC criteria and that all six rooms will meet the NSL daylight criteria, meaning there will be a negligible alteration in daylight to these windows.

Sunlight - APSH

In total, seven windows serving six habitable rooms are relevant for APSH analysis as they are oriented within 90 degrees of due south and thus have been assessed against the BRE criteria.

Technical analysis found that five of the seven windows will retain sufficient levels of both annual and winter sunlight. As a result there will be a negligible alteration in sunlight to these windows.

Windows W1/1100 and W1/1101 (*see window map 9333/17 in Appendix 04*) which serve single aspect rooms (*R1/1100 and R1/1101*) on the ground floor, fall below the recommended BRE criteria and experience alterations in annual and winter sunlight beyond the BRE criteria. However, W/1101 achieves a winter APSH of 5% in the existing context which falls to 4% in the proposed context and is unlikely to be perceptible. The annual APSH for window W1/1100 falls from 24% in the existing context to 16% in the proposed context and from 29% to 23% for window W1/1101. Furthermore, room R1/1101 is a bedroom which can be considered by the BRE as less sensitive.

These two windows face west and due to their orientation and the trajectory of the sun, there is a restriction in the amount of sunlight received. Furthermore, both windows are located next to a projecting wing on one side which reduces the available annual and winter APSH sunspots in the existing context and leaves the remaining sunspots concentrated into a small patch of the sky. In light of the above and as the windows look directly onto the Proposed Development, it can be concluded that the alterations in sunlight to this window are heavily influenced by the existing architectural design.

9.0 Further Material Considerations

Trees

A significant 'tree screen' is situated to the rear of the properties considered within this report as illustrated below within Figure 05:

Figure 05 Tree Screen

As per the BRE guidelines, this has not been included within the analysis for this report, thus presenting a cautious approach to analysis of potential light alterations to neighbouring properties. The BRE states that *"normally trees and shrubs need not be included"* (Paragraph 3.3.9) in the case of deciduous trees, where they do not form a continuous and dense obstruction to light. However, as can be seen from the image below it is easily arguable that the trees do form a continuous and dense obstruction and if they had been taken into account in the analysis it is highly likely the impacts which only really occur to the lower floors of the Oval Road properties would disappear.

10.0 Conclusions

GIA have undertaken a Daylight/Sunlight technical assessment in respect of 19 and 23-27 Oval Road properties neighbouring the Site in relation to updated measured survey information and internal layouts that have been obtained since we produced our December 2016 report. These properties have been analysed using the methodology and criteria recommended by the 2011 BRE Guidelines, to ascertain the alteration in Daylight and Sunlight that may occur should the Proposed Development, as set out in GIA report dated 08 December 2017, be implemented.

The results of these updated analyses show that the results are basically unchanged from the December 2016 Report and that the neighbouring properties considered will still experience some alterations in light beyond the BRE criteria. However, as stated in our original report where losses do occur, we feel that they are either commensurate with daylight and sunlight levels within this type of urban environment within London, or are as a result of the architectural design of the neighbouring property, i.e. access to light is obstructed due to existing building projections thus increasing their sensitivity to any further reductions when measured in percentage change terms.

Further, it should be noted that a cautious approach has been taken to the analysis in this report in respect of the 'tree screen' to the rear of properties located on Oval Road, as this has not been included. It could be argued that this would likely have a shielding effect upon light alterations to neighbours as a result of the Proposed Development and therefore omitting this from the analysis presents a 'worst-case' scenario.

Finally, it is considered that due to the location of the 'tree screen', it is likely that visibility of the Proposed Development will be lower than that presented within the technical analysis.

Appendix 01

Principles of Daylight and Sunlight

Principles of Daylight and Sunlight

Background

The quality of amenity and open spaces is often stipulated within planning policy for protection or enhancement and is often a concern for adjoining properties and other interested parties.

Historically the department of environment provided guidance with the issues, and in this country, this role has now been taken on by the Building Research Establishment (BRE), the British Standards Institutions (BSI) and the Chartered Institute of Building Services Engineers (CIBSE). Fortunately they have collaborated in many areas, to provide as much unified advice as possible in the form of industry best practice.

Many local planning authorities consider daylight and sunlight an important factor for determining planning applications. Policies refer to both the protection of daylight and sunlight amenity within existing properties as well as the creation of proposed dwellings with high levels of daylight and sunlight amenities.

In terms of considering what is material, local authorities typically refer to the BRE guidelines and apply their criteria set out within. The guidelines were originally produced in 1991, but superseded by the BRE guidelines (2011*) site layout planning for daylight and sunlight.*

Where developers are seeking to maximise their development value, it is often in the area of daylight and sunlight issues that they may seek to push the boundaries. Particularly in London, there is a priority on the creation of more housing thus resulting in the densification of urban areas. Local authorities vary in their attitude of how flexible they can be with the degree of impact on the daylight and sunlight amenity enjoyed by neighbouring owners and it is one factor among many planning aspects considered when determining an application. In city centres where high density is common, the protection of amenity is more challenging and there are many factors that need to be taken into account: each case has to be considered on its own merits.

The BRE Guidelines

The guidelines are typically referred to for daylight and sunlight amenity issues, however they were not intended to be used as an instrument of planning policy. In the introduction of 'Site Layout Planning for Daylight and Sunlight (2011)', section 1.6 (page 1), states that:-

> *"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. Its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of many factors in site layout design (see Section 5). In special circumstances the developer or Planning Authority may wish to use different target values. For example, in an 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".*

Again, the paragraph 2.2.3 (page 7) of the document states:-

> "*Note that numerical values given here are purely advisory. Different criteria may be used, based on the requirements for daylighting in an area viewed against other site layout constraints".*

The numerical criteria suggested by the BRE are therefore designed to provide industry advice/guidance to plan/design with daylight in mind. Alternative values may be appropriate in certain circumstances such as highly dense urban areas around London, for e.g. the approach to creating alternative criteria is detailed within Appendix F of the BRE.

Measurement and Criteria for Daylight and Sunlight as set out in the BRE Guidelines

The BRE guidelines state that they are;

> *"intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedroom. Windows to bathrooms, toilets, garages need not be analysed."*

They are therefore primarily designed to be used for residential properties however, the BRE guidelines continue to state that they may be applied to any existing non-residential buildings where there may be a reasonable expectation of daylight including; schools, hospitals, hostels, small workshop and some offices.

Daylight

In the first instance, if a proposed development falls beneath a 25 degree angle taken from the centre point of the lowest window, then the BRE suggests that no further analysis is required as there will be adequate sky light (i.e. sky visibility). This rule is applied when considering the scope of any assessments.

The BRE guidelines provide two methods for calculating daylight to existing surrounding properties:

- Vertical Sky Component (VSC)
- No Sky Line (NSL) also referred to as daylight distribution

A further method, the Average Daylight Factor (ADF) is provided for calculating daylight within proposed properties. However, it is sometimes applied as a supplementary assessment for exiting surrounding properties.

Each method is described below:

Vertical Sky Component

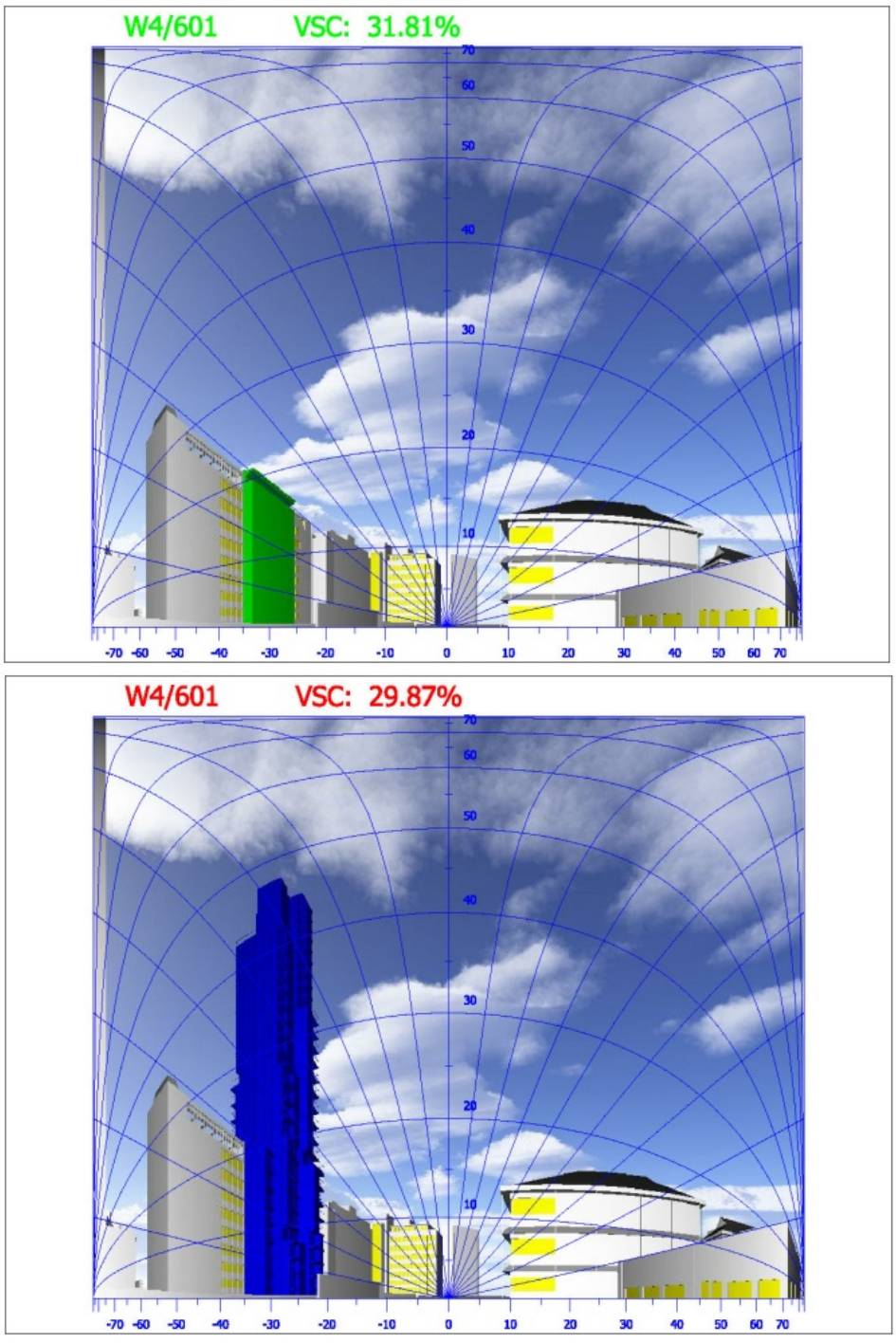
Methodology

This is defined in the BRE as:-

> *"Ratio of that part of illuminance, at a point on a given vertical plane that, is received directly from a CIE standard overcast sky, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky."*

This statement means, in practice that if one had a totally unobstructed view of the sky, looking in a single direction, then just under 40% of the complete hemisphere would be visible. The measurement of this vertical sky component is undertaken using two indicators, namely a skylight indicator and a transparent direction finder.

Alternatively a further method of measuring the VSC, which is easier to understand both in concept and analysis, is often more precise and can deal with more complex instructions, is that of the Waldram diagram.



The point of reference is the same as for the skylight indicator, at the centre of the outward window face. Effectively a snap shot is taken from that point of the sky in front of the window, before and after the obstruction is put in place together with all the relevant obstructions to it, i.e. the buildings.

An unobstructed sky from that point of reference would give a vertical sky component of 39.6%, corresponding to 50% of the hemisphere, and therefore the purpose of the diagram is to discover how much sky remains once obstructions exist in front of that point.

Criteria

The BRE Handbook provides criteria for:

(a) New Development
(b) Existing Buildings
(c) Adjoining Development Land

(a) New Development

Paragraph 2.1.21 of the BRE states that:

"Obstructions can limit access to light from the sky. This can be checked by measuring or calculating the angle of visible sky 'theta', angle of obstruction or Vertical Sky Component (VSC) at the centre of the lowest window where daylight is required. If VSC is:

- at least 27% ('theta' is greater than 65 degrees, obstruction angle less than 25 degrees) conventional window design will usually give reasonable results.
- between 15% and 27% ('theta' is between 45 degrees and 65 degrees, obstruction angle between 25 degrees and 45 degrees) special measures (larger windows, changes to room layout) are usually needed to provide adequate daylight.
- between 5% and 15% ('theta' is between 25 degrees and 45 degrees, obstruction angle between 45 degrees and 65 degrees) it is very difficult to provide adequate daylight unless very large windows are used.
- less than 5% ('theta' less than 25 degrees, obstruction angle more than 65 degrees) it is often impossible to achieve reasonable daylight, even if the whole window wall is glazed."

(b) Existing Buildings

Para 2.2.21 (page 11) of the BRE 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 degree to the horizontal, then the diffuse 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".

The VSC provides a quick and simple test which looks to give an early indication of the potential for light at the window face. However considered in isolation, it does not, in any fashion, indicate the quality of actual light within a space. It does not take into account the window size, the room size or room use. It helps by indicating that if there is an appreciable amount of sky visible from a given point there will be a reasonable potential for daylighting.

(c) Adjoining Development Land

Paragraph 2.3.10 of the BRE guidelines states:

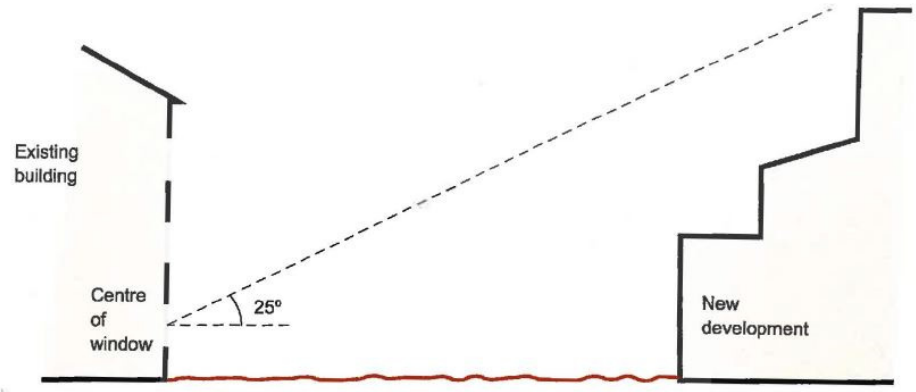
"in broad general terms, a development site next to a proposed new building will retain the potential for good diffuse daylighting provided that on each common boundary:

(a) no new building, measured in a vertical section perpendicular to the boundary, from a point 1.6m above ground level, subtends an angle of more than 43 degrees to the horizontal;

(b) or, If (a) is not satisfied, then all points 1.6m above the boundary line are within 4m (measured along the boundary) of a point which has a VSC (looking towards the new building(s)) of 17% or more 2m above ground level are within 4m (measured sideways) of a point which has a vertical sky component of 27% or more.

Alternative VSC criteria as per Appendix F of the BRE guidelines

The 27% VSC target criteria is based upon a sub-urban type environment whereby a 25 degree line was taken from the centre point on a ground floor window as shown below:



However, in city centre locations and urban areas where density levels are increasing, these values may not be considered appropriate. The BRE guidelines provide that "*different targets may be used based on the special requirements of the proposed development or its location*" (paragraph F1).

Appendix F of the BRE suggests several approaches as to how alternative targets may be considered including:

- Consented scheme - use of an extant planning permission to establish alternative benchmark criteria for VSC and APSH. It is not appropriate to treat a permitted scheme in the same manner as an existing building and allow a 20% reduction beyond this. If the levels of daylight and sunlight retained are similar to a previously consented scheme then it follows that these levels should be considered acceptable again, notwithstanding other planning considerations.
- Mirror massing – to ensure a development matches the height and proportions of existing buildings, the VSC and APSH targets could be set to those of a mirror image of the same height and size, an equal distance away from the boundary (paragraph F5).
- Consider surrounding context and existing obstruction angles as well as spacing to height ratios.

In addition, due to the requirements for external amenity space within local planning policies, many residential buildings are served by balconies. Balconies can restrict the view of the sky dome whereby even the modest obstruction may result in a large relative impact on the VSC. The BRE guidelines therefore provide that an assessment can be carried out comparing the levels of VSC with and without the balconies in place for both the existing and proposed scenarios, to establish whether it is the presence of the balcony or the size of the new obstruction that is the main factor in the loss of light (paragraph 2.2.11).

No Sky Line

Methodology

The NSL method is a measure of the distribution of daylight at the working plane within a room. The 'working plane' means a horizontal 'desktop' plane 0.85m in height for residential properties. The NSL divides those areas of the working plane which can receive direct sky light from those which cannot. If a significant area of the working plane lies beyond the NSL (i.e. it receives no direct sky light), then the distribution of daylight in the room will be poor and supplementary electric lighting may be required.

It is similar to the VSC approach in that a reduction of 0.8 times in the area of sky visibility at the working plane may be deemed to be noticeable. It is however, very dependent upon knowing the actual room layouts or having a reasonable understanding of the likely layouts.

It is assessed by plotting the area of a room which can see the sky and which cannot, referred to as the NSL contour or daylight distribution contour. The contours assist in helping to understand the way the daylight is distributed within a room and the comparisons of existing and limitations of proposed circumstances within neighbouring properties. Like the VSC method, it relates to the amount of visible sky but does not consider the room use in its criteria, it is simply a test to assess the change in position of the No Sky Line, between the existing and proposed situation. It does take into account the number and size of windows to a room, but does not give any quantitative or qualitative assessment of the light in the rooms, only where sky can or cannot be seen.

Criteria

BS 8206 Part 2 (para 5.7) that the:

> *"uniformity of daylight is considered to be unsatisfactory if a significant part of the working plane (normally more than 20%) lies behind the no-sky line".*

Therefore, it is implied that an NSL of at least 80% would be considered satisfactory in regards to deep rooms which are lit by windows on one side, the BRE Guidelines state (para, 2.2.10):

In regards to the alteration as a result of a proposed development or obstruction the BRE provide that the daylight may be adversely affected if *" the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value. ".*

Average Daylight Factor

Methodology

The Average Daylight Factor (ADF) is defined within the 2011 BRE Guidelines as:

> *'a ratio of total daylight flux incident on a reference area to the total area of the reference area, expressed as a percentage of outdoor luminance on a horizontal plane, due to an unobstructed sky of assumed or known luminance distribution'.*

Whilst the BRE guidelines provide this measure as a tool to understand daylight within proposed dwellings not existing dwellings, if room layouts are known it can provide a useful supplementary measure of daylight and is often requested by many local authorities.

The ADF method of assessment considers:

- The diffuse visible transmittance of the glazing to the room in question (i.e. how much light gets through the window glass). A transmittance value of 0.8% is assumed for single glazing and 0.65% for double glazed windows;
- The net glazed area of the window in question;
- The total area of the room surfaces (ceiling, walls, floor and windows); and
- The angle of visible sky reaching the window(s) in question

In addition, the ADF method makes allowance for the average reflectance of the internal surfaces of the room and of external obstruction (assumed to be 0.5 unless otherwise stated).

Criteria

The criteria for ADF is taken from the British Standard 8206 part II which gives the following criteria based on the room use:

- Bedroom – 1% ADF
- Living room – 1.5% ADF
- Kitchen – 2% ADF

Where a room has multiple uses such as a living kitchen diner (LKD) or a studio apartment, the highest value is taken so in these cases the required ADF is 2%.

Sunlight

Methodology

The BS 8206 part 2 (section 5.2) states that:

> *"Provided that the entry of sunlight is properly controlled, it is generally welcome in most buildings in the UK. Dissatisfaction can arise as much from the permanent exclusion of sunlight as from its excess. The provision of sunlight is important in dwellings, particularly during winter months. Sunlight is especially valued in habitable rooms used for long periods during the day."*

Principles of Daylight and Sunlight

Sunlight is measured using a sun indicator which contains 100 spots, each representing 1% of Annual Probable Sunlight Hours (APSH). Where no obstruction exists the total APSH would amount to 1486 hours and therefore each spot equates to 14.86 hours of the total annual sunlight hours.

The number of spots is calculated for both the whole year and also during the winter period (21st September to 21st March) prior to an obstruction and after the obstruction is put in place. This provides a percentage of APSH for each of the time periods for each window assessed. The 2011 BRE Guidelines note that:

- *"In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day, but especially in the afternoon."*

- *"all main living rooms of dwellings…should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun";*

- *"If the main living room to a dwelling has a main window facing within 90° of due north, but a secondary window facing within 90° of due south, sunlight to the secondary window should be checked."*

- *"…a south facing window will, in general, receive most sunlight, while a north facing one will receive it only on a handful of occasions. East and west facing windows will receive sunlight only at certain times of day".*

When a room has multiple windows, not all may have a southerly orientation however, these windows may contribute to the levels of sunlight within a given room even if by 1-2% APSH. As well as the assessment on a window basis the BRE guidelines provide that an assessment can be undertaken on a room basis.

Whilst the emphasis of the BRE guidelines is in regards to living rooms, it is not always possible to determine the room uses within all of the properties assessed and therefore typically all windows or all rooms with windows facing within 90 degrees of due south and facing the site are assessed.

Criteria

The BRE provide that for existing buildings a window maybe adversely affected if a point at the centre of a window receives:

- Less than 25% of the APSH during the whole year, of which 5% APSH must be in the winter period; and
- Receives less than 0.8 times its former sunlight hours in either time period; and
- Has a reduction in sunlight for the whole year more than 4% APSH.

In terms of the assessment on a room basis the criteria applied is the same.

For proposed buildings the BRE provide (paragraph 3.1.15) that a dwelling or building which has a particular requirement for sunlight will appear reasonably sunlit provided:

- At least one main window faces within 90 degrees of due south; and

- Centre of one main living room window can receive 25% of APSH including 5% APSH in the winter months.

It continues that where groups of dwellings are planned the layout should aim to maximise the number of living rooms that meet the above recommendations.

Overshadowing

As well as daylight and sunlight amenity to neighbouring dwellings, planning policy often refers to the levels of overshadowing to amenity areas such as parks, public squares, playgrounds etc. The BRE guidelines provide two methods of calculation in regards to overshadowing which are as follows:

Sun Hours on Ground

Methodology

This method of overshadowing assessment uses the sun on ground indicator to determine the areas which receive direct sunlight and those which do not. This method applies to both new and existing areas of amenity space. The BRE Guidelines suggest that the Spring Equinox (21st March) is a suitable date for the assessment as this is the midpoint of the suns position throughout the year. Using specialist software, the path of the sun is tracked to determine where the sun would reach the ground and where it would not.

Criteria

The BRE guidelines recommend that at least half of an amenity space should receive at least two hours of direct sunlight on March 21st. In regards to existing spaces where the existing sunlit area is less than half of the area, the area which receives two hours of sunlight should not be reduced by more than 20% (it should retain 0.8 times its former value).

Transient Overshadowing

The BRE guidelines suggest that where large buildings are proposed which may affect a number of gardens or open spaces, it is useful to plot a shadow plan to illustrate the location of shadows at different times of the day and year. For the purpose of this assessment, shadow has been mapped at the following times of the year:

- 21st March (Spring equinox)
- 21st June (Summer solstice)
- 21st December (Winter solstice)

The September equinox is not assessed as this would provide the same results as those for March 21st.

For each of these dates the overshadowing is calculated at hourly intervals throughout the day however some images may not be present given the early sunset during the Winter period.

The BRE guidelines do not provide any criteria for transient overshadowing. Therefore the analysis provides a description of where additional shadow is cast as a result of a development with professional judgement to determine the effect comparing the shadow resulting from the proposed development against that of the existing site.

Light pollution and Solar Glare

Light pollution is defined as any light emitting from artificial sources into spaces where it is not wanted for example from offices into neighbouring residential properties where it could cause a nuisance. The ILP Guidance notes provide details of how to measure light pollution and criteria based on the urban density of the respective area to determine the acceptability of the light levels.

Solar glare is particularly important at pedestrian and road junctions as well as along railway lines where the glare can cause a temporary blinding to drivers or pedestrians. Glare can occur from reflective materials such as glazed areas or metal cladding on the facades. This assessment is therefore undertaken from viewpoints surrounding the site at junctions and positioned at the driver's eye level. Focal points are dictated by the location of signals or oncoming traffic.

Other Amenity Considerations

Daylight and sunlight is one factor among many under the heading of residential amenity considerations for any given development design or planning application; others include:

- outlook
- sense of enclosure
- privacy
- access to outdoor space e.g. balconies or communal garden/courtyard

Appendix 02

Daylight and Sunlight Results

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
1-45 DARWIN COURT						
R1/101	**W16/101**	Unknown	35.1	30.7	4.4	12.5
R2/101	**W15/101**	Unknown	28.4	24.7	3.7	13.0
R3/101	**W14/101**	Unknown	33.7	29.9	3.8	11.3
R4/101	**W13/101**	Unknown	35.4	31.8	3.6	10.2
R5/101	**W12/101**	Unknown	35.7	32.4	3.3	9.2
R6/101	**W9/101**	Unknown	34.4	31.4	3.0	8.7
R7/101	**W8/101**	Unknown	28.5	25.7	2.8	9.8
R8/101	**W10/101**	Unknown	36.4	33.7	2.7	7.4
R9/101	**W11/101**	Unknown	36.4	34.0	2.4	6.6
R10/101	**W5/101**	Unknown	28.9	27.2	1.7	5.9
R11/101	**W4/101**	Unknown	34.6	32.6	2.0	5.8
R12/101	**W6/101**	Unknown	36.3	34.6	1.7	4.7
R13/101	**W7/101**	Unknown	36.5	35.0	1.5	4.1
R14/101	**W3/101**	Unknown	35.3	34.0	1.3	3.7
R15/101	**W2/101**	Unknown	29.7	28.4	1.3	4.4
R16/101	**W1/101**	Unknown	37.2	36.1	1.1	3.0
R1/102	**W16/102**	Unknown	35.9	32.2	3.7	10.3
R2/102	**W15/102**	Unknown	28.9	25.8	3.1	10.7
R3/102	**W14/102**	Unknown	34.5	31.3	3.2	9.3
R4/102	**W13/102**	Unknown	36.2	33.2	3.0	8.3
R5/102	**W11/102**	Unknown	36.4	33.8	2.6	7.1
R6/102	**W10/102**	Unknown	35.1	32.7	2.4	6.8

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R7/102	**W9/102**	Unknown	29.2	26.9	2.3	7.9
R8/102	**W8/102**	Unknown	37.1	35.0	2.1	5.7
R9/102	**W6/102**	Unknown	37.1	35.2	1.9	5.1
R10/102	**W17/102**	Unknown	29.4	28.1	1.3	4.4
R11/102	**W18/102**	Unknown	35.3	33.7	1.6	4.5
R12/102	**W5/102**	Unknown	37.0	35.6	1.4	3.8
R13/102	**W4/102**	Unknown	37.2	36.0	1.2	3.2
R14/102	**W3/102**	Unknown	35.9	35.0	0.9	2.5
R15/102	**W2/102**	Unknown	30.3	29.3	1.0	3.3
R16/102	**W1/102**	Unknown	37.8	37.0	0.8	2.1
R1/103	**W16/103**	Unknown	36.7	33.7	3.0	8.2
R2/103	**W15/103**	Unknown	29.4	26.9	2.5	8.5
R3/103	**W14/103**	Unknown	35.2	32.7	2.5	7.1
R4/103	**W13/103**	Unknown	36.9	34.6	2.3	6.2
R5/103	**W12/103**	Unknown	37.1	35.1	2.0	5.4
R6/103	**W11/103**	Unknown	35.7	33.9	1.8	5.0
R7/103	**W10/103**	Unknown	29.8	28.1	1.7	5.7
R8/103	**W9/103**	Unknown	37.7	36.1	1.6	4.2
R9/103	**W18/103**	Unknown	37.7	36.3	1.4	3.7
R10/103	**W17/103**	Unknown	29.9	28.9	1.0	3.3
R11/103	**W6/103**	Unknown	35.9	34.8	1.1	3.1
R12/103	**W5/103**	Unknown	37.6	36.7	0.9	2.4
R13/103	**W4/103**	Unknown	37.8	37.0	0.8	2.1
R14/103	**W3/103**	Unknown	36.5	35.9	0.6	1.6

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R15/103	**W2/103**	Unknown	30.8	30.2	0.6	1.9
R16/103	**W1/103**	Unknown	38.3	37.8	0.5	1.3
R1/104	**W18/104**	Unknown	37.4	35.1	2.3	6.1
R2/104	**W17/104**	Unknown	29.9	28.0	1.9	6.4
R3/104	**W16/104**	Unknown	35.9	34.0	1.9	5.3
R4/104	**W15/104**	Unknown	37.6	35.9	1.7	4.5
R5/104	**W14/104**	Unknown	37.7	36.3	1.4	3.7
R6/104	**W12/104**	Unknown	36.4	35.1	1.3	3.6
R7/104	**W11/104**	Unknown	30.4	29.2	1.2	3.9
R8/104	**W10/104**	Unknown	38.3	37.3	1.0	2.6
R9/104	**W9/104**	Unknown	38.3	37.4	0.9	2.3
R10/104	**W8/104**	Unknown	30.4	29.9	0.5	1.6
R11/104	**W7/104**	Unknown	36.7	36.0	0.7	1.9
R12/104	**W6/104**	Unknown	38.3	37.7	0.6	1.6
R13/104	**W4/104**	Unknown	38.4	38.0	0.4	1.0
R14/104	**W3/104**	Unknown	37.2	36.9	0.3	0.8
R15/104	**W2/104**	Unknown	31.4	31.1	0.3	1.0
R16/104	**W1/104**	Unknown	38.8	38.5	0.3	0.8
R1/105	**W4/105**	Unknown	37.9	36.5	1.4	3.7
R2/105	**W3/105**	Unknown	30.3	29.1	1.2	4.0
R3/105	**W2/105**	Unknown	36.6	35.4	1.2	3.3
R4/105	**W1/105**	Unknown	38.2	37.1	1.1	2.9
R5/105	**W6/105**	Unknown	38.3	37.5	0.8	2.1

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R6/105	**W9/105**	Unknown	37.0	36.3	0.7	1.9
R7/105	**W8/105**	Unknown	30.9	30.3	0.6	1.9
R8/105	**W7/105**	Unknown	38.7	38.2	0.5	1.3
R9/105	**W13/105**	Unknown	38.7	38.2	0.5	1.3
R10/105	**W12/105**	Unknown	32.4	32.1	0.3	0.9
R11/105	**W11/105**	Unknown	38.0	37.7	0.3	0.8
R12/105	**W10/105**	Unknown	38.8	38.5	0.3	0.8
R13/105	**W14/105**	Unknown	38.9	38.7	0.2	0.5
R14/105	**W18/105**	Unknown	38.3	38.2	0.1	0.3
R15/105	**W17/105**	Unknown	33.1	33.0	0.1	0.3
R16/105	**W16/105**	Unknown	39.1	39.0	0.1	0.3
R1/106	**W8/106**	Unknown	38.4	37.6	0.8	2.1
R2/106	**W7/106**	Unknown	31.6	31.0	0.6	1.9
R3/106	**W6/106**	Unknown	37.7	37.1	0.6	1.6
R4/106	**W5/106**	Unknown	38.6	38.1	0.5	1.3
R5/106	**W4/106**	Unknown	38.8	38.4	0.4	1.0
R6/106	**W3/106**	Unknown	38.0	37.7	0.3	0.8
R7/106	**W2/106**	Unknown	32.4	32.1	0.3	0.9
R8/106	**W1/106**	Unknown	39.0	38.8	0.2	0.5
R1/151	**W12/151**	Unknown	36.1	33.0	3.1	8.6
R2/151	**W7/151**	Unknown	37.0	35.6	1.4	3.8
R1/152	**W8/152**	Unknown	36.8	34.4	2.4	6.5
R2/152	**W7/152**	Unknown	37.6	36.6	1.0	2.7
R1/153	**W13/153**	Unknown	37.5	35.7	1.8	4.8

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R2/153	**W5/153**	Unknown	38.2	37.6	0.6	1.6
R1/154	**W5/154**	Unknown	38.1	36.9	1.2	3.1
R2/154	**W15/154**	Unknown	38.9	38.7	0.2	0.5
R1/155	**W9/155**	Unknown	38.7	38.3	0.4	1.0
36 GLOUCERSER AV						
R1/200	**W1/200**	Unknown	20.7	20.7	0.0	0.0
R2/200	**W2/200**	Unknown	27.5	27.3	0.2	0.7
R3/200	**W3/200**	Unknown	29.6	28.7	0.9	3.0
R4/200	**W4/200**	Unknown	30.5	29.2	1.3	4.3
R5/200	**W5/200**	Unknown	31.1	29.3	1.8	5.8
R7/200	**W6/200**	Unknown	32.0	29.4	2.6	8.1
R8/200	**W7/200**	Unknown	32.3	29.5	2.8	8.7
R9/200	**W8/200**	Unknown	32.5	29.4	3.1	9.5
R10/200	**W9/200**	Unknown	32.5	29.3	3.2	9.8
R10/200	**W13/200**	Unknown	30.9	30.0	0.9	2.9
R11/200	**W12/200**	Unknown	28.7	28.0	0.7	2.4
R12/200	**W11/200**	Unknown	24.9	24.7	0.2	0.8
R13/200	**W10/200**	Unknown	32.4	32.3	0.1	0.3
R1/201	**W13/201**	Unknown	32.1	30.8	1.3	4.0
R2/201	**W14/201**	Unknown	32.2	30.7	1.5	4.7
R3/201	**W11/201**	Unknown	32.2	30.6	1.6	5.0
R4/201	**W12/201**	Unknown	32.3	30.5	1.8	5.6
R5/201	**W9/201**	Unknown	32.5	30.5	2.0	6.2
R6/201	**W10/201**	Unknown	32.6	30.4	2.2	6.7

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R7/201	**W7/201**	Unknown	32.8	30.4	2.4	7.3
R8/201	**W8/201**	Unknown	33.1	30.4	2.7	8.2
R9/201	**W5/201**	Unknown	33.2	30.4	2.8	8.4
R10/201	**W3/201**	Unknown	33.0	32.2	0.8	2.4
R10/201	**W6/201**	Unknown	33.4	30.4	3.0	9.0
R11/201	**W4/201**	Unknown	33.0	32.4	0.6	1.8
R12/201	**W2/201**	Unknown	33.3	32.7	0.6	1.8
R13/201	**W1/201**	Unknown	33.8	33.3	0.5	1.5
R1/202	**W7/202**	Unknown	84.0	83.5	0.5	0.6
R2/202	**W8/202**	Unknown	88.5	87.9	0.6	0.7
R3/202	**W9/202**	Unknown	35.3	34.8	0.5	1.4
R3/202	**W10/202**	Unknown	35.4	35.0	0.4	1.1
R3/202	**W11/202**	Unknown	35.2	34.8	0.4	1.1
R3/202	**W12/202**	Unknown	35.0	34.5	0.5	1.4
R4/202	**W3/202**	Unknown	88.7	88.0	0.7	0.8
R5/202	**W4/202**	Unknown	88.8	87.9	0.9	1.0
R6/202	**W5/202**	Unknown	88.8	87.9	0.9	1.0
R7/202	**W6/202**	Unknown	88.9	87.8	1.1	1.2
R8/202	**W9/202**	Unknown	35.3	34.8	0.5	1.4
R8/202	**W10/202**	Unknown	35.4	35.0	0.4	1.1
R8/202	**W11/202**	Unknown	35.2	34.8	0.4	1.1
R9/202	**W1/202**	Unknown	88.9	87.7	1.2	1.3
R10/202	**W2/202**	Unknown	85.7	84.5	1.2	1.4
THE LOCKHOUSE (WEST BLOCK)						
R1/299	**W3/299**	UNKNOWN	11.6	12.5	-0.9	-7.8
R1/299	**W2/299**	UNKNOWN	4.4	5.0	-0.6	-13.6
R1/299	**W1/299**	UNKNOWN	4.4	4.0	0.4	9.1

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R1/300	**W1/300**	Living Room	5.8	6.5	-0.7	-12.1
R1/300	**W2/300**	Living Room	6.0	6.4	-0.4	-6.7
R2/300	**W3/300**	Bedroom	6.0	6.3	-0.3	-5.0
R1/301	**W9/301**	Bedroom	18.6	18.6	0.0	0.0
R3/301	**W7/301**	LKD	7.6	7.6	0.0	0.0
R4/301	**W6/301**	Bedroom	7.8	7.8	0.0	0.0
R5/301	**W5/301**	Bedroom	7.8	7.8	0.0	0.0
R6/301	**W4/301**	Bedroom	6.2	5.6	0.6	9.7
R7/301	**W1/301**	LKD	26.4	26.4	0.0	0.0
R7/301	**W2/301**	LKD	34.5	10.5	24.0	69.6
R7/301	**W3/301**	LKD	36.2	10.3	25.9	71.5
R1/302	**W9/302**	Bedroom	14.2	14.2	0.0	0.0
R3/302	**W7/302**	LKD	9.9	9.8	0.1	1.0
R4/302	**W6/302**	Bedroom	9.5	9.4	0.1	1.1
R5/302	**W5/302**	Bedroom	9.5	9.4	0.1	1.1
R6/302	**W4/302**	Bedroom	7.6	6.9	0.7	9.2
R7/302	**W1/302**	LKD	27.5	27.5	0.0	0.0
R7/302	**W2/302**	LKD	38.1	12.0	26.1	68.5
R7/302	**W3/302**	LKD	38.2	11.9	26.3	68.8
R1/303	**W10/303**	Bedroom	18.2	18.2	0.0	0.0
R3/303	**W8/303**	LKD	11.9	11.7	0.2	1.7
R4/303	**W7/303**	Bedroom	21.9	21.6	0.3	1.4
R5/303	**W6/303**	Bedroom	28.6	28.0	0.6	2.1
R6/303	**W4/303**	Bedroom	38.9	15.9	23.0	59.1
R6/303	**W5/303**	Bedroom	30.3	29.1	1.2	4.0
R7/303	**W1/303**	LKD	29.8	29.5	0.3	1.0
R7/303	**W2/303**	LKD	38.8	14.4	24.4	62.9
R7/303	**W3/303**	LKD	38.9	14.6	24.3	62.5

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R1/304	W10/304	Bedroom	21.5	21.5	0.0	0.0
R3/304	W8/304	LKD	8.4	8.4	0.0	0.0
R4/304	W7/304	Bedroom	23.6	23.5	0.1	0.4
R5/304	W6/304	Bedroom	31.4	31.0	0.4	1.3
R6/304	W4/304	Bedroom	39.3	20.8	18.5	47.1
R6/304	W5/304	Bedroom	32.9	32.1	0.8	2.4
R7/304	W1/304	LKD	28.0	27.8	0.2	0.7
R7/304	W2/304	LKD	39.3	18.4	20.9	53.2
R7/304	W3/304	LKD	39.3	19.3	20.0	50.9
R1/305	W10/305	Bedroom	25.0	25.0	0.0	0.0
R3/305	W8/305	LKD	10.9	10.9	0.0	0.0
R4/305	W7/305	Bedroom	26.1	26.1	0.0	0.0
R5/305	W5/305	Bedroom	34.3	34.2	0.1	0.3
R6/305	W4/305	Bedroom	35.4	35.1	0.3	0.8
R7/305	W1/305	LKD	28.0	27.9	0.1	0.4
R7/305	W2/305	LKD	39.5	25.5	14.0	35.4
R7/305	W3/305	LKD	39.6	27.4	12.2	30.8
R1/306	W10/306	Bedroom	27.5	27.5	0.0	0.0
R3/306	W8/306	LKD	13.4	13.4	0.0	0.0
R4/306	W7/306	Bedroom	33.4	33.4	0.0	0.0
R5/306	W6/306	Bedroom	37.2	37.1	0.1	0.3
R6/306	W4/306	Bedroom	39.6	37.8	1.8	4.5
R6/306	W5/306	Bedroom	37.6	37.5	0.1	0.3
R7/306	W1/306	LKD	34.8	34.8	0.0	0.0
R7/306	W2/306	LKD	39.6	35.3	4.3	10.9
R7/306	W3/306	LKD	39.6	37.6	2.0	5.1
R1/307	W9/307	Unknown	39.2	39.2	0.0	0.0

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R2/307	**W8/307**	Bedroom	38.9	38.9	0.0	0.0
R3/307	**W7/307**	Bedroom	38.8	38.8	0.0	0.0
R4/307	**W5/307**	Bedroom	39.5	39.5	0.0	0.0
R4/307	**W6/307**	Bedroom	39.0	39.0	0.0	0.0
R5/307	**W1/307**	Living Room	26.0	26.0	0.0	0.0
R5/307	**W2/307**	Living Room	25.6	25.6	0.0	0.0
R5/307	**W3/307**	Living Room	31.1	31.1	0.0	0.0
R5/307	**W4/307**	Living Room	32.1	32.1	0.0	0.0
R1/308	**W9/308**	Unknown	39.6	39.6	0.0	0.0
R2/308	**W8/308**	Bedroom	39.6	39.6	0.0	0.0
R3/308	**W7/308**	Bedroom	39.6	39.6	0.0	0.0
R4/308	**W5/308**	Bedroom	39.6	39.6	0.0	0.0
R4/308	**W6/308**	Bedroom	39.6	39.6	0.0	0.0
R5/308	**W1/308**	Living Room	38.1	38.1	0.0	0.0
R5/308	**W2/308**	Living Room	38.0	38.0	0.0	0.0
R5/308	**W3/308**	Living Room	39.6	39.6	0.0	0.0
R5/308	**W4/308**	Living Room	39.6	39.6	0.0	0.0
THE LOCKHOUSE (EAST BLOCK)						
R1/400	**W1/400**	Bedroom	21.7	16.6	5.1	23.5
R1/400	**W2/400**	Bedroom	23.6	17.8	5.8	24.6
R3/400	**W3/400**	Bedroom	26.1	19.3	6.8	26.1
R1/401	**W3/401**	Kitchen	15.6	14.0	1.6	10.3
R2/401	**W1/401**	Kitchen	15.8	13.6	2.2	13.9
R2/401	**W2/401**	Kitchen	16.1	13.6	2.5	15.5
R3/401	**W4/401**	L/D	17.3	13.7	3.6	20.8
R3/401	**W7/401**	L/D	27.5	22.1	5.4	19.6
R4/401	**W8/401**	Bedroom	29.6	25.0	4.6	15.5
R5/401	**W5/401**	Bedroom	26.5	22.6	3.9	14.7
R6/401	**W6/401**	Bedroom	23.5	20.0	3.5	14.9

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R1/402	**W13/402**	Kitchen	17.9	16.5	1.4	7.8
R2/402	**W10/402**	Kitchen	18.0	16.2	1.8	10.0
R2/402	**W11/402**	Kitchen	17.8	15.6	2.2	12.4
R2/402	**W12/402**	Kitchen	18.2	16.1	2.1	11.5
R3/402	**W8/402**	L/D	28.8	24.5	4.3	14.9
R4/402	**W9/402**	Bedroom	32.0	28.3	3.7	11.6
R5/402	**W6/402**	Bedroom	28.8	25.7	3.1	10.8
R6/402	**W7/402**	Bedroom	25.2	22.5	2.7	10.7
R7/402	**W1/402**	L/D	14.6	11.6	3.0	20.5
R8/402	**W2/402**	Bedroom	23.3	19.8	3.5	15.0
R10/402	**W3/402**	Bedroom	28.6	24.1	4.5	15.7
R11/402	**W4/402**	Kitchen	29.8	25.0	4.8	16.1
R12/402	**W5/402**	L/D	31.3	25.9	5.4	17.3
R2/403	**W1/403**	Kitchen	20.6	19.2	1.4	6.8
R2/403	**W2/403**	Kitchen	20.7	19.2	1.5	7.2
R3/403	**W6/403**	L/D	30.8	27.5	3.3	10.7
R4/403	**W7/403**	Bedroom	34.3	31.6	2.7	7.9
R5/403	**W4/403**	Bedroom	31.7	29.5	2.2	6.9
R6/403	**W5/403**	Bedroom	27.9	25.9	2.0	7.2
R7/403	**W3/403**	L/D	15.5	13.3	2.2	14.2
R8/403	**W8/403**	Bedroom	24.9	22.3	2.6	10.4
R11/403	**W9/403**	LD	30.4	27.1	3.3	10.9
R11/403	**W11/403**	LD	38.7	37.4	1.3	3.4
R12/403	**W10/403**	KITCHEN	38.6	37.5	1.1	2.8
R1/404	**W11/404**	Bedroom	23.1	22.2	0.9	3.9
R2/404	**W8/404**	L/D	33.2	31.1	2.1	6.3

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R3/404	**W10/404**	Kitchen	36.5	34.7	1.8	4.9
R4/404	**W9/404**	Bedroom	35.5	34.1	1.4	3.9
R5/404	**W7/404**	Bedroom	32.9	31.7	1.2	3.6
R6/404	**W3/404**	Bedroom	19.6	18.2	1.4	7.1
R7/404	**W4/404**	L/D	25.5	23.9	1.6	6.3
R7/404	**W5/404**	L/D	27.0	25.3	1.7	6.3
R8/404	**W12/404**	Bedroom	29.7	27.8	1.9	6.4
R9/404	**W2/404**	KD	39.4	38.6	0.8	2.0
R9/404	**W6/404**	KD	32.4	30.3	2.1	6.5
R10/404	**W1/404**	Bedroom	39.3	38.7	0.6	1.5
R1/405	**W1/405**	Bedroom	27.0	26.6	0.4	1.5
R1/405	**W2/405**	Bedroom	27.2	26.9	0.3	1.1
R2/405	**W3/405**	L/D	28.1	27.4	0.7	2.5
R2/405	**W10/405**	L/D	33.4	32.5	0.9	2.7
R3/405	**W11/405**	Kitchen	38.2	37.4	0.8	2.1
R4/405	**W8/405**	Bedroom	38.7	38.1	0.6	1.6
R5/405	**W9/405**	Bedroom	38.6	38.1	0.5	1.3
R6/405	**W7/405**	Bedroom	38.3	37.9	0.4	1.0
R7/405	**W6/405**	Bedroom	37.6	37.3	0.3	0.8
R8/405	**W5/405**	Bedroom	35.3	35.0	0.3	0.8
R9/405	**W4/405**	Living Room	33.6	33.4	0.2	0.6
R1/406	**W9/406**	Bedroom	30.7	30.7	0.0	0.0
R2/406	**W1/406**	L/D	39.2	39.1	0.1	0.3
R3/406	**W2/406**	Kitchen	39.3	39.3	0.0	0.0
R4/406	**W3/406**	Bedroom	39.4	39.3	0.1	0.3

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R5/406	**W4/406**	Bedroom	39.4	39.4	0.0	0.0
R6/406	**W8/406**	Bedroom	39.5	39.5	0.0	0.0
R7/406	**W7/406**	Bedroom	39.5	39.5	0.0	0.0
R8/406	**W6/406**	Bedroom	39.6	39.5	0.1	0.3
R9/406	**W5/406**	Living Room	39.6	39.5	0.1	0.3
R7/451	**W1/451**	L/D	13.9	10.2	3.7	26.6
R8/451	**W3/451**	Bedroom	22.0	17.6	4.4	20.0
R10/451	**W4/451**	Bedroom	27.0	21.5	5.5	20.4
R11/451	**W2/451**	Kitchen	28.2	22.2	6.0	21.3
R12/451	**W5/451**	L/D	29.7	23.0	6.7	22.6
29 OVAL ROAD						
R1/599	**W1/599**	Unknown-Resi	23.3	16.5	6.8	29.2
R1/599	**W2/599**	Unknown-Resi	25.5	18.2	7.3	28.6
R1/599	**W4/599**	Unknown-Resi	24.5	17.5	7.0	28.6
R1/600	**W3/600**	Unknown	26.8	18.2	8.6	32.1
R2/600	**W2/600**	Living Room	33.1	23.4	9.7	29.3
R1/601	**W1/601**	Bedroom	35.4	26.8	8.6	24.3
R1/602	**W1/602**	Bedroom	30.3	23.7	6.6	21.8
27 OVAL ROAD						
R2/699	**W2/699**	Reception	22.3	15.1	7.2	32.3
R1/700	**W1/700**	Reception	32.6	23.1	9.5	29.1
R1/701	**W1/701**	Unknown	35.5	27.2	8.3	23.4
R1/702	**W1/702**	Unknown	30.6	24.2	6.4	20.9
R1/709	**W1/709**	Reception	24.4	17.1	7.3	29.9
R1/710	**W1/710**	Unknown	33.7	24.6	9.1	27.0

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R1/711	**W1/711**	Unknown	34.0	27.2	6.8	20.0
25 OVAL ROAD						
R1/799	**W2/799**	Bedroom	13.5	9.2	4.3	31.9
R3/799	**W3/799**	Kitchen-Resi	7.9	6.5	1.4	17.7
R1/800	**W2/800**	Kitchen-Resi	32.0	21.0	11.0	34.4
R1/800	**W3/800**	Kitchen-Resi	12.4	10.6	1.8	14.5
R2/800	**W1/800**	LKD	22.6	16.9	5.7	25.2
R1/801	**W1/801**	Bedroom	34.7	26.8	7.9	22.8
23 OVAL ROAD						
R1/899	**W1/899**	Bedroom	21.3	13.6	7.7	36.2
R1/899	**W3/899**	Bedroom	23.9	15.4	8.5	35.6
R1/899	**W2/899**	Bedroom	19.6	12.4	7.2	36.7
R2/899	**W4/899**	Bedroom	25.5	16.6	8.9	34.9
R2/899	**W5/899**	Bedroom	22.8	15.2	7.6	33.3
R1/900	**W3/900**	Bedroom	25.9	17.6	8.3	32.0
R2/900	**W1/900**	Bedroom	32.5	22.6	9.9	30.5
R2/900	**W2/900**	Bedroom	19.3	16.7	2.6	13.5
R1/901	**W1/901**	Bedroom	28.3	20.8	7.5	26.5
R1/902	**W1/902**	Bedroom	31.0	25.8	5.2	16.8
R1/912	**W1/912**	Unknown	36.7	31.0	5.7	15.5
23 OVAL ROAD - COACH HOUSE						
R1/899	**W1/899**	Bedroom	16.9	11.5	5.4	32.0
R1/900	**W1/900**	Unknown-Resi	32.8	23.3	9.5	29.0
R1/900	**W2/900**	Unknown-Resi	32.6	23.6	9.0	27.6
R1/900	**W3/900**	Unknown-Resi	32.6	23.9	8.7	26.7
R1/900	**W4/900**	Unknown-Resi	32.6	24.2	8.4	25.8
R1/900	**W1/910**	Unknown-Resi	81.3	78.6	2.7	3.3
R1/900	**W2/910**	Unknown-Resi	51.0	49.7	1.3	2.5

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
21 OVAL ROAD						
R1/999	**W1/999**	LKD	19.7	15.2	4.5	22.8
R1/999	**W3/999**	LKD	26.1	26.1	0.0	0.0
R1/999	**W4/999**	LKD	23.1	23.1	0.0	0.0
R1/999	**W5/999**	LKD	19.2	19.2	0.0	0.0
R1/999	**W2/999**	LKD	57.7	54.5	3.2	5.5
R2/1000	**W2/1000**	Bedroom	31.7	26.4	5.3	16.7
R1/1002	**W1/1002**	Bedroom	32.0	29.1	2.9	9.1
19 OVAL ROAD						
R1/1099	**W1/1099**	Reception	13.0	11.3	1.7	13.1
R1/1100	**W1/1100**	Living Room	24.4	20.0	4.4	18.0
R1/1101	**W1/1101**	Bedroom	28.2	24.3	3.9	13.8
R1/1102	**W1/1102**	Bedroom	29.9	27.6	2.3	7.7
R1/1109	**W1/1109**	Living Room	9.7	8.9	0.8	8.2
R1/1109	**W2/1100**	Living Room	25.3	22.2	3.1	12.3
R1/1110	**W1/1110**	Bedroom	34.3	30.2	4.1	12.0
17 OVAL ROAD						
R1/1199	**W1/1199**	Unknown	28.3	25.5	2.8	9.9
R1/1199	**W2/1199**	Unknown	33.9	32.1	1.8	5.3
R1/1199	**W3/1199**	Unknown	24.2	24.0	0.2	0.8
R1/1200	**W1/1200**	Unknown	30.8	28.1	2.7	8.8
R1/1200	**W2/1200**	Unknown	36.4	34.6	1.8	4.9
R1/1200	**W3/1200**	Unknown	29.7	29.6	0.1	0.3
R1/1201	**W2/1201**	Unknown	37.5	36.4	1.1	2.9
R2/1201	**W1/1201**	Unknown	37.5	36.1	1.4	3.7
R1/1202	**W1/1202**	Unknown	34.1	33.4	0.7	2.1
R2/1202	**W3/1202**	Unknown	30.2	29.4	0.8	2.6
R3/1202	**W2/1202**	Unknown	34.1	33.5	0.6	1.8

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R1/1210	**W1/1210**	Unknown	16.6	16.0	0.6	3.6
R1/1211	**W1/1211**	Unknown	24.1	23.7	0.4	1.7
R1/1212	**W1/1212**	Unknown	33.3	32.4	0.9	2.7
15 OVAL ROAD						
R1/1300	**W1/1300**	Unknown	25.8	24.7	1.1	4.3
R1/1301	**W1/1301**	Unknown	37.6	36.8	0.8	2.1
R1/1302	**W1/1302**	Unknown	34.2	33.7	0.5	1.5
R2/1302	**W2/1302**	Unknown	34.3	33.8	0.5	1.5
R1/1309	**W1/1309**	Unknown	36.7	35.7	1.0	2.7
R1/1309	**W2/1309**	Unknown	19.1	17.7	1.4	7.3
R1/1310	**W1/1310**	Unknown	18.0	16.9	1.1	6.1
R1/1311	**W1/1311**	Unknown	37.7	37.0	0.7	1.9
85 JAMESTOWN ROAD						
R1/1401	**W2/1401**	Unknown	22.4	22.4	0.0	0.0
R2/1401	**W1/1401**	Unknown	21.2	21.2	0.0	0.0
R1/1402	**W1/1402**	Unknown	24.0	23.9	0.1	0.4
R2/1402	**W2/1402**	Unknown	25.2	25.0	0.2	0.8
R1/1403	**W1/1403**	Unknown	27.9	27.8	0.1	0.4
R2/1403	**W2/1403**	Unknown	29.1	28.7	0.4	1.4
18 OVAL ROAD						
R1/1499	**W1/1499**	Dining Room	17.6	17.6	0.0	0.0
R1/1500	**W1/1500**	Bedroom	20.3	20.3	0.0	0.0
R1/1501	**W1/1501**	Living Room	23.7	23.7	0.0	0.0
R1/1502	**W1/1502**	Bedroom	27.6	27.3	0.3	1.1

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
16 OVAL ROAD						
R1/1599	**W1/1599**	Unknown-Resi	18.6	18.6	0.0	0.0
R1/1600	**W2/1600**	Unknown-Resi	22.5	22.5	0.0	0.0
R2/1600	**W1/1600**	Unknown-Resi	23.7	23.7	0.0	0.0
R1/1601	**W1/1601**	Unknown-Resi	26.1	26.0	0.1	0.4
R1/1602	**W1/1602**	Unknown-Resi	30.2	29.5	0.7	2.3
14 OVAL ROAD						
R1/1699	**W1/1699**	Unknown	19.8	19.8	0.0	0.0
R1/1700	**W1/1700**	Unknown	24.5	24.5	0.0	0.0
R2/1700	**W2/1700**	Unknown	25.5	25.5	0.0	0.0
R1/1701	**W1/1701**	Unknown	28.1	27.9	0.2	0.7
R1/1702	**W1/1702**	Unknown	32.0	31.1	0.9	2.8
2-10 OVAL ROAD						
R1/1999	**W2/1999**	Bedroom	25.1	25.1	0.0	0.0
R2/1999	**W1/1999**	Bedroom	26.0	26.0	0.0	0.0
R3/1999	**W5/1999**	Bedroom	25.8	25.8	0.0	0.0
R4/1999	**W4/1999**	Unknown	24.0	24.0	0.0	0.0
R5/1999	**W3/1999**	Unknown	24.2	24.2	0.0	0.0
R6/1999	**W6/1999**	Unknown	23.7	23.7	0.0	0.0
R1/2000	**W1/2000**	Unknown	30.0	29.8	0.2	0.7
R2/2000	**W2/2000**	Unknown	30.1	29.9	0.2	0.7
R3/2000	**W3/2000**	Bedroom	30.7	30.5	0.2	0.7
R5/2000	**W5/2000**	Bedroom	31.7	31.5	0.2	0.6
R7/2000	**W8/2000**	Bedroom	31.4	31.3	0.1	0.3

Vertical Sky Component

Room	Window	Room Use	Existing	Proposed	Loss	%
R9/2000	**W11/2000**	Bedroom	30.0	30.0	0.0	0.0
R1/2001	**W3/2001**	Unknown	34.6	34.3	0.3	0.9
R1/2001	**W4/2001**	Unknown	33.4	33.1	0.3	0.9
R2/2001	**W5/2001**	Unknown	34.9	34.6	0.3	0.9
R2/2001	**W6/2001**	Unknown	34.9	34.5	0.4	1.1
R3/2001	**W7/2001**	Unknown	33.6	33.4	0.2	0.6
R3/2001	**W8/2001**	Unknown	34.7	34.5	0.2	0.6
R4/2001	**W2/2001**	Unknown	34.6	34.3	0.3	0.9
R5/2001	**W1/2001**	Unknown	34.6	34.4	0.2	0.6
R6/2001	**W9/2001**	Unknown	34.6	34.5	0.1	0.3
R6/2001	**W10/2001**	Unknown	34.7	34.5	0.2	0.6
R1/2002	**W3/2002**	Unknown	33.8	33.2	0.6	1.8
R1/2002	**W4/2002**	Unknown	35.5	35.0	0.5	1.4
R2/2002	**W5/2002**	Unknown	35.7	35.1	0.6	1.7
R2/2002	**W6/2002**	Unknown	35.7	35.1	0.6	1.7
R3/2002	**W7/2002**	Unknown	34.1	33.6	0.5	1.5
R3/2002	**W8/2002**	Unknown	35.5	35.0	0.5	1.4
R4/2002	**W2/2002**	Unknown	35.5	34.9	0.6	1.7
R5/2002	**W1/2002**	Unknown	35.5	34.9	0.6	1.7
R6/2002	**W9/2002**	Unknown	35.5	35.1	0.4	1.1
R6/2002	**W10/2002**	Unknown	35.6	35.1	0.5	1.4

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	% Loss	% Prev	% New
1-45 DARWIN COURT								
R1/101	Unknown	261.96	261.21	243.21	18.01	6.89	99.72	92.84
R2/101	Unknown	100.89	99.58	97.36	2.22	2.23	98.70	96.50
R3/101	Unknown	137.79	132.58	124.64	7.94	5.99	96.22	90.46
R4/101	Unknown	160.75	160.20	160.04	0.16	0.10	99.66	99.56
R5/101	Unknown	160.75	160.16	159.44	0.72	0.45	99.63	99.18
R6/101	Unknown	137.79	132.57	132.57	0.00	0.00	96.22	96.22
R7/101	Unknown	100.89	99.67	99.67	0.00	0.00	98.79	98.79
R8/101	Unknown	257.33	256.60	256.60	0.00	0.00	99.72	99.72
R9/101	Unknown	242.63	242.31	242.31	0.00	0.00	99.87	99.87
R10/101	Unknown	100.89	99.72	99.72	0.00	0.00	98.83	98.83
R11/101	Unknown	137.79	132.48	132.48	0.00	0.00	96.14	96.14
R12/101	Unknown	178.30	177.39	177.39	0.00	0.00	99.49	99.49
R13/101	Unknown	178.67	177.85	177.85	0.00	0.00	99.54	99.54
R14/101	Unknown	137.79	132.89	132.89	0.00	0.00	96.44	96.44
R15/101	Unknown	101.17	100.00	100.00	0.00	0.00	98.84	98.84
R16/101	Unknown	248.64	247.98	247.98	0.00	0.00	99.74	99.74
R1/102	Unknown	261.96	261.21	259.06	2.16	0.83	99.72	98.89
R2/102	Unknown	100.89	99.58	99.58	0.00	0.00	98.70	98.70
R3/102	Unknown	137.79	132.58	132.31	0.28	0.21	96.22	96.02
R4/102	Unknown	160.75	160.20	160.20	0.00	0.00	99.66	99.66
R5/102	Unknown	160.75	160.16	160.16	0.00	0.00	99.63	99.63
R6/102	Unknown	137.79	132.57	132.57	0.00	0.00	96.22	96.22
R7/102	Unknown	100.89	99.67	99.67	0.00	0.00	98.79	98.79
R8/102	Unknown	257.33	256.60	256.60	0.00	0.00	99.72	99.72
R9/102	Unknown	242.63	242.31	242.31	0.00	0.00	99.87	99.87
R10/102	Unknown	100.89	99.72	99.72	0.00	0.00	98.83	98.83
R11/102	Unknown	137.79	132.48	132.48	0.00	0.00	96.15	96.15
R12/102	Unknown	178.30	177.39	177.39	0.00	0.00	99.49	99.49
R13/102	Unknown	178.67	177.85	177.85	0.00	0.00	99.54	99.54
R14/102	Unknown	137.79	132.89	132.89	0.00	0.00	96.44	96.44
R15/102	Unknown	101.17	100.00	100.00	0.00	0.00	98.84	98.84
R16/102	Unknown	248.64	247.98	247.98	0.00	0.00	99.74	99.74
R1/103	Unknown	261.96	261.21	261.21	0.00	0.00	99.72	99.72
R2/103	Unknown	100.89	99.58	99.58	0.00	0.00	98.70	98.70
R3/103	Unknown	137.79	132.58	132.58	0.00	0.00	96.22	96.22
R4/103	Unknown	160.75	160.20	160.20	0.00	0.00	99.66	99.66
R5/103	Unknown	160.75	160.16	160.16	0.00	0.00	99.63	99.63
R6/103	Unknown	137.79	132.57	132.57	0.00	0.00	96.22	96.22
R7/103	Unknown	100.89	99.67	99.67	0.00	0.00	98.79	98.79
R8/103	Unknown	257.33	256.60	256.60	0.00	0.00	99.72	99.72
R9/103	Unknown	242.63	242.34	242.34	0.00	0.00	99.88	99.88
R10/103	Unknown	100.89	99.72	99.72	0.00	0.00	98.83	98.83
R11/103	Unknown	137.79	132.48	132.48	0.00	0.00	96.15	96.15
R12/103	Unknown	178.30	177.39	177.39	0.00	0.00	99.49	99.49
R13/103	Unknown	178.67	177.85	177.85	0.00	0.00	99.54	99.54
R14/103	Unknown	137.79	132.89	132.89	0.00	0.00	96.44	96.44
R15/103	Unknown	101.17	100.00	100.00	0.00	0.00	98.84	98.84
R16/103	Unknown	248.64	247.98	247.98	0.00	0.00	99.74	99.74
R1/104	Unknown	261.96	261.21	261.21	0.00	0.00	99.72	99.72
R2/104	Unknown	100.89	99.58	99.58	0.00	0.00	98.70	98.70
R3/104	Unknown	137.79	132.58	132.58	0.00	0.00	96.22	96.22
R4/104	Unknown	160.75	160.20	160.20	0.00	0.00	99.66	99.66
R5/104	Unknown	160.75	160.16	160.16	0.00	0.00	99.63	99.63
R6/104	Unknown	137.79	132.57	132.57	0.00	0.00	96.22	96.22
R7/104	Unknown	100.89	99.67	99.67	0.00	0.00	98.79	98.79
R8/104	Unknown	257.33	256.60	256.60	0.00	0.00	99.72	99.72
R9/104	Unknown	242.63	242.36	242.36	0.00	0.00	99.89	99.89
R10/104	Unknown	100.89	99.72	99.72	0.00	0.00	98.83	98.83
R11/104	Unknown	137.79	132.50	132.50	0.00	0.00	96.16	96.16
R12/104	Unknown	178.30	177.42	177.42	0.00	0.00	99.50	99.50
R13/104	Unknown	178.67	177.88	177.88	0.00	0.00	99.56	99.56
R14/104	Unknown	137.79	132.94	132.94	0.00	0.00	96.48	96.48
R15/104	Unknown	101.17	100.00	100.00	0.00	0.00	98.84	98.84
R16/104	Unknown	248.64	247.98	247.98	0.00	0.00	99.74	99.74
R1/105	Unknown	261.96	261.21	261.21	0.00	0.00	99.72	99.72
R2/105	Unknown	100.89	99.60	99.60	0.00	0.00	98.72	98.72
R3/105	Unknown	137.79	132.66	132.66	0.00	0.00	96.28	96.28
R4/105	Unknown	160.75	160.20	160.20	0.00	0.00	99.66	99.66
R5/105	Unknown	160.75	160.17	160.17	0.00	0.00	99.64	99.64
R6/105	Unknown	137.79	132.59	132.59	0.00	0.00	96.23	96.23
R7/105	Unknown	100.89	99.67	99.67	0.00	0.00	98.79	98.79
R8/105	Unknown	257.33	256.61	256.61	0.00	0.00	99.72	99.72
R9/105	Unknown	242.63	242.36	242.36	0.00	0.00	99.89	99.89

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	% Loss	% Prev	% New
R10/105	Unknown	100.89	100.19	100.19	0.00	0.00	99.30	99.30
R11/105	Unknown	137.79	135.00	135.00	0.00	0.00	97.97	97.97
R12/105	Unknown	178.30	177.46	177.46	0.00	0.00	99.53	99.53
R13/105	Unknown	178.67	177.90	177.90	0.00	0.00	99.57	99.57
R14/105	Unknown	137.79	134.83	134.83	0.00	0.00	97.86	97.86
R15/105	Unknown	101.17	100.46	100.46	0.00	0.00	99.29	99.29
R16/105	Unknown	248.64	247.98	247.98	0.00	0.00	99.74	99.74
R1/106	Unknown	261.96	261.21	261.21	0.00	0.00	99.72	99.72
R2/106	Unknown	100.89	100.12	100.12	0.00	0.00	99.24	99.24
R3/106	Unknown	137.79	134.66	134.66	0.00	0.00	97.73	97.73
R4/106	Unknown	160.75	160.20	160.20	0.00	0.00	99.66	99.66
R5/106	Unknown	160.75	160.17	160.17	0.00	0.00	99.64	99.64
R6/106	Unknown	137.79	134.77	134.77	0.00	0.00	97.81	97.81
R7/106	Unknown	100.89	100.07	100.07	0.00	0.00	99.18	99.18
R8/106	Unknown	257.33	248.43	248.43	0.00	0.00	96.54	96.54
R1/151	Unknown	151.20	143.18	137.32	5.86	4.10	94.70	90.82
R2/151	Unknown	117.30	111.18	111.18	0.00	0.00	94.78	94.78
R1/152	Unknown	151.20	143.18	143.16	0.02	0.02	94.70	94.68
R2/152	Unknown	117.30	111.18	111.18	0.00	0.00	94.78	94.78
R1/153	Unknown	151.20	143.18	143.18	0.00	0.00	94.70	94.70
R2/153	Unknown	117.30	111.18	111.18	0.00	0.00	94.78	94.78
R1/154	Unknown	151.20	143.18	143.18	0.00	0.00	94.70	94.70
R2/154	Unknown	117.30	115.38	115.38	0.00	0.00	98.36	98.36
R1/155	Unknown	151.20	148.41	148.41	0.00	0.00	98.16	98.16
36 GLOUCERSER AV								
R1/200	Unknown	180.48	177.01	171.63	5.38	3.04	98.08	95.10
R2/200	Unknown	169.71	167.16	167.06	0.10	0.06	98.50	98.44
R3/200	Unknown	169.71	167.52	167.52	0.00	0.00	98.71	98.71
R4/200	Unknown	169.71	167.56	167.56	0.00	0.00	98.73	98.73
R5/200	Unknown	169.71	167.34	167.34	0.00	0.00	98.60	98.60
R7/200	Unknown	169.71	166.43	165.94	0.49	0.30	98.07	97.78
R8/200	Unknown	169.71	165.40	163.17	2.22	1.34	97.46	96.15
R9/200	Unknown	169.71	166.28	162.47	3.82	2.30	97.98	95.73
R10/200	Unknown	156.12	155.96	155.96	0.00	0.00	99.90	99.90
R11/200	Unknown	146.46	141.37	141.37	0.00	0.00	96.53	96.52
R12/200	Unknown	147.12	138.75	138.74	0.00	0.00	94.31	94.31
R13/200	Unknown	151.96	142.60	142.60	0.00	0.00	93.84	93.84
R1/201	Unknown	180.48	178.09	175.99	2.11	1.18	98.68	97.51
R2/201	Unknown	169.71	167.54	167.43	0.11	0.07	98.72	98.66
R3/201	Unknown	169.71	167.47	167.44	0.03	0.02	98.68	98.66
R4/201	Unknown	169.71	167.09	167.09	0.00	0.00	98.46	98.46
R5/201	Unknown	169.71	165.57	165.57	0.00	0.00	97.56	97.56
R6/201	Unknown	169.71	164.26	164.26	0.00	0.00	96.79	96.79
R7/201	Unknown	169.71	163.52	162.69	0.84	0.51	96.36	95.86
R8/201	Unknown	169.71	164.04	160.72	3.32	2.03	96.66	94.70
R9/201	Unknown	169.71	165.96	160.97	4.99	3.01	97.79	94.85
R10/201	Unknown	156.12	155.84	155.83	0.01	0.01	99.82	99.82
R11/201	Unknown	146.46	141.57	141.56	0.01	0.01	96.66	96.65
R12/201	Unknown	147.12	139.29	139.28	0.01	0.01	94.67	94.67
R13/201	Unknown	151.96	143.74	143.73	0.01	0.01	94.59	94.58
R1/202	Unknown	174.46	157.66	157.66	0.00	0.00	90.37	90.37
R2/202	Unknown	163.48	155.97	155.97	0.00	0.00	95.41	95.41
R3/202	Unknown	119.16	97.95	97.95	0.00	0.00	82.20	82.20
R4/202	Unknown	162.40	155.35	155.35	0.00	0.00	95.66	95.66
R5/202	Unknown	161.85	154.29	154.29	0.00	0.00	95.33	95.33
R6/202	Unknown	161.31	154.85	154.85	0.00	0.00	96.00	96.00
R7/202	Unknown	160.76	155.47	155.47	0.00	0.00	96.71	96.71
R8/202	Unknown	3033.28	706.11	706.11	0.00	0.00	23.28	23.28
R9/202	Unknown	159.67	154.04	154.04	0.00	0.00	96.47	96.47
R10/202	Unknown	169.15	154.29	154.29	0.00	0.00	91.21	91.21
THE LOCKHOUSE (WEST BLOCK)								
R1/299	UNKNOWN	223.75	162.83	189.12	-26.29	-16.15	72.77	84.52
R1/300	Living Room	316.50	159.64	160.58	-0.94	-0.59	50.44	50.74
R2/300	Bedroom	104.92	81.45	83.25	-1.80	-2.21	77.64	79.35
R1/301	Bedroom	116.39	66.04	66.04	0.00	0.00	56.74	56.74
R3/301	LKD	231.94	83.42	83.35	0.06	0.08	35.97	35.94
R4/301	Bedroom	134.02	45.05	45.05	0.00	0.00	33.61	33.61
R5/301	Bedroom	103.20	45.36	45.36	0.00	0.00	43.96	43.96
R6/301	Bedroom	135.30	76.44	76.44	0.00	0.00	56.50	56.50
R7/301	LKD	297.39	295.85	294.79	1.07	0.36	99.48	99.12
R1/302	Bedroom	116.39	73.67	73.67	0.00	0.00	63.30	63.30
R3/302	LKD	231.94	119.28	119.19	0.09	0.07	51.43	51.39

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	% Loss	% Prev	% New
R4/302	Bedroom	134.02	70.31	70.31	0.00	0.00	52.46	52.46
R5/302	Bedroom	103.20	66.23	66.23	0.00	0.00	64.18	64.18
R6/302	Bedroom	135.30	102.82	102.82	0.00	0.00	76.00	76.00
R7/302	LKD	297.39	296.03	294.97	1.07	0.36	99.54	99.18
R1/303	Bedroom	116.39	82.63	82.63	0.00	0.00	71.00	71.00
R3/303	LKD	231.94	166.80	166.70	0.10	0.06	71.92	71.87
R4/303	Bedroom	134.02	85.03	85.03	0.00	0.00	63.44	63.44
R5/303	Bedroom	103.20	74.93	74.93	0.00	0.00	72.60	72.60
R6/303	Bedroom	135.30	128.20	128.20	0.00	0.00	94.75	94.75
R7/303	LKD	297.39	296.40	295.92	0.48	0.16	99.67	99.50
R1/304	Bedroom	116.39	88.63	88.63	0.00	0.00	76.15	76.15
R3/304	LKD	231.94	129.46	129.46	0.00	0.00	55.82	55.82
R4/304	Bedroom	134.02	89.84	89.84	0.00	0.00	67.03	67.03
R5/304	Bedroom	103.20	82.29	82.29	0.00	0.00	79.74	79.74
R6/304	Bedroom	135.30	132.61	132.61	0.00	0.00	98.01	98.01
R7/304	LKD	297.39	296.39	295.91	0.48	0.16	99.66	99.50
R1/305	Bedroom	116.39	109.60	109.60	0.00	0.00	94.17	94.17
R3/305	LKD	231.94	161.15	161.15	0.00	0.00	69.48	69.48
R4/305	Bedroom	134.02	110.15	110.15	0.00	0.00	82.18	82.18
R5/305	Bedroom	103.20	98.76	98.76	0.00	0.00	95.70	95.70
R6/305	Bedroom	135.30	135.04	135.04	0.00	0.00	99.81	99.81
R7/305	LKD	297.39	296.39	296.33	0.06	0.02	99.66	99.64
R1/306	Bedroom	116.39	110.63	110.63	0.00	0.00	95.06	95.06
R3/306	LKD	231.94	226.98	226.98	0.00	0.00	97.86	97.86
R4/306	Bedroom	134.02	125.66	125.66	0.00	0.00	93.76	93.76
R5/306	Bedroom	103.20	98.93	98.93	0.00	0.00	95.86	95.86
R6/306	Bedroom	135.30	135.11	135.11	0.00	0.00	99.86	99.86
R7/306	LKD	297.39	296.52	296.52	0.00	0.00	99.71	99.71
R1/307	Unknown	90.80	61.80	61.80	0.00	0.00	68.06	68.06
R2/307	Bedroom	117.54	117.13	117.13	0.00	0.00	99.66	99.66
R3/307	Bedroom	120.34	116.87	116.87	0.00	0.00	97.11	97.11
R4/307	Bedroom	336.39	334.41	334.41	0.00	0.00	99.41	99.41
R5/307	Living Room	682.17	682.17	682.17	0.00	0.00	100.00	100.00
R1/308	Unknown	90.80	61.86	61.86	0.00	0.00	68.13	68.13
R2/308	Bedroom	117.54	117.13	117.13	0.00	0.00	99.65	99.65
R3/308	Bedroom	120.34	116.87	116.87	0.00	0.00	97.11	97.11
R4/308	Bedroom	336.39	334.60	334.60	0.00	0.00	99.47	99.47
R5/308	Living Room	682.17	682.17	682.17	0.00	0.00	100.00	100.00
THE LOCKHOUSE (EAST BLOCK)								
R1/400	Bedroom	179.12	172.86	120.42	52.44	30.33	96.51	67.23
R3/400	Bedroom	143.01	127.74	103.01	24.73	19.36	89.32	72.03
R1/401	Kitchen	80.39	18.83	18.83	0.00	0.01	23.42	23.42
R2/401	Kitchen	84.24	60.87	58.64	2.23	3.67	72.26	69.61
R3/401	L/D	182.12	177.64	177.63	0.01	0.01	97.54	97.53
R4/401	Bedroom	132.77	129.84	129.82	0.02	0.01	97.79	97.78
R5/401	Bedroom	129.36	104.65	104.65	0.00	0.00	80.90	80.90
R6/401	Bedroom	126.46	121.00	121.00	0.00	0.00	95.68	95.68
R1/402	Kitchen	80.39	21.66	21.66	0.00	0.00	26.94	26.94
R2/402	Kitchen	84.24	70.18	69.97	0.21	0.30	83.31	83.06
R3/402	L/D	182.12	179.03	179.03	0.00	0.00	98.30	98.30
R4/402	Bedroom	132.77	130.07	130.06	0.01	0.01	97.97	97.96
R5/402	Bedroom	129.36	108.54	108.54	0.00	0.00	83.90	83.90
R6/402	Bedroom	126.46	122.70	122.70	0.00	0.00	97.03	97.03
R7/402	L/D	299.77	215.97	190.59	25.38	11.75	72.05	63.58
R8/402	Bedroom	160.13	114.50	108.34	6.16	5.38	71.50	67.66
R10/402	Bedroom	135.41	117.86	111.46	6.40	5.43	87.04	82.32
R11/402	Kitchen	95.66	83.83	81.48	2.35	2.80	87.64	85.18
R12/402	L/D	207.75	202.33	178.45	23.88	11.80	97.39	85.90
R2/403	Kitchen	84.24	64.74	64.73	0.01	0.01	76.85	76.84
R3/403	L/D	182.12	179.43	179.43	0.00	0.00	98.52	98.52
R4/403	Bedroom	132.77	130.11	130.10	0.00	0.00	97.99	97.99
R5/403	Bedroom	129.36	119.47	119.47	0.00	0.00	92.36	92.36
R6/403	Bedroom	126.46	123.82	123.82	0.00	0.00	97.91	97.91
R7/403	L/D	299.77	219.72	215.58	4.14	1.88	73.29	71.91
R8/403	Bedroom	134.33	116.27	116.27	0.00	0.00	86.56	86.56
R11/403	LD	165.97	154.64	154.61	0.03	0.02	93.17	93.15
R12/403	KITCHEN	82.84	81.07	81.06	0.00	0.00	97.86	97.86
R1/404	Bedroom	154.28	94.59	93.08	1.51	1.59	61.31	60.33
R2/404	L/D	239.57	234.98	234.98	0.00	0.00	98.08	98.08
R3/404	Kitchen	88.68	86.15	86.15	0.00	0.00	97.15	97.15
R4/404	Bedroom	130.62	126.63	126.63	0.00	0.00	96.95	96.95
R5/404	Bedroom	153.76	146.04	146.03	0.01	0.01	94.98	94.97
R6/404	Bedroom	131.53	103.30	103.30	0.00	0.00	78.54	78.54
R7/404	L/D	172.21	150.36	150.36	0.00	0.00	87.31	87.31

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	% Loss	% Prev	% New
R8/404	Bedroom	147.92	104.59	104.59	0.00	0.00	70.71	70.71
R9/404	KD	160.52	157.76	157.76	0.00	0.00	98.28	98.28
R10/404	Bedroom	91.53	89.55	89.55	0.00	0.00	97.83	97.83
R1/405	Bedroom	154.28	131.33	131.19	0.13	0.10	85.12	85.04
R2/405	L/D	239.57	235.77	235.77	0.00	0.00	98.42	98.42
R3/405	Kitchen	88.68	86.36	86.36	0.00	0.00	97.39	97.39
R4/405	Bedroom	130.62	126.67	126.67	0.00	0.00	96.98	96.98
R5/405	Bedroom	153.76	146.04	146.04	0.00	0.00	94.98	94.98
R6/405	Bedroom	127.39	122.82	122.82	0.00	0.00	96.41	96.41
R7/405	Bedroom	89.54	88.22	88.22	0.00	0.00	98.52	98.52
R8/405	Bedroom	123.92	122.05	122.05	0.00	0.00	98.49	98.49
R9/405	Living Room	168.99	156.89	156.88	0.01	0.01	92.84	92.84
R1/406	Bedroom	154.28	124.57	124.57	0.00	0.00	80.74	80.74
R2/406	L/D	239.57	236.93	236.93	0.00	0.00	98.90	98.90
R3/406	Kitchen	88.68	86.56	86.56	0.00	0.00	97.61	97.61
R4/406	Bedroom	130.62	126.68	126.68	0.00	0.00	96.98	96.98
R5/406	Bedroom	153.76	146.04	146.04	0.00	0.00	94.98	94.98
R6/406	Bedroom	127.39	122.83	122.83	0.00	0.00	96.42	96.42
R7/406	Bedroom	89.54	88.22	88.22	0.00	0.00	98.52	98.52
R8/406	Bedroom	123.92	122.05	122.05	0.00	0.00	98.49	98.49
R9/406	Living Room	168.99	156.89	156.89	0.00	0.00	92.84	92.84
R7/451	L/D	299.77	213.56	171.10	42.46	19.88	71.24	57.08
R8/451	Bedroom	160.13	111.63	95.91	15.72	14.08	69.72	59.90
R10/451	Bedroom	135.41	115.71	101.12	14.59	12.61	85.45	74.68
R11/451	Kitchen	95.66	80.83	76.70	4.13	5.11	84.50	80.18
R12/451	L/D	207.75	199.66	172.10	27.56	13.80	96.11	82.84
29 OVAL ROAD								
R1/599	Unknown-Resi	223.45	200.17	77.90	122.27	61.08	89.58	34.86
R1/600	Unknown	13.68	13.22	7.70	5.53	41.81	96.68	56.26
R2/600	Living Room	109.70	106.88	80.96	25.91	24.25	97.43	73.80
R1/601	Bedroom	119.86	116.83	115.77	1.07	0.91	97.47	96.58
R1/602	Bedroom	119.70	116.67	114.00	2.67	2.29	97.47	95.24
27 OVAL ROAD								
R2/699	Reception	198.24	176.54	66.97	109.57	62.06	89.05	33.78
R1/700	Reception	110.77	109.73	86.09	23.64	21.54	99.06	77.72
R1/701	Unknown	118.22	115.74	107.88	7.86	6.79	97.90	91.25
R1/702	Unknown	119.34	116.73	108.00	8.73	7.47	97.81	90.50
R1/709	Reception	23.60	13.74	13.74	0.00	0.00	58.24	58.24
R1/710	Unknown	17.70	17.19	17.19	0.00	0.00	97.12	97.12
R1/711	Unknown	18.86	18.16	18.16	0.00	0.00	96.26	96.26
25 OVAL ROAD								
R1/799	Bedroom	99.87	87.01	40.67	46.35	53.26	87.13	40.72
R3/799	Kitchen-Resi	91.83	25.92	18.40	7.52	29.02	28.23	20.04
R1/800	Kitchen-Resi	86.37	84.06	65.88	18.17	21.62	97.32	76.28
R2/800	LKD	117.59	112.21	79.89	32.31	28.80	95.42	67.94
R1/801	Bedroom	116.88	112.96	103.81	9.15	8.10	96.65	88.82
23 OVAL ROAD								
R1/899	Bedroom	106.61	96.00	40.06	55.94	58.27	90.05	37.58
R2/899	Bedroom	111.60	67.91	28.76	39.15	57.65	60.86	25.77
R1/900	Bedroom	48.25	47.36	47.36	0.00	0.00	98.15	98.15
R2/900	Bedroom	103.60	101.81	84.14	17.66	17.35	98.27	81.22
R1/901	Bedroom	101.40	98.30	84.50	13.80	14.04	96.95	83.34
R1/902	Bedroom	101.90	98.19	98.19	0.00	0.00	96.36	96.36
R1/912	Unknown	27.80	26.58	26.58	0.00	0.00	95.61	95.61
23 OVAL ROAD - COACH HOUSE								
R1/899	Bedroom	161.80	120.75	52.43	68.32	56.58	74.63	32.40
R1/900	Unknown-Resi	266.89	266.89	265.03	1.85	0.69	100.00	99.31
21 OVAL ROAD								
R1/999	LKD	750.45	690.87	663.83	27.04	3.91	92.06	88.46
R2/1000	Bedroom	120.99	117.19	95.71	21.48	18.33	96.86	79.11
R1/1002	Bedroom	102.45	99.85	99.85	0.00	0.00	97.46	97.46
19 OVAL ROAD								

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	% Loss	% Prev	% New
R1/1099	Reception	116.16	98.47	83.54	14.94	15.17	84.77	71.91
R1/1100	Living Room	116.60	111.48	107.48	4.00	3.59	95.61	92.18
R1/1101	Bedroom	109.21	107.66	107.66	0.00	0.00	98.59	98.59
R1/1102	Bedroom	108.27	106.97	106.97	0.00	0.00	98.80	98.80
R1/1109	Living Room	86.93	82.68	75.41	7.27	8.80	95.11	86.75
R1/1110	Bedroom	128.48	91.48	75.85	15.63	17.08	71.20	59.04
17 OVAL ROAD								
R1/1199	Unknown	335.87	317.85	292.13	25.72	8.09	94.63	86.98
R1/1200	Unknown	335.87	332.26	329.68	2.57	0.77	98.92	98.16
R1/1201	Unknown	162.52	158.29	158.29	0.00	0.00	97.40	97.40
R2/1201	Unknown	139.81	136.25	136.25	0.00	0.00	97.45	97.45
R1/1202	Unknown	92.66	88.81	88.81	0.00	0.00	95.85	95.85
R2/1202	Unknown	27.00	25.35	25.35	0.00	0.00	93.88	93.88
R3/1202	Unknown	162.52	158.11	158.11	0.00	0.00	97.28	97.28
R1/1210	Unknown	64.81	21.47	21.44	0.03	0.12	33.12	33.08
R1/1211	Unknown	63.04	62.80	62.80	0.00	0.00	99.61	99.61
R1/1212	Unknown	64.58	64.32	64.32	0.00	0.00	99.60	99.60
15 OVAL ROAD								
R1/1300	Unknown	174.34	142.92	142.92	0.00	0.00	81.98	81.98
R1/1301	Unknown	174.34	169.48	169.48	0.00	0.00	97.21	97.21
R1/1302	Unknown	174.34	169.36	169.36	0.00	0.00	97.14	97.14
R2/1302	Unknown	125.44	122.31	122.31	0.00	0.00	97.51	97.51
R1/1309	Unknown	65.27	62.76	62.75	0.00	0.01	96.16	96.15
R1/1310	Unknown	32.29	27.11	27.11	0.00	0.00	83.95	83.95
R1/1311	Unknown	125.44	123.30	123.30	0.00	0.00	98.29	98.29
85 JAMESTOWN ROAD								
R1/1401	Unknown	151.97	113.96	113.96	0.00	0.00	74.99	74.99
R2/1401	Unknown	143.29	105.67	105.67	0.00	0.00	73.75	73.75
R1/1402	Unknown	143.29	108.32	108.32	0.00	0.00	75.59	75.59
R2/1402	Unknown	151.97	116.16	116.12	0.04	0.03	76.43	76.41
R1/1403	Unknown	143.29	106.91	106.91	0.00	0.00	74.61	74.61
R2/1403	Unknown	151.97	112.37	112.18	0.19	0.17	73.94	73.82
18 OVAL ROAD								
R1/1499	Dining Room	177.17	65.56	65.56	0.00	0.00	37.00	37.00
R1/1500	Bedroom	117.19	85.91	85.91	0.00	0.00	73.31	73.31
R1/1501	Living Room	177.17	141.50	141.50	0.00	0.00	79.87	79.87
R1/1502	Bedroom	177.17	153.08	153.08	0.00	0.00	86.40	86.40
16 OVAL ROAD								
R1/1599	Unknown-Resi	179.03	49.54	49.54	0.00	0.00	27.67	27.67
R1/1600	Unknown-Resi	116.92	102.48	102.48	0.00	0.00	87.66	87.66
R2/1600	Unknown-Resi	29.54	25.38	25.38	0.00	0.00	85.92	85.92
R1/1601	Unknown-Resi	179.03	156.19	156.19	0.00	0.00	87.24	87.24
R1/1602	Unknown-Resi	179.03	165.06	165.06	0.00	0.00	92.20	92.20
14 OVAL ROAD								
R1/1699	Unknown	177.52	56.75	56.75	0.00	0.00	31.97	31.97
R1/1700	Unknown	116.61	112.74	112.74	0.01	0.00	96.69	96.68
R2/1700	Unknown	29.54	21.87	21.87	0.00	0.00	74.04	74.04
R1/1701	Unknown	177.17	165.65	165.65	0.00	0.00	93.50	93.50
R1/1702	Unknown	177.89	170.43	170.43	0.00	0.00	95.81	95.81
2-10 OVAL ROAD								
R1/1999	Bedroom	161.28	131.19	130.39	0.80	0.61	81.34	80.85
R2/1999	Bedroom	161.28	140.25	137.50	2.76	1.96	86.96	85.26
R3/1999	Bedroom	161.28	131.78	131.45	0.33	0.25	81.71	81.50
R4/1999	Unknown	155.37	131.15	131.15	0.00	0.00	84.41	84.41
R5/1999	Unknown	134.32	111.56	111.40	0.16	0.15	83.06	82.94
R6/1999	Unknown	243.13	168.81	168.78	0.03	0.02	69.43	69.42
R1/2000	Unknown	155.37	152.04	152.04	0.00	0.00	97.85	97.85
R2/2000	Unknown	141.86	131.13	131.13	0.00	0.00	92.44	92.44
R3/2000	Bedroom	149.41	142.94	142.94	0.00	0.00	95.67	95.67
R5/2000	Bedroom	149.41	143.42	143.42	0.00	0.00	95.99	95.99
R7/2000	Bedroom	149.41	143.43	143.43	0.00	0.00	96.00	96.00
R9/2000	Bedroom	192.52	182.23	182.23	0.00	0.00	94.65	94.65

DAYLIGHT DISTRIBUTION ANALYSIS

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	% Loss	% Prev	% New
R1/2001	Unknown	216.40	213.06	213.06	0.00	0.00	98.46	98.46
R2/2001	Unknown	216.40	213.54	213.54	0.00	0.00	98.68	98.68
R3/2001	Unknown	216.40	213.09	213.09	0.00	0.00	98.47	98.47
R4/2001	Unknown	155.37	152.04	152.04	0.00	0.00	97.86	97.86
R5/2001	Unknown	134.32	129.93	129.92	0.00	0.00	96.73	96.73
R6/2001	Unknown	243.13	238.90	238.90	0.00	0.00	98.26	98.26
R1/2002	Unknown	216.40	212.92	212.92	0.00	0.00	98.40	98.40
R2/2002	Unknown	216.40	213.44	213.44	0.00	0.00	98.63	98.63
R3/2002	Unknown	216.40	212.99	212.99	0.00	0.00	98.43	98.43
R4/2002	Unknown	155.37	152.00	152.00	0.00	0.00	97.83	97.83
R5/2002	Unknown	134.32	129.89	129.89	0.01	0.01	96.71	96.70
R6/2002	Unknown	243.13	238.91	238.91	0.00	0.00	98.27	98.27

Annual Probable Sunlight Hours (APSH)

Centric Close
IR24 - Revised Latest Scheme
24.11.16
Sunlight Analysis

Room	Window	Room Use	Orientation	Window Existing Winter APSH	Window Existing Annual APSH	Window Proposed Winter APSH	Window Proposed Annual APSH	Winter Loss	Annual Loss	Winter %Loss	Annual %Loss	Room Existing Winter APSH	Room Existing Annual APSH	Room Proposed Winter APSH	Room Proposed Annual APSH	Winter %Loss	Annual %Loss
1-45 DARWIN COURT																	
R1/101	W16/101	Unknown	62	6	34	6	32	0	2	0.00	5.88	6	34	6	32	0.0	6
R2/101	W15/101	Unknown	65	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R3/101	W14/101	Unknown	65	6	34	6	32	0	2	0.00	5.88	6	34	6	32	0.0	6
R4/101	W13/101	Unknown	65	6	34	6	32	0	2	0.00	5.88	6	34	6	32	0.0	6
R5/101	W12/101	Unknown	65	6	31	6	31	0	0	0.00	0.00	6	31	6	31	0.0	0
R6/101	W9/101	Unknown	65	3	23	3	23	0	0	0.00	0.00	3	23	3	23	0.0	0
R7/101	W8/101	Unknown	65	0	10	0	10	0	0	0.00	0.00	0	10	0	10	0.0	0
R8/101	W10/101	Unknown	66	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R9/101	W11/101	Unknown	59	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R10/101	W5/101	Unknown	60	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R11/101	W4/101	Unknown	60	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R12/101	W6/101	Unknown	60	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R13/101	W7/101	Unknown	60	5	31	5	30	0	1	0.00	3.23	5	31	5	30	0.0	3
R14/101	W3/101	Unknown	60	3	23	3	22	0	1	0.00	4.35	3	23	3	22	0.0	4
R15/101	W2/101	Unknown	60	0	8	0	8	0	0	0.00	0.00	0	8	0	8	0.0	0
R16/101	W1/101	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R1/102	W16/102	Unknown	62	6	35	6	34	0	1	0.00	2.86	6	35	6	34	0.0	3
R2/102	W15/102	Unknown	65	7	36	7	35	0	1	0.00	2.78	7	36	7	35	0.0	3
R3/102	W14/102	Unknown	65	6	35	6	34	0	1	0.00	2.86	6	35	6	34	0.0	3
R4/102	W13/102	Unknown	65	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R5/102	W11/102	Unknown	65	6	32	6	31	0	1	0.00	3.13	6	32	6	31	0.0	3
R6/102	W10/102	Unknown	65	3	24	3	23	0	1	0.00	4.17	3	24	3	23	0.0	4
R7/102	W9/102	Unknown	65	0	11	0	10	0	1	0.00	9.09	0	11	0	10	0.0	9
R8/102	W8/102	Unknown	66	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R9/102	W6/102	Unknown	59	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R10/102	W17/102	Unknown	60	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R11/102	W18/102	Unknown	60	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R12/102	W5/102	Unknown	60	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R13/102	W4/102	Unknown	60	5	32	5	31	0	1	0.00	3.13	5	32	5	31	0.0	3
R14/102	W3/102	Unknown	60	3	23	3	23	0	0	0.00	0.00	3	23	3	23	0.0	0
R15/102	W2/102	Unknown	60	0	8	0	8	0	0	0.00	0.00	0	8	0	8	0.0	0
R16/102	W1/102	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R1/103	W16/103	Unknown	62	6	35	6	34	0	1	0.00	2.86	6	35	6	34	0.0	3
R2/103	W15/103	Unknown	65	7	36	7	35	0	1	0.00	2.78	7	36	7	35	0.0	3
R3/103	W14/103	Unknown	65	7	36	7	35	0	1	0.00	2.78	7	36	7	35	0.0	3
R4/103	W13/103	Unknown	65	6	35	6	34	0	1	0.00	2.86	6	35	6	34	0.0	3
R5/103	W12/103	Unknown	65	6	33	6	32	0	1	0.00	3.03	6	33	6	32	0.0	3
R6/103	W11/103	Unknown	65	3	24	3	23	0	1	0.00	4.17	3	24	3	23	0.0	4
R7/103	W10/103	Unknown	65	0	11	0	10	0	1	0.00	9.09	0	11	0	10	0.0	9
R8/103	W9/103	Unknown	66	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R9/103	W18/103	Unknown	59	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R10/103	W17/103	Unknown	60	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R11/103	W6/103	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R12/103	W5/103	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R13/103	W4/103	Unknown	60	5	33	5	33	0	0	0.00	0.00	5	33	5	33	0.0	0
R14/103	W3/103	Unknown	60	3	23	3	23	0	0	0.00	0.00	3	23	3	23	0.0	0
R15/103	W2/103	Unknown	60	0	8	0	8	0	0	0.00	0.00	0	8	0	8	0.0	0
R16/103	W1/103	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0

				Window								Room					
				Existing		Proposed						Existing		Proposed			
Room	Window	Room Use	Orientation	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter Loss	Annual Loss	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R1/104	W18/104	Unknown	62	6	35	6	34	0	1	0.00	2.86	6	35	6	34	0.0	3
R2/104	W17/104	Unknown	65	7	36	7	35	0	1	0.00	2.78	7	36	7	35	0.0	3
R3/104	W16/104	Unknown	65	7	36	7	35	0	1	0.00	2.78	7	36	7	35	0.0	3
R4/104	W15/104	Unknown	65	7	36	7	35	0	1	0.00	2.78	7	36	7	35	0.0	3
R5/104	W14/104	Unknown	65	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R6/104	W12/104	Unknown	65	3	24	3	24	0	0	0.00	0.00	3	24	3	24	0.0	0
R7/104	W11/104	Unknown	65	0	11	0	11	0	0	0.00	0.00	0	11	0	11	0.0	0
R8/104	W10/104	Unknown	66	6	35	6	35	0	0	0.00	0.00	6	35	6	35	0.0	0
R9/104	W9/104	Unknown	59	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R10/104	W8/104	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R11/104	W7/104	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R12/104	W6/104	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R13/104	W4/104	Unknown	60	5	33	5	33	0	0	0.00	0.00	5	33	5	33	0.0	0
R14/104	W3/104	Unknown	60	3	25	3	25	0	0	0.00	0.00	3	25	3	25	0.0	0
R15/104	W2/104	Unknown	60	0	8	0	8	0	0	0.00	0.00	0	8	0	8	0.0	0
R16/104	W1/104	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R1/105	W4/105	Unknown	62	6	35	6	34	0	1	0.00	2.86	6	35	6	34	0.0	3
R2/105	W3/105	Unknown	65	8	37	8	36	0	1	0.00	2.70	8	37	8	36	0.0	3
R3/105	W2/105	Unknown	65	8	37	8	36	0	1	0.00	2.70	8	37	8	36	0.0	3
R4/105	W1/105	Unknown	65	7	36	7	35	0	1	0.00	2.78	7	36	7	35	0.0	3
R5/105	W6/105	Unknown	65	7	36	7	36	0	0	0.00	0.00	7	36	7	36	0.0	0
R6/105	W9/105	Unknown	65	3	26	3	26	0	0	0.00	0.00	3	26	3	26	0.0	0
R7/105	W8/105	Unknown	65	0	11	0	11	0	0	0.00	0.00	0	11	0	11	0.0	0
R8/105	W7/105	Unknown	66	7	36	7	36	0	0	0.00	0.00	7	36	7	36	0.0	0
R9/105	W13/105	Unknown	59	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R10/105	W12/105	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R11/105	W11/105	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R12/105	W10/105	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R13/105	W14/105	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R14/105	W18/105	Unknown	60	3	31	3	31	0	0	0.00	0.00	3	31	3	31	0.0	0
R15/105	W17/105	Unknown	60	0	9	0	9	0	0	0.00	0.00	0	9	0	9	0.0	0
R16/105	W16/105	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R1/106	W8/106	Unknown	62	6	35	6	35	0	0	0.00	0.00	6	35	6	35	0.0	0
R2/106	W7/106	Unknown	65	8	37	8	37	0	0	0.00	0.00	8	37	8	37	0.0	0
R3/106	W6/106	Unknown	65	8	37	8	37	0	0	0.00	0.00	8	37	8	37	0.0	0
R4/106	W5/106	Unknown	65	8	37	8	37	0	0	0.00	0.00	8	37	8	37	0.0	0
R5/106	W4/106	Unknown	65	8	37	8	37	0	0	0.00	0.00	8	37	8	37	0.0	0
R6/106	W3/106	Unknown	65	4	33	4	33	0	0	0.00	0.00	4	33	4	33	0.0	0
R7/106	W2/106	Unknown	65	0	11	0	11	0	0	0.00	0.00	0	11	0	11	0.0	0
R8/106	W1/106	Unknown	66	9	38	9	38	0	0	0.00	0.00	9	38	9	38	0.0	0
R1/151	W12/151	Unknown	65	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R2/151	W7/151	Unknown	60	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R1/152	W8/152	Unknown	65	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R2/152	W7/152	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R1/153	W13/153	Unknown	65	6	34	6	33	0	1	0.00	2.94	6	34	6	33	0.0	3
R2/153	W5/153	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R1/154	W5/154	Unknown	65	7	36	7	35	0	1	0.00	2.78	7	36	7	35	0.0	3
R2/154	W15/154	Unknown	60	6	34	6	34	0	0	0.00	0.00	6	34	6	34	0.0	0
R1/155	W9/155	Unknown	65	8	37	8	37	0	0	0.00	0.00	8	37	8	37	0.0	0

				Window								Room					
				Existing		Proposed						Existing		Proposed			
Room	Window	Room Use	Orientation	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter Loss	Annual Loss	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
36 GLOUCERSER AV																	
R1/200	W1/200	Unknown	64	3	21	3	21	0	0	0.00	0.00	3	21	3	21	0.0	0
R2/200	W2/200	Unknown	64	4	26	4	25	0	1	0.00	3.85	4	26	4	25	0.0	4
R3/200	W3/200	Unknown	64	6	29	5	28	1	1	16.67	3.45	6	29	5	28	16.7	3
R4/200	W4/200	Unknown	64	6	31	5	28	1	3	16.67	9.68	6	31	5	28	16.7	10
R5/200	W5/200	Unknown	64	6	32	6	30	0	2	0.00	6.25	6	32	6	30	0.0	6
R7/200	W6/200	Unknown	64	6	32	6	28	0	4	0.00	12.50	6	32	6	28	0.0	13
R8/200	W7/200	Unknown	64	6	32	6	28	0	4	0.00	12.50	6	32	6	28	0.0	13
R9/200	W8/200	Unknown	64	5	31	5	27	0	4	0.00	12.90	5	31	5	27	0.0	13
R10/200	W9/200	Unknown	64	5	32	5	28	0	4	0.00	12.50						
R10/200	W13/200	Unknown	153	19	72	19	69	0	3	0.00	4.17	21	74	21	71	0.0	4
R11/200	W12/200	Unknown	153	17	70	17	68	0	2	0.00	2.86	17	70	17	68	0.0	3
R12/200	W11/200	Unknown	153	12	63	12	61	0	2	0.00	3.17	12	63	12	61	0.0	3
R13/200	W10/200	Unknown	153	23	75	23	74	0	1	0.00	1.33	23	75	23	74	0.0	1
R1/201	W13/201	Unknown	64	6	27	5	26	1	1	16.67	3.70	6	27	5	26	16.7	4
R2/201	W14/201	Unknown	64	6	27	5	26	1	1	16.67	3.70	6	27	5	26	16.7	4
R3/201	W11/201	Unknown	64	6	29	5	28	1	1	16.67	3.45	6	29	5	28	16.7	3
R4/201	W12/201	Unknown	64	6	30	5	28	1	2	16.67	6.67	6	30	5	28	16.7	7
R5/201	W9/201	Unknown	64	6	31	6	29	0	2	0.00	6.45	6	31	6	29	0.0	6
R6/201	W10/201	Unknown	64	6	31	6	28	0	3	0.00	9.68	6	31	6	28	0.0	10
R7/201	W7/201	Unknown	64	6	31	6	28	0	3	0.00	9.68	6	31	6	28	0.0	10
R8/201	W8/201	Unknown	64	6	31	6	27	0	4	0.00	12.90	6	31	6	27	0.0	13
R9/201	W5/201	Unknown	64	5	30	5	27	0	3	0.00	10.00	5	30	5	27	0.0	10
R10/201	W3/201	Unknown	153	21	74	21	72	0	2	0.00	2.70						
R10/201	W6/201	Unknown	64	5	30	5	27	0	3	0.00	10.00	22	75	22	73	0.0	3
R11/201	W4/201	Unknown	153	23	75	23	73	0	2	0.00	2.67	23	75	23	73	0.0	3
R12/201	W2/201	Unknown	153	23	75	23	75	0	0	0.00	0.00	23	75	23	75	0.0	0
R13/201	W1/201	Unknown	153	24	77	24	77	0	0	0.00	0.00	24	77	24	77	0.0	0
R1/202	W7/202	Unknown	64	7	31	7	31	0	0	0.00	0.00	7	31	7	31	0.0	0
R2/202	W8/202	Unknown	64	7	31	7	31	0	0	0.00	0.00	7	31	7	31	0.0	0
R3/202	W9/202	Unknown	153	25	78	25	78	0	0	0.00	0.00						
R3/202	W10/202	Unknown	153	25	77	25	77	0	0	0.00	0.00						
R3/202	W11/202	Unknown	153	24	78	24	78	0	0	0.00	0.00						
R3/202	W12/202	Unknown	153	25	79	25	79	0	0	0.00	0.00	27	81	27	81	0.0	0
R4/202	W3/202	Unknown	64	7	35	7	35	0	0	0.00	0.00	7	35	7	35	0.0	0
R5/202	W4/202	Unknown	64	7	35	7	34	0	1	0.00	2.86	7	35	7	34	0.0	3
R6/202	W5/202	Unknown	64	7	35	7	34	0	1	0.00	2.86	7	35	7	34	0.0	3
R7/202	W6/202	Unknown	64	7	35	7	34	0	1	0.00	2.86	7	35	7	34	0.0	3
R8/202	W9/202	Unknown	153	25	78	25	78	0	0	0.00	0.00						
R8/202	W10/202	Unknown	153	25	77	25	77	0	0	0.00	0.00						
R8/202	W11/202	Unknown	153	24	78	24	78	0	0	0.00	0.00	26	80	26	80	0.0	0
R9/202	W1/202	Unknown	64	7	35	7	34	0	1	0.00	2.86	7	35	7	34	0.0	3
R10/202	W2/202	Unknown	64	1	30	1	28	0	2	0.00	6.67	1	30	1	28	0.0	7
THE LOCKHOUSE (WEST BLOCK)																	
R1/299	W3/299	UNKNOWN	69	0	16	1	19	0	-3	0.00	-18.75						
R1/299	W2/299	UNKNOWN	159	3	16	4	17	-1	-1	-33.33	-6.25						
R1/299	W1/299	UNKNOWN	159	2	14	5	14	-3	0	-150.00	0.00	3	26	7	26	-133.3	0
R1/300	W1/300	Living Room	69	1	10	1	10	0	0	0.00	0.00						
R1/300	W2/300	Living Room	69	1	12	1	12	0	0	0.00	0.00	1	12	1	12	0.0	0
R2/300	W3/300	Bedroom	69	1	13	1	13	0	0	0.00	0.00	1	13	1	13	0.0	0
R1/301	W9/301	Bedroom	69	5	18	5	18	0	0	0.00	0.00	5	18	5	18	0.0	0
R3/301	W7/301	LKD	69	3	14	3	14	0	0	0.00	0.00	3	14	3	14	0.0	0
R4/301	W6/301	Bedroom	69	2	13	2	13	0	0	0.00	0.00	2	13	2	13	0.0	0
R5/301	W5/301	Bedroom	69	1	8	1	8	0	0	0.00	0.00	1	8	1	8	0.0	0

Centric Close
IR24 - Revised Latest Scheme
24.11.16
Sunlight Analysis

				Window								Room					
				Existing		Proposed						Existing		Proposed			
Room	Window	Room Use	Orientation	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter Loss	Annual Loss	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R6/301	W4/301	Bedroom	69	4	9	0	5	4	4	100.00	44.44	4	9	0	5	100.0	44
R7/301	W1/301	LKD	-111	10	37	10	37	0	0	0.00	0.00						
R7/301	W2/301	LKD	159	27	82	8	30	19	52	70.37	63.41						
R7/301	W3/301	LKD	159	29	83	8	29	21	54	72.41	65.06	29	97	11	47	62.1	52
R1/302	W9/302	Bedroom	69	6	13	6	13	0	0	0.00	0.00	6	13	6	13	0.0	0
R3/302	W7/302	LKD	69	4	16	4	16	0	0	0.00	0.00	4	16	4	16	0.0	0
R4/302	W6/302	Bedroom	69	3	16	3	16	0	0	0.00	0.00	3	16	3	16	0.0	0
R5/302	W5/302	Bedroom	69	3	11	3	11	0	0	0.00	0.00	3	11	3	11	0.0	0
R6/302	W4/302	Bedroom	69	4	11	0	7	4	4	100.00	36.36	4	11	0	7	100.0	36
R7/302	W1/302	LKD	-111	12	39	12	39	0	0	0.00	0.00						
R7/302	W2/302	LKD	159	29	85	9	35	20	50	68.97	58.82						
R7/302	W3/302	LKD	159	29	83	8	33	21	50	72.41	60.24	30	99	12	53	60.0	46
R1/303	W10/303	Bedroom	69	6	15	6	15	0	0	0.00	0.00	6	15	6	15	0.0	0
R3/303	W8/303	LKD	69	7	16	6	15	1	1	14.29	6.25	7	16	6	15	14.3	6
R4/303	W7/303	Bedroom	69	9	39	6	36	3	3	33.33	7.69	9	39	6	36	33.3	8
R5/303	W6/303	Bedroom	69	9	38	5	33	4	5	44.44	13.16	9	38	5	33	44.4	13
R6/303	W4/303	Bedroom	159	29	85	6	45	23	40	79.31	47.06						
R6/303	W5/303	Bedroom	69	9	39	4	30	5	9	55.56	23.08	29	85	8	51	72.4	40
R7/303	W1/303	LKD	-111	21	54	18	50	3	4	14.29	7.41						
R7/303	W2/303	LKD	159	29	85	9	38	20	47	68.97	55.29						
R7/303	W3/303	LKD	159	29	85	8	41	21	44	72.41	51.76	30	99	18	67	40.0	32
R1/304	W10/304	Bedroom	69	6	18	6	18	0	0	0.00	0.00	6	18	6	18	0.0	0
R3/304	W8/304	LKD	69	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0.0	0
R4/304	W7/304	Bedroom	69	8	38	7	37	1	1	12.50	2.63	8	38	7	37	12.5	3
R5/304	W6/304	Bedroom	69	9	39	7	37	2	2	22.22	5.13	9	39	7	37	22.2	5
R6/304	W4/304	Bedroom	159	29	85	6	56	23	29	79.31	34.12						
R6/304	W5/304	Bedroom	69	9	39	4	33	5	6	55.56	15.38	29	85	8	60	72.4	29
R7/304	W1/304	LKD	-111	21	54	18	51	3	3	14.29	5.56						
R7/304	W2/304	LKD	159	29	85	9	52	20	33	68.97	38.82						
R7/304	W3/304	LKD	159	29	85	8	54	21	31	72.41	36.47	30	99	18	78	40.0	21
R1/305	W10/305	Bedroom	69	6	19	6	19	0	0	0.00	0.00	6	19	6	19	0.0	0
R3/305	W8/305	LKD	69	0	0	0	0	0	0	0.00	0.00	0	0	0	0	0.0	0
R4/305	W7/305	Bedroom	69	8	38	8	38	0	0	0.00	0.00	8	38	8	38	0.0	0
R5/305	W5/305	Bedroom	69	9	39	8	38	1	1	11.11	2.56	9	39	8	38	11.1	3
R6/305	W4/305	Bedroom	69	9	39	8	38	1	1	11.11	2.56	9	39	8	38	11.1	3
R7/305	W1/305	LKD	-111	21	54	19	52	2	2	9.52	3.70						
R7/305	W2/305	LKD	159	29	85	13	66	16	19	55.17	22.35						
R7/305	W3/305	LKD	159	29	85	14	70	15	15	51.72	17.65	30	99	20	89	33.3	10
R1/306	W10/306	Bedroom	69	6	25	6	25	0	0	0.00	0.00	6	25	6	25	0.0	0
R3/306	W8/306	LKD	69	0	1	0	1	0	0	0.00	0.00	0	1	0	1	0.0	0
R4/306	W7/306	Bedroom	69	8	38	8	38	0	0	0.00	0.00	8	38	8	38	0.0	0
R5/306	W6/306	Bedroom	69	9	39	9	39	0	0	0.00	0.00	9	39	9	39	0.0	0
R6/306	W4/306	Bedroom	159	29	85	29	85	0	0	0.00	0.00						
R6/306	W5/306	Bedroom	69	9	39	9	39	0	0	0.00	0.00	29	85	29	85	0.0	0
R7/306	W1/306	LKD	-111	21	60	21	60	0	0	0.00	0.00						
R7/306	W2/306	LKD	159	29	85	27	83	2	2	6.90	2.35						
R7/306	W3/306	LKD	159	29	85	29	85	0	0	0.00	0.00	30	99	30	99	0.0	0
R1/307	W9/307	Unknown	69	9	40	9	40	0	0	0.00	0.00	9	40	9	40	0.0	0
R2/307	W8/307	Bedroom	69	9	40	9	40	0	0	0.00	0.00	9	40	9	40	0.0	0
R3/307	W7/307	Bedroom	69	9	40	9	40	0	0	0.00	0.00	9	40	9	40	0.0	0
R4/307	W5/307	Bedroom	159	28	83	28	83	0	0	0.00	0.00						
R4/307	W6/307	Bedroom	69	9	40	9	40	0	0	0.00	0.00	28	84	28	84	0.0	0
R5/307	W1/307	Living Room	-111	13	36	13	36	0	0	0.00	0.00						
R5/307	W2/307	Living Room	-111	19	40	19	40	0	0	0.00	0.00						
R5/307	W3/307	Living Room	159	29	70	29	70	0	0	0.00	0.00						
R5/307	W4/307	Living Room	159	29	70	29	70	0	0	0.00	0.00	30	92	30	92	0.0	0
R1/308	W9/308	Unknown	69	9	40	9	40	0	0	0.00	0.00	9	40	9	40	0.0	0
R2/308	W8/308	Bedroom	69	9	40	9	40	0	0	0.00	0.00	9	40	9	40	0.0	0

				Window								Room					
				Existing		Proposed						Existing		Proposed			
Room	Window	Room Use	Orientation	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter Loss	Annual Loss	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R3/308	W7/308	Bedroom	69	9	40	9	40	0	0	0.00	0.00	9	40	9	40	0.0	0
R4/308	W5/308	Bedroom	159	29	85	29	85	0	0	0.00	0.00						
R4/308	W6/308	Bedroom	69	9	40	9	40	0	0	0.00	0.00	29	86	29	86	0.0	0
R5/308	W1/308	Living Room	-111	20	55	20	55	0	0	0.00	0.00						
R5/308	W2/308	Living Room	-111	21	58	21	58	0	0	0.00	0.00						
R5/308	W3/308	Living Room	159	29	85	29	85	0	0	0.00	0.00						
R5/308	W4/308	Living Room	159	29	85	29	85	0	0	0.00	0.00	30	99	30	99	0.0	0
THE LOCKHOUSE (EAST BLOCK)																	
R1/400	W1/400	Bedroom	-112	18	46	12	39	6	7	33.33	15.22						
R1/400	W2/400	Bedroom	-112	18	47	12	40	6	7	33.33	14.89	18	47	12	40	33.3	15
R3/400	W3/400	Bedroom	-112	17	48	10	38	7	10	41.18	20.83	17	48	10	38	41.2	21
R1/401	W3/401	Kitchen	-111	12	27	8	23	4	4	33.33	14.81	12	27	8	23	33.3	15
R2/401	W1/401	Kitchen	-111	14	30	10	26	4	4	28.57	13.33						
R2/401	W2/401	Kitchen	-111	14	30	10	26	4	4	28.57	13.33	14	30	10	26	28.6	13
R3/401	W4/401	L/D	-111	15	31	9	25	6	6	40.00	19.35						
R3/401	W7/401	L/D	159	23	57	14	48	9	9	39.13	15.79	23	58	15	50	34.8	14
R4/401	W8/401	Bedroom	159	24	55	16	47	8	8	33.33	14.55	24	55	16	47	33.3	15
R5/401	W5/401	Bedroom	159	23	53	18	48	5	5	21.74	9.43	23	53	18	48	21.7	9
R6/401	W6/401	Bedroom	159	22	51	17	46	5	5	22.73	9.80	22	51	17	46	22.7	10
R1/402	W13/402	Kitchen	-111	12	28	9	25	3	3	25.00	10.71	12	28	9	25	25.0	11
R2/402	W10/402	Kitchen	-111	14	30	11	27	3	3	21.43	10.00						
R2/402	W11/402	Kitchen	-111	14	30	10	26	4	4	28.57	13.33						
R2/402	W12/402	Kitchen	-111	14	30	10	26	4	4	28.57	13.33	14	30	11	27	21.4	10
R3/402	W8/402	L/D	159	23	59	16	52	7	7	30.43	11.86	23	59	16	52	30.4	12
R4/402	W9/402	Bedroom	159	24	57	19	52	5	5	20.83	8.77	24	57	19	52	20.8	9
R5/402	W6/402	Bedroom	159	23	57	19	53	4	4	17.39	7.02	23	57	19	53	17.4	7
R6/402	W7/402	Bedroom	159	22	54	18	50	4	4	18.18	7.41	22	54	18	50	18.2	7
R7/402	W1/402	L/D	-112	19	35	16	32	3	3	15.79	8.57	19	35	16	32	15.8	9
R8/402	W2/402	Bedroom	-112	19	47	15	43	4	4	21.05	8.51	19	47	15	43	21.1	9
R10/402	W3/402	Bedroom	-112	21	51	17	47	4	4	19.05	7.84	21	51	17	47	19.0	8
R11/402	W4/402	Kitchen	-112	21	53	16	48	5	5	23.81	9.43	21	53	16	48	23.8	9
R12/402	W5/402	L/D	-112	21	53	15	46	6	7	28.57	13.21	21	53	15	46	28.6	13
R2/403	W1/403	Kitchen	-111	14	33	13	32	1	1	7.14	3.03						
R2/403	W2/403	Kitchen	-111	14	33	13	32	1	1	7.14	3.03	14	33	13	32	7.1	3
R3/403	W6/403	L/D	159	24	66	20	62	4	4	16.67	6.06	24	66	20	62	16.7	6
R4/403	W7/403	Bedroom	159	24	65	20	61	4	4	16.67	6.15	24	65	20	61	16.7	6
R5/403	W4/403	Bedroom	159	24	62	22	60	2	2	8.33	3.23	24	62	22	60	8.3	3
R6/403	W5/403	Bedroom	159	22	57	20	55	2	2	9.09	3.51	22	57	20	55	9.1	4
R7/403	W3/403	L/D	-112	19	36	16	33	3	3	15.79	8.33	19	36	16	33	15.8	8
R8/403	W8/403	Bedroom	-112	19	48	16	45	3	3	15.79	6.25	19	48	16	45	15.8	6
R11/403	W9/403	LD	-112	21	54	18	51	3	3	14.29	5.56						
R11/403	W11/403	LD	159	29	85	26	82	3	3	10.34	3.53	30	93	28	91	6.7	2
R12/403	W10/403	KITCHEN	159	29	85	28	84	1	1	3.45	1.18	29	85	28	84	3.4	1
R1/404	W11/404	Bedroom	-111	14	37	14	37	0	0	0.00	0.00	14	37	14	37	0.0	0
R2/404	W8/404	L/D	159	27	78	26	77	1	1	3.70	1.28	27	78	26	77	3.7	1
R3/404	W10/404	Kitchen	159	24	70	23	69	1	1	4.17	1.43	24	70	23	69	4.2	1
R4/404	W9/404	Bedroom	159	25	72	24	71	1	1	4.00	1.39	25	72	24	71	4.0	1
R5/404	W7/404	Bedroom	159	25	70	24	69	1	1	4.00	1.43	25	70	24	69	4.0	1
R6/404	W3/404	Bedroom	-112	19	47	17	45	2	2	10.53	4.26	19	47	17	45	10.5	4
R7/404	W4/404	L/D	-112	19	49	17	47	2	2	10.53	4.08						
R7/404	W5/404	L/D	-112	19	50	17	48	2	2	10.53	4.00	19	50	17	48	10.5	4
R8/404	W12/404	Bedroom	-112	20	53	18	51	2	2	10.00	3.77	20	53	18	51	10.0	4
R9/404	W2/404	KD	159	29	85	28	84	1	1	3.45	1.18						
R9/404	W6/404	KD	-112	21	55	19	53	2	2	9.52	3.64	30	94	29	93	3.3	1
R10/404	W1/404	Bedroom	159	29	85	28	84	1	1	3.45	1.18	29	85	28	84	3.4	1
R1/405	W1/405	Bedroom	-111	14	43	14	43	0	0	0.00	0.00						

				Window								Room					
				Existing		Proposed						Existing		Proposed			
Room	Window	Room Use	Orientation	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter Loss	Annual Loss	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R1/405	W2/405	Bedroom	-111	14	44	14	44	0	0	0.00	0.00	14	44	14	44	0.0	0
R2/405	W3/405	L/D	-111	16	43	16	43	0	0	0.00	0.00						
R2/405	W10/405	L/D	159	27	77	27	77	0	0	0.00	0.00	27	84	27	84	0.0	0
R3/405	W11/405	Kitchen	159	27	75	27	75	0	0	0.00	0.00	27	75	27	75	0.0	0
R4/405	W8/405	Bedroom	159	28	83	28	83	0	0	0.00	0.00	28	83	28	83	0.0	0
R5/405	W9/405	Bedroom	159	27	83	27	83	0	0	0.00	0.00	27	83	27	83	0.0	0
R6/405	W7/405	Bedroom	159	28	84	28	84	0	0	0.00	0.00	28	84	28	84	0.0	0
R7/405	W6/405	Bedroom	159	26	82	26	82	0	0	0.00	0.00	26	82	26	82	0.0	0
R8/405	W5/405	Bedroom	159	25	80	25	80	0	0	0.00	0.00	25	80	25	80	0.0	0
R9/405	W4/405	Living Room	159	23	79	23	79	0	0	0.00	0.00	23	79	23	79	0.0	0
R1/406	W9/406	Bedroom	-111	15	50	15	50	0	0	0.00	0.00	15	50	15	50	0.0	0
R2/406	W1/406	L/D	159	27	83	27	83	0	0	0.00	0.00	27	83	27	83	0.0	0
R3/406	W2/406	Kitchen	159	28	84	28	84	0	0	0.00	0.00	28	84	28	84	0.0	0
R4/406	W3/406	Bedroom	159	28	84	28	84	0	0	0.00	0.00	28	84	28	84	0.0	0
R5/406	W4/406	Bedroom	159	28	84	28	84	0	0	0.00	0.00	28	84	28	84	0.0	0
R6/406	W8/406	Bedroom	159	28	84	28	84	0	0	0.00	0.00	28	84	28	84	0.0	0
R7/406	W7/406	Bedroom	159	29	85	29	85	0	0	0.00	0.00	29	85	29	85	0.0	0
R8/406	W6/406	Bedroom	159	29	85	29	85	0	0	0.00	0.00	29	85	29	85	0.0	0
R9/406	W5/406	Living Room	159	29	85	29	85	0	0	0.00	0.00	29	85	29	85	0.0	0
R7/451	W1/451	L/D	-112	19	35	13	29	6	6	31.58	17.14	19	35	13	29	31.6	17
R8/451	W3/451	Bedroom	-112	19	46	12	39	7	7	36.84	15.22	19	46	12	39	36.8	15
R10/451	W4/451	Bedroom	-112	20	49	13	42	7	7	35.00	14.29	20	49	13	42	35.0	14
R11/451	W2/451	Kitchen	-112	20	51	12	42	8	9	40.00	17.65	20	51	12	42	40.0	18
R12/451	W5/451	L/D	-112	20	51	11	40	9	11	45.00	21.57	20	51	11	40	45.0	22
29 OVAL ROAD																	
R1/599	W1/599	Unknown-Resi	-110	10	41	7	30	3	11	30.00	26.83						
R1/599	W2/599	Unknown-Resi	-110	5	39	3	25	2	14	40.00	35.90						
R1/599	W4/599	Unknown-Resi	-110	1	34	0	21	1	13	100.00	38.24	10	44	7	30	30.0	32
R1/600	W3/600	Unknown	-109	4	30	0	16	4	14	100.00	46.67	4	30	0	16	100.0	47
R2/600	W2/600	Living Room	-110	18	56	11	38	7	18	38.89	32.14	18	56	11	38	38.9	32
R1/601	W1/601	Bedroom	-110	18	55	14	44	4	11	22.22	20.00	18	55	14	44	22.2	20
R1/602	W1/602	Bedroom	-110	16	45	13	38	3	7	18.75	15.56	16	45	13	38	18.8	16
27 OVAL ROAD																	
R2/699	W2/699	Reception	-110	2	23	0	11	2	12	100.00	52.17	2	23	0	11	100.0	52
R1/700	W1/700	Reception	-110	15	51	9	34	6	17	40.00	33.33	15	51	9	34	40.0	33
R1/701	W1/701	Unknown	-110	18	55	14	44	4	11	22.22	20.00	18	55	14	44	22.2	20
R1/702	W1/702	Unknown	-110	16	45	14	39	2	6	12.50	13.33	16	45	14	39	12.5	13
R1/709	W1/709	Reception	-110	0	25	0	13	0	12	0.00	48.00	0	25	0	13	0.0	48
R1/710	W1/710	Unknown	-110	13	48	8	34	5	14	38.46	29.17	13	48	8	34	38.5	29
R1/711	W1/711	Unknown	-110	14	49	11	40	3	9	21.43	18.37	14	49	11	40	21.4	18
25 OVAL ROAD																	
R1/799	W2/799	Bedroom	-110	4	23	2	17	2	6	50.00	26.09	4	23	2	17	50.0	26
R3/799	W3/799	Kitchen-Resi	160	3	24	1	19	2	5	66.67	20.83	3	24	1	19	66.7	21
R1/800	W2/800	Kitchen-Resi	-111	17	55	12	35	5	20	29.41	36.36						
R1/800	W3/800	Kitchen-Resi	160	10	34	6	28	4	6	40.00	17.65	17	55	13	38	23.5	31
R2/800	W1/800	LKD	-110	6	33	2	23	4	10	66.67	30.30	6	33	2	23	66.7	30
R1/801	W1/801	Bedroom	-110	13	50	10	40	3	10	23.08	20.00	13	50	10	40	23.1	20
23 OVAL ROAD																	
R1/899	W1/899	Bedroom	-110	0	20	0	9	0	11	0.00	55.00						
R1/899	W3/899	Bedroom	-110	2	32	0	18	2	14	100.00	43.75						
R1/899	W2/899	Bedroom	-110	0	13	0	4	0	9	0.00	69.23	2	32	0	18	100.0	44
R2/899	W4/899	Bedroom	-110	4	38	2	23	2	15	50.00	39.47						
R2/899	W5/899	Bedroom	-110	6	38	4	24	2	14	33.33	36.84	6	40	4	25	33.3	38

Centric Close
IR24 - Revised Latest Scheme
24.11.16
Sunlight Analysis

Room	Window	Room Use	Orientation	Window Existing Winter APSH	Window Existing Annual APSH	Window Proposed Winter APSH	Window Proposed Annual APSH	Window Winter Loss	Window Annual Loss	Window Winter %Loss	Window Annual %Loss	Room Existing Winter APSH	Room Existing Annual APSH	Room Proposed Winter APSH	Room Proposed Annual APSH	Room Winter %Loss	Room Annual %Loss
R1/900	W3/900	Bedroom	-110	3	27	0	13	3	14	100.00	51.85	3	27	0	13	100.0	52
R2/900	W1/900	Bedroom	-110	16	54	13	39	3	15	18.75	27.78						
R2/900	W2/900	Bedroom	-19	0	11	0	2	0	9	0.00	81.82	16	54	13	39	18.8	28
R1/901	W1/901	Bedroom	-110	14	42	11	33	3	9	21.43	21.43	14	42	11	33	21.4	21
R1/902	W1/902	Bedroom	-110	16	45	14	39	2	6	12.50	13.33	16	45	14	39	12.5	13
R1/912	W1/912	Unknown	-110	19	57	16	49	3	8	15.79	14.04	19	57	16	49	15.8	14
23 OVAL ROAD - COACH HOUSE																	
R1/899	W1/899	Bedroom	-110	0	24	0	14	0	10	0.00	41.67	0	24	0	14	0.0	42
R1/900	W1/900	Unknown-Resi	-110	16	54	14	40	2	14	12.50	25.93						
R1/900	W2/900	Unknown-Resi	-110	16	54	14	40	2	14	12.50	25.93						
R1/900	W3/900	Unknown-Resi	-110	16	54	14	40	2	14	12.50	25.93						
R1/900	W4/900	Unknown-Resi	-110	17	55	14	40	3	15	17.65	27.27						
R1/900	W1/910	Unknown-Resi	0R	20	67	16	55	4	12	20.00	17.91						
R1/900	W2/910	Unknown-Resi	0R	13	59	10	55	3	4	23.08	6.78	21	78	18	68	14.3	13
21 OVAL ROAD																	
R1/999	W1/999	LKD	-111	3	30	3	23	0	7	0.00	23.33						
R1/999	W3/999	LKD	69	9	31	9	31	0	0	0.00	0.00						
R1/999	W4/999	LKD	69	9	30	9	30	0	0	0.00	0.00						
R1/999	W5/999	LKD	69	7	28	7	28	0	0	0.00	0.00						
R1/999	W2/999	LKD	0R	15	50	13	41	2	9	13.33	18.00	24	80	22	71	8.3	11
R2/1000	W2/1000	Bedroom	-111	10	44	11	36	-1	8	-10.00	18.18	10	44	11	36	-10.0	18
R1/1002	W1/1002	Bedroom	-111	17	47	16	43	1	4	5.88	8.51	17	47	16	43	5.9	9
19 OVAL ROAD																	
R1/1099	W1/1099	Reception	-111	1	13	1	9	0	4	0.00	30.77	1	13	1	9	0.0	31
R1/1100	W1/1100	Living Room	-111	2	24	2	16	0	8	0.00	33.33	2	24	2	16	0.0	33
R1/1101	W1/1101	Bedroom	-111	5	29	4	23	1	6	20.00	20.69	5	29	4	23	20.0	21
R1/1102	W1/1102	Bedroom	-111	13	42	12	39	1	3	7.69	7.14	13	42	12	39	7.7	7
R1/1109	W1/1109	Living Room	-20	0	6	0	2	0	4	0.00	66.67						
R1/1109	W2/1100	Living Room	-110	6	38	6	35	0	3	0.00	7.89	6	39	6	35	0.0	10
R1/1110	W1/1110	Bedroom	-110	20	54	20	49	0	5	0.00	9.26	20	54	20	49	0.0	9
17 OVAL ROAD																	
R1/1199	W1/1199	Unknown	-66	8	32	8	29	0	3	0.00	9.38						
R1/1199	W2/1199	Unknown	-111	14	50	14	47	0	3	0.00	6.00						
R1/1199	W3/1199	Unknown	-156	9	46	9	42	0	4	0.00	8.70	14	52	14	48	0.0	8
R1/1200	W1/1200	Unknown	-66	8	33	8	29	0	4	0.00	12.12						
R1/1200	W2/1200	Unknown	-111	18	55	18	53	0	2	0.00	3.64						
R1/1200	W3/1200	Unknown	-156	15	52	15	50	0	2	0.00	3.85	18	55	18	53	0.0	4
R1/1201	W2/1201	Unknown	-111	20	57	20	56	0	1	0.00	1.75	20	57	20	56	0.0	2
R2/1201	W1/1201	Unknown	-111	20	57	20	54	0	3	0.00	5.26	20	57	20	54	0.0	5
R1/1202	W1/1202	Unknown	-111	18	50	18	50	0	0	0.00	0.00	18	50	18	50	0.0	0
R2/1202	W3/1202	Unknown	-21	1	9	1	9	0	0	0.00	0.00	1	9	1	9	0.0	0
R3/1202	W2/1202	Unknown	-111	18	50	18	50	0	0	0.00	0.00	18	50	18	50	0.0	0
R1/1210	W1/1210	Unknown	-21	0	11	0	8	0	3	0.00	27.27	0	11	0	8	0.0	27
R1/1211	W1/1211	Unknown	-21	0	12	0	10	0	2	0.00	16.67	0	12	0	10	0.0	17
R1/1212	W1/1212	Unknown	-21	1	11	1	10	0	1	0.00	9.09	1	11	1	10	0.0	9
15 OVAL ROAD																	
R1/1300	W1/1300	Unknown	-111	2	23	2	21	0	2	0.00	8.70	2	23	2	21	0.0	9
R1/1301	W1/1301	Unknown	-111	19	56	19	55	0	1	0.00	1.79	19	56	19	55	0.0	2
R1/1302	W1/1302	Unknown	-111	18	50	18	50	0	0	0.00	0.00	18	50	18	50	0.0	0
R2/1302	W2/1302	Unknown	-111	19	51	19	51	0	0	0.00	0.00	19	51	19	51	0.0	0
R1/1309	W1/1309	Unknown	-109	20	58	20	57	0	1	0.00	1.72						
R1/1309	W2/1309	Unknown	-21	0	12	0	10	0	2	0.00	16.67	20	58	20	57	0.0	2
R1/1310	W1/1310	Unknown	-21	0	12	0	11	0	1	0.00	8.33	0	12	0	11	0.0	8
R1/1311	W1/1311	Unknown	-111	19	57	19	56	0	1	0.00	1.75	19	57	19	56	0.0	2
85 JAMESTOWN ROAD																	
R1/1401	W2/1401	Unknown	-112	15	42	15	42	0	0	0.00	0.00	15	42	15	42	0.0	0
R2/1401	W1/1401	Unknown	-112	14	39	14	39	0	0	0.00	0.00	14	39	14	39	0.0	0

				Window								Room					
				Existing		Proposed						Existing		Proposed			
Room	Window	Room Use	Orientation	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter Loss	Annual Loss	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R1/1402	W1/1402	Unknown	-112	15	40	15	40	0	0	0.00	0.00	15	40	15	40	0.0	0
R2/1402	W2/1402	Unknown	-112	17	44	17	44	0	0	0.00	0.00	17	44	17	44	0.0	0
R1/1403	W1/1403	Unknown	-112	16	42	16	42	0	0	0.00	0.00	16	42	16	42	0.0	0
R2/1403	W2/1403	Unknown	-112	18	47	18	47	0	0	0.00	0.00	18	47	18	47	0.0	0
18 OVAL ROAD																	
R1/1499	W1/1499	Dining Room	-111	13	35	13	35	0	0	0.00	0.00	13	35	13	35	0.0	0
R1/1500	W1/1500	Bedroom	-111	14	39	14	39	0	0	0.00	0.00	14	39	14	39	0.0	0
R1/1501	W1/1501	Living Room	-111	16	43	16	43	0	0	0.00	0.00	16	43	16	43	0.0	0
R1/1502	W1/1502	Bedroom	-111	18	49	18	49	0	0	0.00	0.00	18	49	18	49	0.0	0
16 OVAL ROAD																	
R1/1599	W1/1599	Unknown-Resi	-111	12	36	12	36	0	0	0.00	0.00	12	36	12	36	0.0	0
R1/1600	W2/1600	Unknown-Resi	-111	16	42	16	42	0	0	0.00	0.00	16	42	16	42	0.0	0
R2/1600	W1/1600	Unknown-Resi	-111	16	43	16	43	0	0	0.00	0.00	16	43	16	43	0.0	0
R1/1601	W1/1601	Unknown-Resi	-111	17	46	17	46	0	0	0.00	0.00	17	46	17	46	0.0	0
R1/1602	W1/1602	Unknown-Resi	-111	20	53	19	52	1	1	5.00	1.89	20	53	19	52	5.0	2
14 OVAL ROAD																	
R1/1699	W1/1699	Unknown	-111	10	36	10	36	0	0	0.00	0.00	10	36	10	36	0.0	0
R1/1700	W1/1700	Unknown	-111	16	46	16	46	0	0	0.00	0.00	16	46	16	46	0.0	0
R2/1700	W2/1700	Unknown	-111	16	45	16	45	0	0	0.00	0.00	16	45	16	45	0.0	0
R1/1701	W1/1701	Unknown	-111	18	49	17	48	1	1	5.56	2.04	18	49	17	48	5.6	2
R1/1702	W1/1702	Unknown	-111	20	53	19	52	1	1	5.00	1.89	20	53	19	52	5.0	2
2-10 OVAL ROAD																	
R1/1999	W2/1999	Bedroom	-111	8	41	8	41	0	0	0.00	0.00	8	41	8	41	0.0	0
R2/1999	W1/1999	Bedroom	-111	8	41	8	41	0	0	0.00	0.00	8	41	8	41	0.0	0
R3/1999	W5/1999	Bedroom	-111	7	38	7	38	0	0	0.00	0.00	7	38	7	38	0.0	0
R4/1999	W4/1999	Unknown	-111	12	40	12	40	0	0	0.00	0.00	12	40	12	40	0.0	0
R5/1999	W3/1999	Unknown	-111	5	35	5	35	0	0	0.00	0.00	5	35	5	35	0.0	0
R6/1999	W6/1999	Unknown	-111	4	34	4	34	0	0	0.00	0.00	4	34	4	34	0.0	0
R1/2000	W1/2000	Unknown	-111	17	49	17	49	0	0	0.00	0.00	17	49	17	49	0.0	0
R2/2000	W2/2000	Unknown	-111	19	52	19	52	0	0	0.00	0.00	19	52	19	52	0.0	0
R3/2000	W3/2000	Bedroom	-111	17	50	17	50	0	0	0.00	0.00	17	50	17	50	0.0	0
R5/2000	W5/2000	Bedroom	-111	17	50	17	50	0	0	0.00	0.00	17	50	17	50	0.0	0
R7/2000	W8/2000	Bedroom	-111	14	48	14	48	0	0	0.00	0.00	14	48	14	48	0.0	0
R9/2000	W11/2000	Bedroom	-111	17	48	17	48	0	0	0.00	0.00	17	48	17	48	0.0	0
R1/2001	W3/2001	Unknown	-111	18	55	18	54	0	1	0.00	1.82						
R1/2001	W4/2001	Unknown	-111	19	55	18	54	1	1	5.26	1.82	19	56	18	54	5.3	4
R2/2001	W5/2001	Unknown	-111	18	56	18	55	0	1	0.00	1.79						
R2/2001	W6/2001	Unknown	-111	17	54	17	54	0	0	0.00	0.00	18	56	18	55	0.0	2
R3/2001	W7/2001	Unknown	-111	13	47	13	47	0	0	0.00	0.00						
R3/2001	W8/2001	Unknown	-111	17	54	17	53	0	1	0.00	1.85	18	55	18	54	0.0	2
R4/2001	W2/2001	Unknown	-111	19	55	19	55	0	0	0.00	0.00	19	55	19	55	0.0	0
R5/2001	W1/2001	Unknown	-111	19	56	19	56	0	0	0.00	0.00	19	56	19	56	0.0	0
R6/2001	W9/2001	Unknown	-111	20	59	20	58	0	1	0.00	1.69						
R6/2001	W10/2001	Unknown	-111	19	56	19	55	0	1	0.00	1.79	20	59	20	58	0.0	2
R1/2002	W3/2002	Unknown	-111	20	54	20	54	0	0	0.00	0.00						
R1/2002	W4/2002	Unknown	-111	20	54	20	54	0	0	0.00	0.00	20	54	20	54	0.0	0
R2/2002	W5/2002	Unknown	-111	20	55	20	55	0	0	0.00	0.00						
R2/2002	W6/2002	Unknown	-111	20	55	20	55	0	0	0.00	0.00	20	55	20	55	0.0	0
R3/2002	W7/2002	Unknown	-111	15	45	15	45	0	0	0.00	0.00						
R3/2002	W8/2002	Unknown	-111	19	54	19	54	0	0	0.00	0.00	19	54	19	54	0.0	0
R4/2002	W2/2002	Unknown	-111	21	55	20	54	1	1	4.76	1.82	21	55	20	54	4.8	2
R5/2002	W1/2002	Unknown	-111	21	55	21	55	0	0	0.00	0.00	21	55	21	55	0.0	0

				Window								Room					
				Existing		Proposed						Existing		Proposed			
Room	Window	Room Use	Orientation	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter Loss	Annual Loss	Winter %Loss	Annual %Loss	Winter APSH	Annual APSH	Winter APSH	Annual APSH	Winter %Loss	Annual %Loss
R6/2002	W9/2002	Unknown	-111	20	55	20	55	0	0	0.00	0.00						
R6/2002	W10/2002	Unknown	-111	20	55	20	55	0	0	0.00	0.00	20	55	20	55	0.0	0

Appendix 03

Window Maps

SOURCES OF INFORMATION

VERTEX
IR02-9333-040315-VERTEX

FIND MAP
IR03-120315 FIND OS MAP

GIA
SITE PHOTOS & SURVEY NOTES

PLANNING DOCUMENTS

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NOTES:

N.B. DO NOT SCALE OFF THIS DRAWING

PROJECT:

CENTRIC CLOSE
LONDON, CAMDEN NW1

DRAWING NAME:

WINDOW MAP
29 OVAL ROAD
27 OVAL ROAD
25 OVAL ROAD
23 OVAL ROAD
23 OVAL ROAD - COACH HOUSE

DWN BY	SCALE	CHK BY	STATUS	DATE
MO	NTS@A3	AH	WM	MAY 17
PROJ No.	REL No.	IS No.	DWG No.	REV No.
9333	REL10	IS01	17	A

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SOURCES OF INFORMATION

VERTEX
IR02-9333-040315-VERTEX

FIND MAP
IR03-120315 FIND OS MAP

GIA
SITE PHOTOS & SURVEY NOTES

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NOTES:

N.B. DO NOT SCALE OFF THIS DRAWING

PROJECT:

CENTRIC CLOSE
LONDON, CAMDEN NW1

DRAWING NAME:

WINDOW MAP
19 OVAL ROAD

DWN BY	SCALE	CHK BY	STATUS	DATE
MO	NTS@A3	AH	WM	MAY 17
PROJ No.	REL No.	IS No.	DWG No.	REV No.
9333	REL10	IS01	18	A

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