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Squire and Partners



Twyman House, London NW1

Daylight / Sunlight Report

By Gordon Ingram Associates

For CIT Developments Ltd

April 2011

DAYLIGHT AND SUNLIGHT REPORT

TWYMAN HOUSE

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SURVEY BASED ANALYSIS CONTENTS PAGE

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4946-jw-11-0419-aah(DL&SL Report) Principles of Daylight and Sunlight Existing and Proposed Drawings: 4946/51 & 52 (Rel 09 Rev B) 4946/49 & 50 (Rel 09 Rev B) Tabulated Results VSC, ADF, NO SKY, APSH

AUTHOR:

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AUTHORISATION FOR GIA :

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1.0 INSTRUCTIONS

You have instructed this practice to provide you with a report on the Daylight and Sunlight implications arising from the proposed development of the Twyman House Site.

2.0 INTRODUCTION

DAYLIGHT AND SUNLIGHT

In considering the development potential and the quality of amenity for the surrounding properties once the scheme has been implemented, the analysis is based upon the Building Research Establishment (BRE) guidelines '*Site Layout Planning for Daylight and Sunlight*' which provides the criteria and methodology for calculation in connection with daylight and sunlight. This handbook is the primary authority for this matter and therefore it is not only this Practice, but also the Local Authority, who will be considering your application by reference to these guidelines.

The BRE guidelines provide three main methods of calculation for daylight. The first is known as the Vertical Sky Component (VSC) method which considers the potential for daylight by calculating the angle of vertical sky at the centre of each of the windows serving the residential buildings which look towards the site. This is a more simplistic approach and it could be considered as a "rule of thumb" to highlight whether there are any potential concerns to the amenity serving a particular property.

The second method is the No Sky Line or Daylight Distribution method.

This simply assesses the change in position of the No Sky Line between the existing and proposed situations. It does take into account the number and size of windows to a room, but still does not give any qualitative or quantitative assessment of the light in the room, only where sky can or cannot be seen.

The third method of calculation is the Average Daylight Factor (ADF). This is a more detailed and thus more accurate method which considers not only the amount of sky visibility on the vertical face of the window, but also the window size, room size and room use.

Where dimensions of the room to be assessed are available this is the best method of assessment, but even where they are not, it provides a very informative result. It gives guidance as to the qualitative and quantitative change in daylight and is related to the British Standard BS 8206 Part II.

In relation to sunlight, the criteria given calculates the annual probable sunlight hours (APSH) which considers the amount of sun available in both the summer and winter for each given window which faces within 90° of due south. Summer is considered to be the six months between March 21st and September 21st and winter the remaining months.

3.0 SOURCES OF INFORMATION

Plowman Craven (Survey info)

18434-001E-01-B, 18434-001E-01-B, 18434-001E-03-A, 18434-001E-04-B, 18434-001E-05-, 18434-001E-06-A, 18434-001T-01C, 18434-003E-01A, 18434-003E-02A, 18434-003E-03A, 18434-003E-04A, 18434-003E-05A, 18434-003E-06A

Squire & Partners

IR12 - 4946 IR13 - 4946 IR14 - 4946

Salans (Room layouts)

SFX23F.pdf

GIA Various Site Photographs

4.0 ASSUMPTIONS

1. Where we have not obtained access to or plans for the surrounding properties we have made reasonable assumptions as to the internal layouts of the rooms behind the fenestration. 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 and the 6m (20ft) deep from for commercial properties.

- Floor levels have been assumed for those adjoining properties where access has not been obtained. This dictates the level of the working plane which is the point at which rights of light assessments are carried out. It is also relevant for the No Sky Line and ADF daylight assessments.
- 3. We have fully resolved the uses which are carried out legally within the adjoining properties in terms of commercial and residential.

5.0 THE SITE

The site is located adjacent to the Regents Canal in Camden. There are surrounding properties of both commercial and residential use in the immediate vicinity of the site. Most noticeably, there is a warehouse building immediately to the west of the site and residential properties known as 2-8 and 12-14A Bonny Street, which are immediately to the north of the site and have rear windows facing directly over the site.

Our understanding of the existing site is shown on drawings 4946/51 and 52 in Appendix 2 of this report.

6.0 THE PROPOSAL

The proposal by Squire & Partners Architects comprises a residential scheme facing the canal and Camden Road.

Our understanding of the proposal is shown on drawings 4946/49 and 50 in Appendix 2 of this report.

7.0 SURROUNDING PROPERTIES

GIA have undertaken a daylight and sunlight analysis of the impact of the proposal upon each of the surrounding residential properties. This analysis has been conducted in accordance with the methods specified in the BRE

Guidelines. The results of this analysis are shown in detail in the tables in Appendix 3 of this report.

We have undertaken quantitative daylight and sunlight analysis in relation to the following residential properties surrounding the site:

- 1-28 Camden Street
- 148 Camden Street
- 1A and 1B Bonny Street
- 3-11 Bonny Street
- 2-8 Bonny Street
- 12-14A Bonny Street
- 41 Bonny Street
- 94 and 96 Camden Road (first to third floors)
- 1-63 Highstone Mansions / 84-92 Camden Road (first floor and above)
- 41-45 Camden Road (first floor and above)

The location of each of these properties can be seen on the site plan shown on drawing 4946/51 in Appendix 2 of this report.

It should be noted that the adjoining property which immediately abuts the site to the west and known as 146-148 Camden Street does have windows in the boundary wall over looking the site, but these are not to residential space and have not been put in with the consent of the applicant and they do not have any legal right to the light they currently enjoy.

Daylight

All of the windows serving habitable residential space within these properties meet the BRE Guidelines in relation to the Vertical Sky Component (VSC). The results, which are contained in Appendix 3 of this report show VSC reductions that are all well below the BRE guideline of 20%.

The No Skyline analysis demonstrates full BRE compliance for:

- 1a and 1b Bonny Street
- 3-11 Bonny Street
- 41-45 Camden Road
- 96 Camden Road
- 94Camden Road
- 1-28 Camden Road
- 148 Camden Road
- 6 Bonny Street
- 12 Bonny Street

The analysis of the remaining properties shows generally high levels of compliance also. The few infringements of the BRE guidelines on NSL are set out below.

84-92 Camden Road – Highstone Mansions

As can be seen from the results the majority of rooms see virtually no impact as a result of the proposed development. However, there are some which do see more than a 20% change in their No Skyline Area from the existing situation. However, these are generally relatively modest reductions and if the retained area of No Sky is examined it is clear that all rooms will retain a view of the sky to over 61% of their room area under the proposed situation.

It is also relevant to note that the Average Daylight Factor analysis shows that all bar two of the rooms retain ADF values which exceed the BRE and British Standard minimum requirements. The two which do not are only marginally reduced by 0.17% ADF.

Given the VSC position and the generally good level of retained daylight to the accommodation, by reference to the No Skyline area and ADF analysis; it is clear that the proposed development will not have an overbearing impact on the daylight to the residential accommodation in this building.

2 Bonny Street

The No Skyline analysis shows that all bar one room will easily pass the BRE guideline with changes in No Skyline area being well below the 20% threshold. There is one room at ground floor level which does see more than a 20% change; and therefore will notice an alteration in its daylight distribution. However, as the VSC results show there to be only a very minor impact, the potential for daylight and sky visibility is not materially impacted.

This is further reflected in the Average Daylight Factor analysis which shows that the existing ADF value changes only very marginally by 0.06% from its existing value.

4 Bonny Street

The No Skyline analysis again shows here that the majority of rooms see very little change in their No Skyline area as a result of the proposal. There is however, one ground floor room which does see more than a 20% and therefore there will be a noticeable change in the daylight distribution to this room. The minimal impact arising from the VSC analysis however shows that this room will enjoy good daylight potential.

The Average Daylight Factor which provides additional guidance here shows that the impact of the proposed development is minimal, with the ADF value changing by only 0.05%. This change would be imperceptible.

8 Bonny Street

The No Skyline analysis here shows that there are two rooms which see just over the 20% guideline at 21.3% and 20.9%; these minor breaches of the BRE No Skyline guidance is not of material significance. Both rooms will retain a view of the sky to 62% and 71% of their room areas respectively and both rooms show only a minimal change in their existing ADF values, by a loss of 0.08% ADF.

Given the VSC position of complete BRE compliance, the minimal impact in No Skyline and unnoticeable change in ADF value to daylight to this property will not be adversely affected.

12b Bonny Street

The No Skyline analysis shows that there is one room which sees more than a 20% change in its No Skyline area at 28%. However, 64% of the room retains a view of the sky which for a bedroom, which the BRE guidelines acknowledges as

less important in terms of daylight, is not at all unreasonable. The ADF analysis shows that this room, which is known to be a bedroom, retains an ADF value of 1.5% under the proposed situation therefore significantly exceeding the BRE minimum requirement of 1% for a bedroom. As such, it is clear given the VSC, ADF position and room use that the proposed development will not give rise to a material loss of daylight to this property.

12a Bonny Street

The No Skyline analysis shows that there are two rooms in this property which see more than a 20% loss of sky area within the room. However, the ADF analysis demonstrates that both rooms, one being a reception/living the other a bedroom retain ADF values which exceed the BRE minimum for their room use. This combined with the VSC analysis clearly demonstrates that the proposed development will not have a negative impact on the daylight to this property.

14 Bonny Street

The No Skyline analysis shows there is one room in this property which sees more than a 20% change in its No Skyline area. However, the Average Daylight Factor analysis shows that the retained ADF value meets the BRE minimum requirement of 1.5% for a living room. This coupled with the VSC position which shows clear BRE compliance would suggest that good daylight potential and distribution will be retained within this room under the proposed situation.

14a Bonny Street

The No Skyline analysis shows just one room which sees more than a 20% change in its No Skyline area, and that the ADF analysis shows a drop in existing ADF value of 0.15%. This room which is known to be a living room currently has less than the minimum requirement at 1.47% ADF and that situation is maintained under the proposed situation.

The VSC analysis clearly shows this room will continue to enjoy an unnoticeably changed level of sky component as stated above and as such, the BRE guidelines in that regard are met.

Therefore, we consider that the impact of the proposal on the residential properties surrounding the site meets the BRE Guidelines and is therefore acceptable in planning terms.

Sunlight

The BRE Guidelines specify that only those windows within 90° of due south are relevant for sunlight analysis.

All those windows relevant for sunlight analysis meet the BRE Guideline criteria for sunlight, with the exception of two windows. These windows are located on the ground and first floors of 2 Bonny Street. Both continue to enjoy Total APSH values that exceed the BRE guidelines of 25% APSH, but do experience a change in winter sunlight of more than the 20% guideline.

However, given the fact that he lower angled winter sun is difficult to maintain in urban area developments and that the Total APSH values remain high, this minor impact to two windows is not considered significant.

8.0 CONCLUSIONS

GIA have undertaken a technical daylight and sunlight analysis of the impact of the Squire & Partners proposal upon the surrounding residential properties.

In daylight terms, our analysis shows that all windows meet the BRE guidelines in terms of VSC. The No Skyline analysis shows only a few minor breaches and in those cases the rooms either still enjoy high levels of No Skyline area, over 60%, or the room will retain good ADF levels or levels that are not noticeably changed from the existing situation.

In terms of sunlight the scheme performs very well with just two windows in all of the surrounding properties showing a reduction that exceeds the BRE guidelines and these only in relation to the low angle winter sun and to windows that retain total APSH values that exceed the BRE guidelines.

For a large development such as this, to have so little impact in an urban area, it is clear that this scheme has been developed carefully to respect the amenity of the surrounding properties.

APPENDIX 1 PRINCIPLES OF DAYLIGHT AND SUNLIGHT

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BACKGROUND

The quality of amenity for buildings and open spaces is increasingly becoming the subject of concern and attention for many interested parties.

Historically the Department of Environment provided guidance of these issues and, in this country, this role has now been taken on by the Building Research Establishment (BRE), the British Standards Institution (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 these areas.

Further emphasis has been placed on these issues through the European Directive that require Environmental Impact Assessments (EIA's) for large projects. Part of these assessments include the consideration of the microclimate around and within a proposal. The EIA requires a developer to advise upon, amongst other matters, the quality of and impact to daylight, sunlight, overshadowing, solar glare and light pollution.

It is also clear, particularly through either adopted or emerging Unitary Development Plans (UDP's), that local Authorities take this matter far more seriously than they previously did. There are many instances of planning applications being refused due to impact on daylight and sunlight to neighbouring properties and proportionately more of these refusals are appealed by applicants.

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'. Local Authorities vary in their attitude of how flexible they can be with worsening the impact on the amenity enjoyed by neighbouring owners. In city centres, where there is high density, it can be the subject of hot debate as to whether further loss of amenity is material or not. There are many factors that need to be taken into account and therefore each case has to be considered on its own merits. Clearly, though, there are governing principles which direct and inform on the approach that is taken.

These principles are effectively embodied within the UDP's and the guidance they expressly rely upon. For example, in central London, practically all of the Local Authorities expressly state they will not permit or encourage developments which create a material impact to neighbouring buildings or amenity areas. Often the basis on what is constituted as 'material' will be derived specifically from the BRE Guidelines. The guidelines were produced in 1991, as a direct commission from the Department of the Environment, and entitled 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice'.

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These guidelines are normally the only official document used by local Authorities and consequently they are referred to extensively by designers, consultants and planners. Whilst they are expressly not mandatory and state that they should not be used as an instrument of planning policy, they are heavily relied upon as they advise on the approach, methodology evaluation of impact in daylight and sunlight matters.

THE BRE GUIDELINES

The BRE give criteria and methods for calculating daylight, and sunlight and to some degree overshadowing and through that approach define what they consider as a material impact. As these different methods of calculation vary in their depth of analysis, it is often arguable as to whether the BRE definition of 'material' is applicable in all locations and furthermore if it holds under the different methods of calculation.

As the majority of the controversial daylight and sunlight issues occur within city centres these explanatory notes focus on the relevant criteria and parts of the Handbook which are applicable in such locations.

In the Introduction of 'Site Layout Planning for Daylight and Sunlight' it 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 a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".

Again, the second paragraph of Chapter 2.2 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 reason for including these statements in the Report is to appreciate that when quoting the criteria suggested by the BRE, they should not necessarily be considered as appropriate. However, rather than suggest alternative values, consultants in this field often remind local Authorities that this approach is supportable and thus flexibility applied.

MEASUREMENT AND CRITERIA FOR DAYLIGHT & SUNLIGHT

The BRE handbook provides two main methods of measurement for calculating daylight which we use for the assessment in our Reports. In addition, in conjunction with the BSI and CIBSE it provides a further method in Appendix C of the Handbook. In relation to sunlight only one method is offered for calculating sunlight availability for buildings. There is an overshadowing test offered in connection with open spaces.

DAYLIGHT

In the first instance, if a proposed development falls beneath a 25° angle taken from a point two metres above ground level, then the BRE say that no further analysis is required as there will be adequate skylight (i.e. sky visibility) availability.

The three methods for calculating daylight are as follows:

- (a) Vertical Sky Component (VSC)
- (b) No Sky Contours (NSC)
- (c) Average Daylight Factor (ADF)

Each are briefly described below.

(a) Vertical Sky Component

<u>Methodology</u>

This is defined in the Handbook 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 illuminate on a horizontal plane due to an unobstructed hemisphere of this sky."

"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 ratio referred to in the above definition is the percentage of the total unobstructed view that is available, once obstructions, in the form of buildings (trees are excluded) are placed in front of the point of view. The view is always taken from the centre of the outward face of a window.

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 vertical sky component, 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. Effectively a snap shot is taken from that point of the sky in front of the window, 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.

The diagram comes on an A4 sheet (landscape) and this sheet represents the unobstructed sky, which in one direction equates to a vertical sky component of 39.6%. The obstructions in front of a point of reference are then plotted onto the diagram and the resultant area remaining is proportional to the vertical sky component from that point.

<u>Criteria</u>

The BRE Handbook provides criteria for:

- (a) New Development
- (b) Existing Buildings

A summary of the criteria for each of these elements is given and these are repeated below:-

New Development

Summary

In general, a building will retain the potential for good interior diffuse daylighting provided that on all its main faces:-

- (a) no obstruction, measured in a vertical section perpendicular
 to the main face, from a point 2m above ground level, subtends
 an angle of more than 25 degrees to the horizontal;
- (b) If (a) is not satisfied, then all points on the main face on a line
 2m above ground level are within 4m (measured sideways) of a
 point which has a vertical sky component of 27% or more.

Existing Buildings

Summary

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 either:

 (a) 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;

or

(b) 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.

The VSC calculation has, like the other two methods, both advantages and disadvantages. In fact they are tied together. It is a quick simple test which looks to give an early indication of the potential for light. However, 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.

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(b) No Sky Contours

This is the part (b) of the alternative method of analysis which is given under the Vertical Sky Component heading in this Appendix. 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 adversely affect daylight. It is however, very dependent upon knowing the actual room layouts or having a reasonable understanding of the likely layouts. The contours are also known as daylight distribution contours. They 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 quantative or qualative assessment of the light in the rooms, only where sky can or cannot be seen.

(c) Average Daylight Factor

This is defined in Appendix H of the BRE Document as:

"Ratio of total daylight flux incident on the working plane, expressed as a percentage of the outdoor illuminance on a horizontal plane due to an unobstructed CIE Standard Overcast Sky."

This factor considers interior daylighting to a room and therefore is a more accurate indication of available light in a given room, if details of the room size and use are available.

<u>Criteria</u>

The British Standard, BS8206 Part II gives the following recommendations for the average daylight factor (ADF) in dwellings.

The BRE Handbook provides the formula for calculating the average daylight factor. If the necessary information can be obtained to use the formula then this criteria would be more useful.

Room	Percentage
Kitchen	2%
Living Rooms	1.5%
Bedrooms	1%

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It is sometimes questioned whether the use of the ADF is valid when assessing the impact on neighbouring buildings. Firstly, it is often the case that room layouts and uses may not have been established with certainty. Additionally this method is not cited in the main body of text in the BRE Guidelines but only in Appendix C of that document. It is however, the principal method used by both the British Standard and CIBSE in their detailed daylight publications with which the BRE guide recommends that it should be read.

The counter-argument to this view is that whilst room uses and layouts may be not definitely established, reasonable assumptions can easily be made to give sufficient understanding of the likely quality of light. Building types and layouts for certain buildings, particularly residential, are often similar. In these circumstances reasonable conclusions can be drawn as to whether a particular room will have sufficient light against the British Standards. In addition, the final result is less sensitive to changes in the room layout that the No Sky Contour method as it is an average and this element represents only one of the input factors. It is in cases where rooms sizes have been assumed a more reliable indicator than the No Sky Line method.

Clearly if a room which is being designed for a new development is deemed to have sufficient light against the British Standards, then it should equally follow for a room assessed in a neighbouring existing building.

The average daylight factor considers the light within the room behind the fenestration which serves it. The latter is therefore likely to be more accurate because it takes into account the following:-

- a) All the windows serving the room in question.
- b) The room use.
- c) The size and layout of the room.
- d) The finishes of the room surfaces.

SUMMARY

The VSC (which forms part of the ADF formula) is helpful as an initial first guide, especially where access to the rooms in question is not available. Where the room layouts and uses are established or can be reasonably estimated we consider it appropriate to analyse the average daylight factor as well as the vertical sky component.

SUNLIGHT

(a) Annual Probable Sunlight Hours (APSH) method

Sunlight is measured in the Handbook in a similar manner to the first method given for measuring the VSC.

A separate indicator is used which contains 100 spots, each representing 1% of annual probable sunlight hours.

The BRE calculated that where no obstructions exist, the total annual probable sunlight hours would amount to 1486. Therefore, each dot on the indicator equates to 14.86 hours of the total annual probable sunlight. Again, to use this indicator the obstructions need to be scaled down and overlaid onto the sunlight indicator.

Those spots which remain uncovered by the scaled obstructions are counted and this gives the percentage of total annual probable sunlight hours for that particular reference point. Again, like the VSC, the reference point is taken to be the centre of the window.

<u>Criteria</u>

Again, the BRE Handbook gives criteria for:

- (a) New Development
- (b) Existing Buildings

A summary is given in the handbook on page 12 and this is as follows:-

New Development

Summary

In general, a dwelling or non-domestic building which has a particular requirement for sunlight, will appear reasonably sunlit provided that:

(a) at least one <u>main window</u> wall faces within 90 degrees of due south;

and

(b) on this window wall, all points on a line 2m above ground level are within 4m (measured sideways) of a point which receives at least a quarter of annual probable sunlight hours, including <u>at least 5% of annual probable sunlight hours</u> during the winter months, between 21 September and 21 March.

Existing Buildings

Summary

If a living room of an existing dwelling has a main window facing within 90 degrees of due south, and any part of a new development subtends an angle of more than 25 degrees to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if a point at the centre of the window, in the plane of the inner window wall, receives in the year less than one quarter of annual probable sunlight hours including at least 5% of annual probable sunlight hours between 21 September and 21 March and less than 0.8 times its former sunlight hours during either period.

(b) Area of Permanent Shadow

The BRE Handbook, 'Site Layout Planning for Daylight and Sunlight' also provides criteria for open spaces.

In particular it gives guidance for calculating any areas of open space that may be in permanent shadow on 21 March. There is no criteria for the overshadowing of buildings.

In summary the BRE document states the following:-

"It is suggested that, for it to appear adequately sunlit throughout the year, no more than two-fifths and preferably no more than a quarter of any garden or amenity area should be prevented by buildings from

receiving any sun at all on 21 March. If, as a result of new development, an existing garden or amenity area does not meet these guidelines, and the area which can receive some sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable".

In relation to general overshadowing we often provide, where appropriate, an hourly record for existing and proposed situations, the effect of overshadowing on December 21st, March 21st and June 21st.

For open spaces the permanent shadow criteria is naturally adopted but this offers limited understanding of how a space will feel or appear generally.

CITY CENTRES

The introduction of the BRE document gives the example of *'historic city centres'* being a case where there is the need for flexibility and altering the target values for criteria when appropriate, to reflect other site and layout constraints.

To explain why it is appropriate to alter these values, one needs to go further into the BRE Handbook to examine how the criteria for the vertical sky component criteria was determined and the reason therefore for varying the criteria in City Centres.

Appendix G of the document is dedicated to the use of alternative values and, it also demonstrates the manner in which the criteria for skylight was determined for the Summary given above, i.e. the need for 27% vertical sky component for adequate daylighting.

This figure of 27% was achieved in the following manner:

A theoretical road was created with two storey terraced houses upon either side, approximately twelve metres apart. The houses have windows at ground and first floor level, and a pitched roof with a central ridge.

Thereafter, a reference point was taken at the centre of a ground floor window of one of the properties and a line was drawn from this point to the central ridge of the property on the other side of the road. The angle of this line equated to 25 degrees (the 25 degrees referred to in the summaries given with reference to the criteria for skylight).

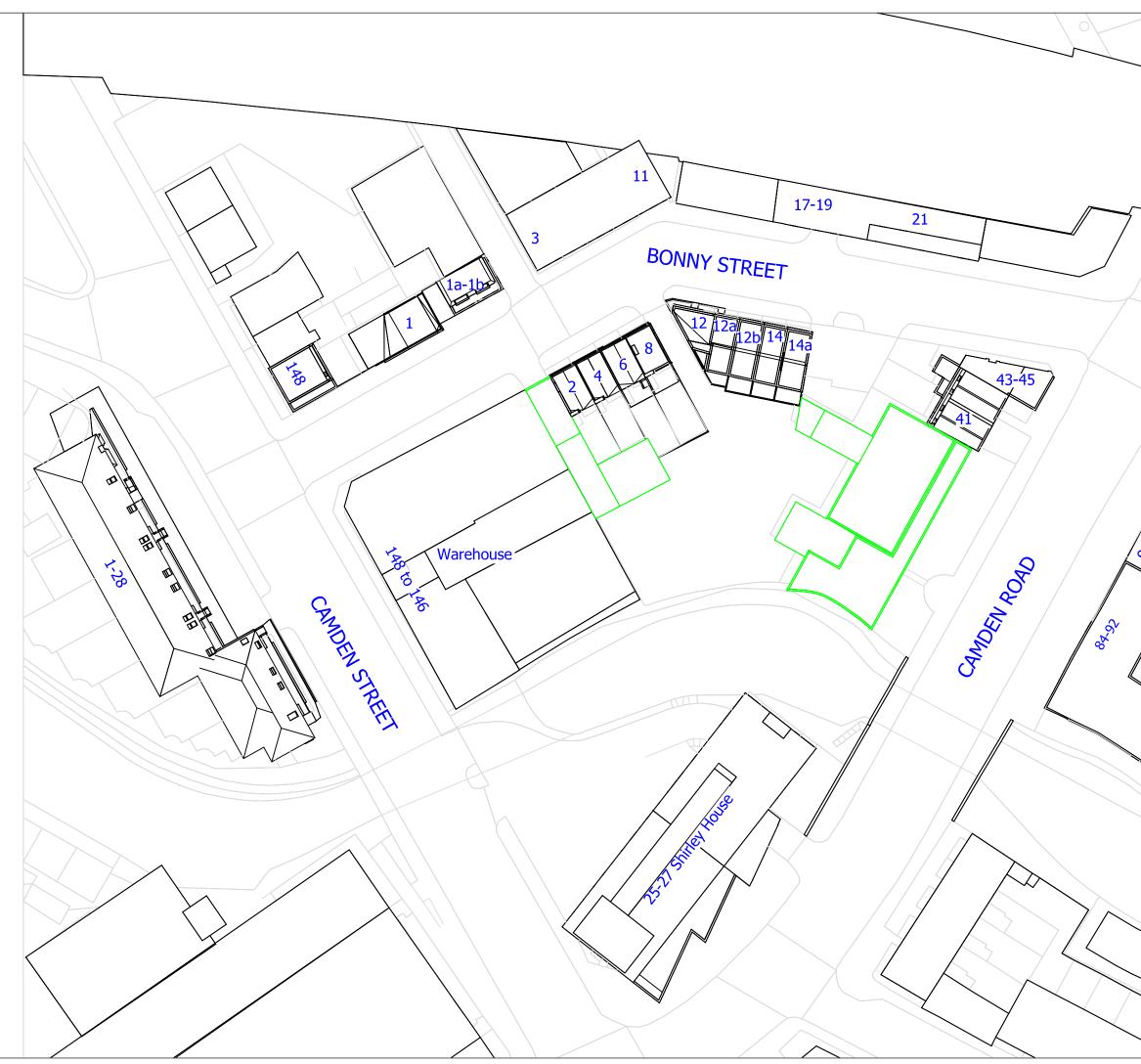
This 25 degrees line obstructs 13% of the totally unobstructed sky available, leaving a resultant figure of 27% which is deemed to give adequate daylighting. This figure of 27% is the recommended criteria referred to earlier in this report. It will be readily appreciated that in a City Centre, this kind of urban form is unlikely and is

impractical. It would therefore be inappropriate to consider values for two storey terraced housing in a City Centre.

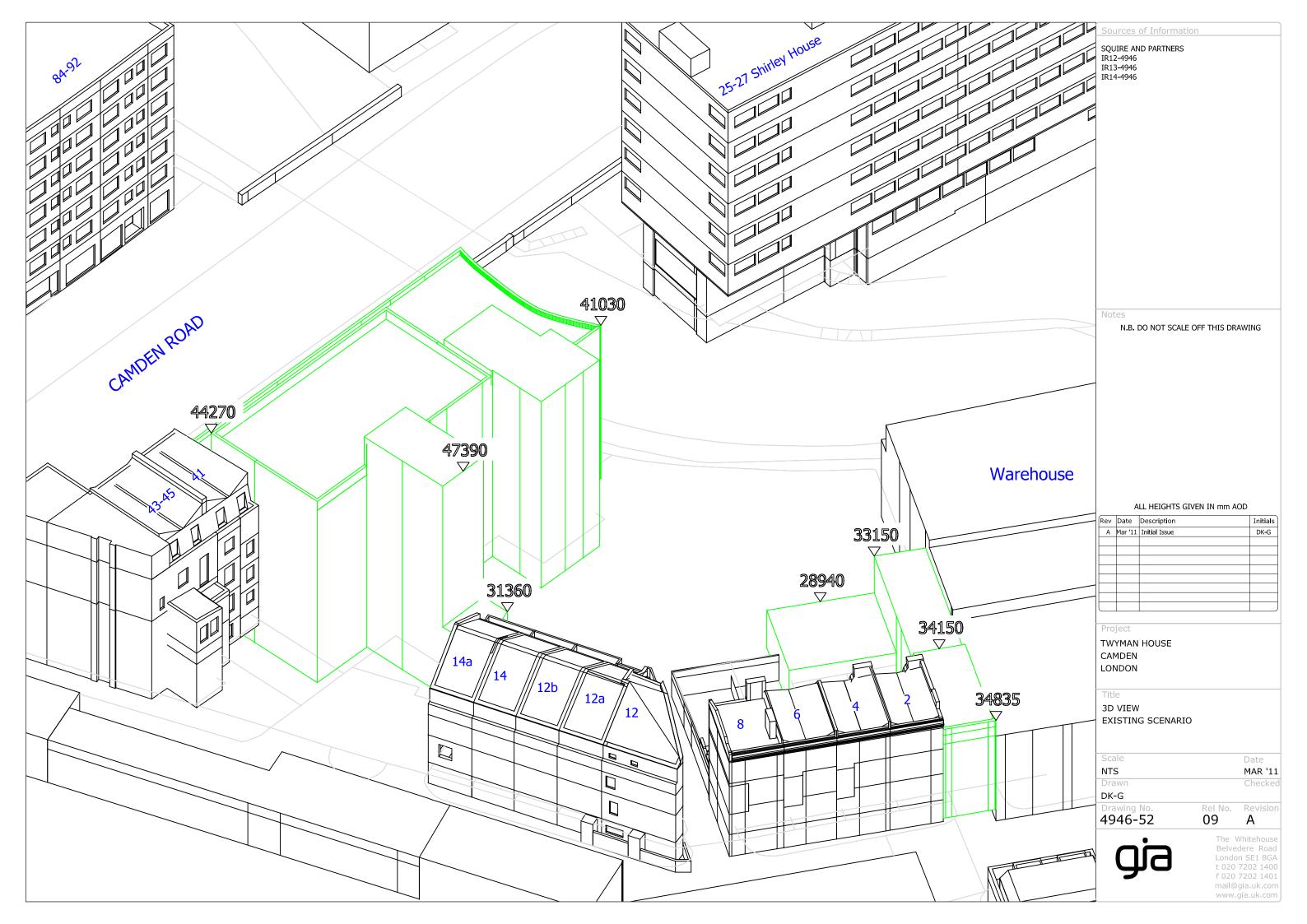
It is therefore sometimes necessary to apply different target criteria or at least acknowledge that the recommendations in the BRE cannot be achieved.

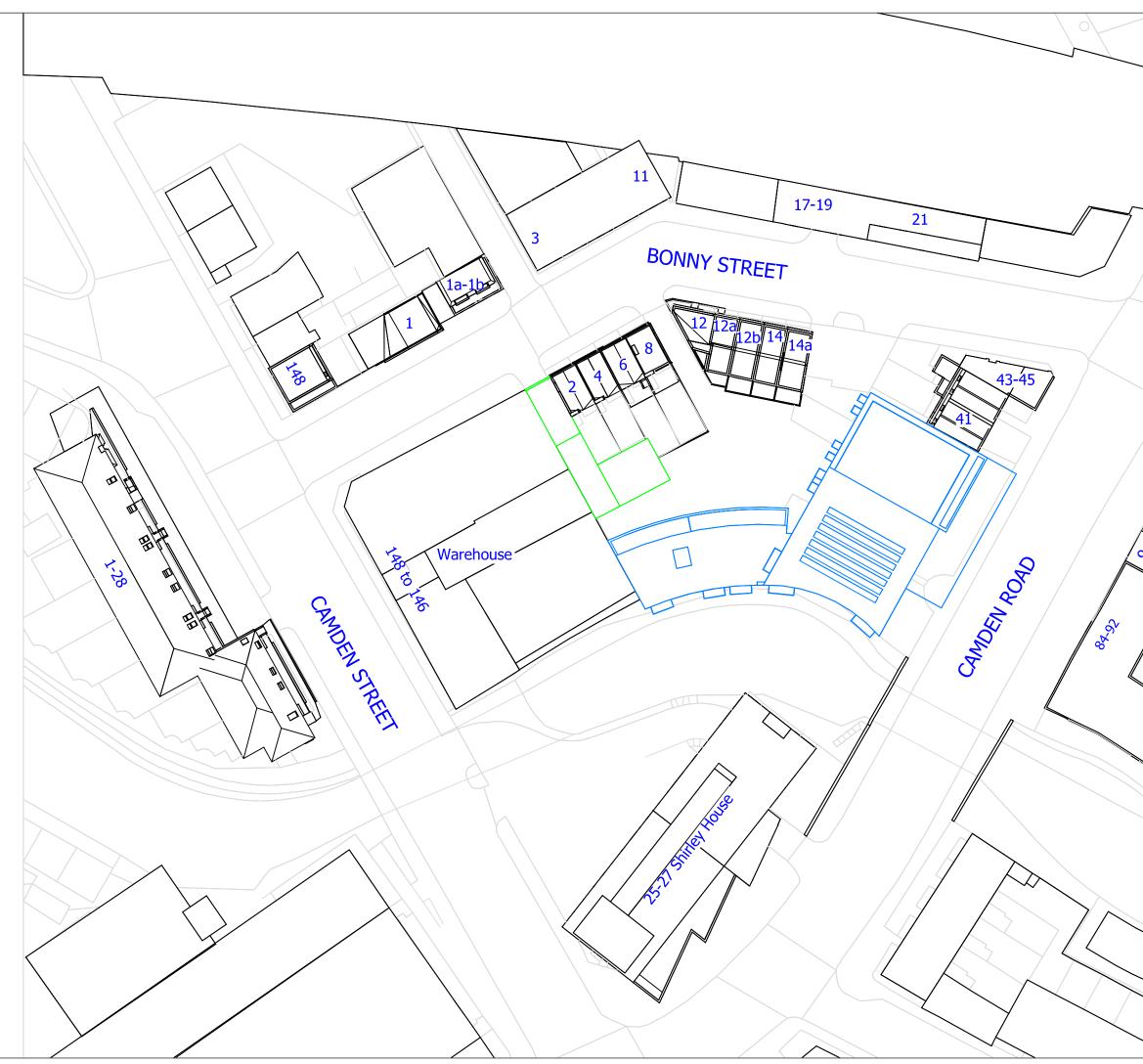
In addition, it is often the case that residential buildings within city centres are served by balconies. Balconies restrict lighting levels even more and thus if they were to be rigidly taken into account, a neighbouring proposal would be artificially and inappropriately constrained. This view is supported by the BRE and is equally another reason for flexible and sensible interpretation of the guidelines.



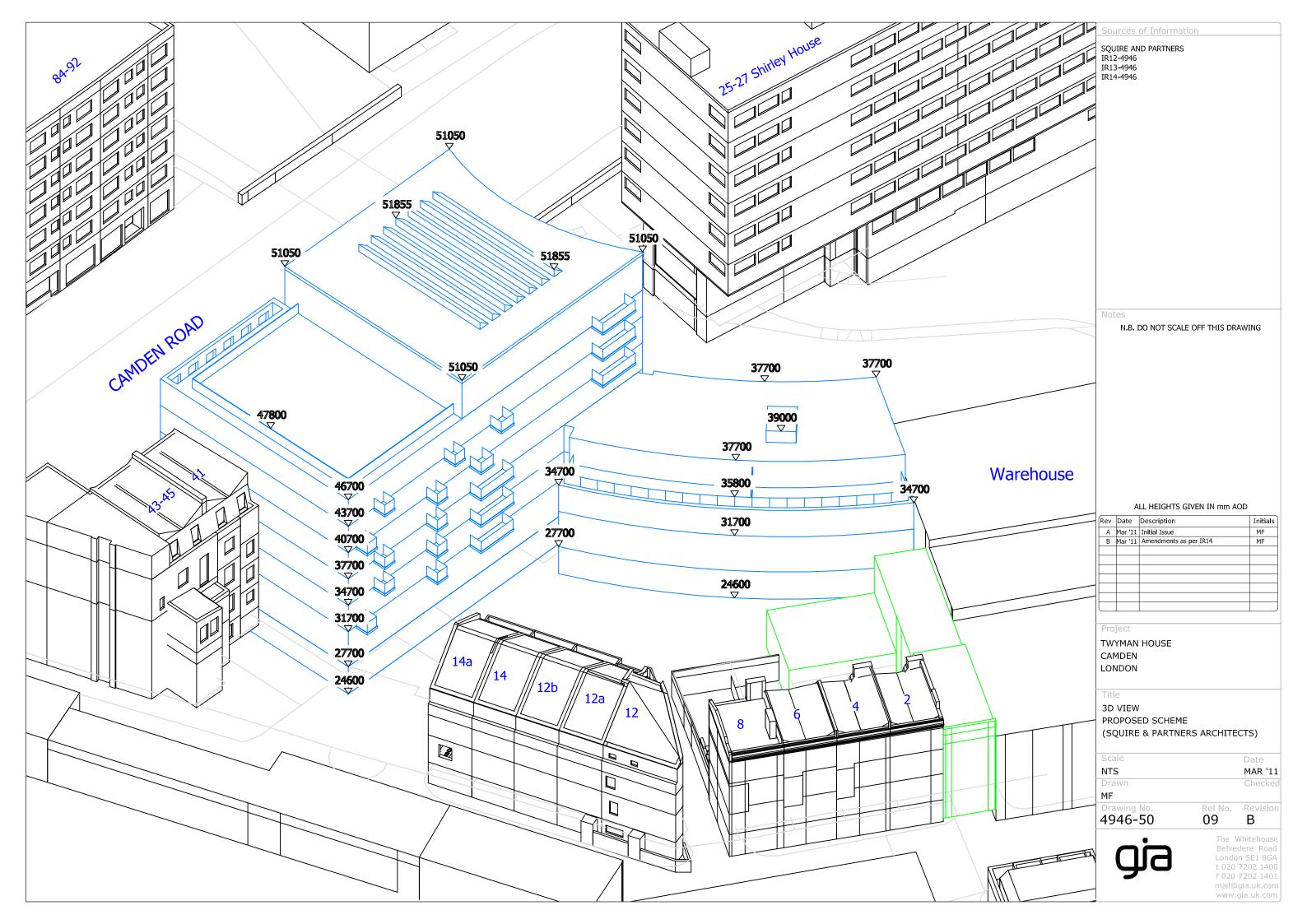


	Sources of Information SQUIRE AND PARTNERS IR12-4946 IR13-4946 IR14-4946
	Notes N.B. DO NOT SCALE OFF THIS DRAWING
8	Rev Date Description Initials A Mar'11 Initial Issue DK-G A A A A
	Project TWYMAN HOUSE CAMDEN
	LONDON Title SITE PLAN EXISTING SCENARIO
	Scale Date 1:600 @ A3 MAR '11 Drawn Checked DK-G Drawing No. Rel No. Revision 4946-51 09 A The Whitehouse Belvedere Road
	The Whitehouse Belvedere Road London SE1 8GA t 020 7202 1400 f 020 7202 1401 mail@gia.uk.com www.gia.uk.com





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Rev A B	N.B. I Date Mar'11	Description Initial Issue Amendments as pe	=	AWING
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(SC Sca 1:6 Dra MF Dra	QUIRE	No.	Rel No. 09 The V Belve Londo t 020	CTS) Date MAR '11 Checked Revision B Whitehouse dere Road n SE1 8GA 7202 1400 7202 1401





VERTICAL SKY COMPONENT (VSC) AND AVERAGE DAYLIGHT FACTOR (ADF)

Existing v Pr	946 (REL_09_4946) oposed Estimated from Pho						/YMAN HOUSE Prop110328 LIGHT ANALYSI	IS						
		Vertical Sky C	Component		Average Daylight Factor									
Room	Window	Existing	Proposed	Loss	%	Room Use	Exis ADF	sting Total	Prop ADF	oosed Total	Loss	%		
1a & 1b Bor	nny Street													
R1/100	W1/100	24.11	24.11	0.00	0.00	RESIDENTIAL	1.09	1.09	1.09	1.09	0.00	0.00		
R2/100 R2/100	W2/100 W3/100	27.30 27.05	27.30 27.05	0.00 0.00	0.00 0.00	RESIDENTIAL RESIDENTIAL	1.10 1.10	2.20	1.10 1.10	2.20	0.00	0.00		
R3/100	W4/100	19.96	19.96	0.00	0.00	HALL	0.26	0.26	0.26	0.26	0.00	0.00		
R4/100 R4/100	W5/100 W6/100	26.55 16.89	26.55 16.89	0.00 0.00	0.00 0.00	RESIDENTIAL RESIDENTIAL	1.31 1.35	2.66	1.31 1.35	2.66	0.00	0.00		
R5/100	W7/100	12.06	12.05	0.01	0.08	RESIDENTIAL	0.85	0.85	0.85	0.85	0.00	0.00		
R1/101 R1/101	W1/101 W2/101	30.43 30.29	30.30 30.19	0.13 0.10	0.43 0.33	RESIDENTIAL RESIDENTIAL	0.95 0.95	1.90	0.95 0.95	1.90	0.01	0.26		
R2/101	W3/101	30.20	30.09	0.11	0.36	RESIDENTIAL	1.26	1.26	1.25	1.25	0.00	0.32		
R3/101	W4/101	30.04	29.92	0.12	0.40	RESIDENTIAL	1.52	1.52	1.52	1.52	0.01	0.33		
R4/101	W5/101	18.47	18.31	0.16	0.87	RESIDENTIAL	1.41	1.41	1.40	1.40	0.01	0.50		
R1/102 R1/102 R1/102	W1/102 W2/102 W3/102	28.97 31.09 28.87	28.30 30.43 28.17	0.67 0.66 0.70	2.31 2.12 2.42	RESIDENTIAL RESIDENTIAL RESIDENTIAL	0.51 0.69 0.52	1.71	0.51 0.67 0.51	1.69	0.03	1.69		
R2/102 R2/102 R2/102	W4/102 W5/102 W6/102	28.79 30.98 28.77	28.12 30.27 28.12	0.67 0.71 0.65	2.33 2.29 2.26	RESIDENTIAL RESIDENTIAL RESIDENTIAL	0.49 0.65 0.48	1.62	0.48 0.64 0.48	1.59	0.03	1.67		

Existing v Pr	946 (REL_09_4946) oposed Estimated from Pho	tographs		TWYMAN HOUSE Prop110328 DAYLIGHT ANALYSIS									
		Vertical Sky C	omponent	Average Daylight Factor Existing Proposed									
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	Total	Loss	%	
3-11 Bonny	Street												
R1/200	W1/200	26.67	26.67	0.00	0.00	RESIDENTIAL	1.24	1.24	1.24	1.24	0.00	0.00	
R2/200	W2/200	26.71	26.57	0.14	0.52	RESIDENTIAL	1.33	1.33	1.32	1.32	0.01	0.38	
R3/200	W3/200	26.91	26.56	0.35	1.30	RESIDENTIAL	1.40	1.40	1.39	1.39	0.01	0.93	
R4/200	W4/200	27.15	26.60	0.55	2.03	RESIDENTIAL	1.33	1.33	1.31	1.31	0.02	1.43	
R5/200	W5/200	25.45	25.19	0.26	1.02	RESIDENTIAL	1.28	1.28	1.27	1.27	0.01	0.70	
R1/201 R1/201	W1/201 W2/201	31.18 31.06	30.72 30.57	0.46 0.49	1.48 1.58	RESIDENTIAL RESIDENTIAL	1.19 1.19	2.38	1.18 1.17	2.35	0.03	1.18	
R2/201 R2/201	W3/201 W4/201	30.97 30.88	30.43 30.30	0.54 0.58	1.74 1.88	RESIDENTIAL RESIDENTIAL	1.13 1.13	2.26	1.12 1.11	2.23	0.03	1.41	
R3/201 R3/201	W5/201 W6/201	30.70 30.69	30.14 29.99	0.56 0.70	1.82 2.28	RESIDENTIAL RESIDENTIAL	1.19 1.19	2.37	1.17 1.17	2.34	0.04	1.60	
R4/201 R4/201	W7/201 W8/201	30.46 29.79	29.79 29.31	0.67 0.48	2.20 1.61	RESIDENTIAL RESIDENTIAL	1.12 1.10	2.22	1.10 1.09	2.18	0.03	1.44	
R5/201 R5/201	W9/201 W10/201	28.82 25.88	28.34 25.35	0.48 0.53	1.67 2.05	RESIDENTIAL RESIDENTIAL	1.18 1.09	2.27	1.16 1.08	2.24	0.03	1.28	
R1/202 R1/202	W1/202 W2/202	32.87 32.75	31.95 31.83	0.92 0.92	2.80 2.81	RESIDENTIAL RESIDENTIAL	0.93 0.93	1.86	0.91 0.91	1.81	0.04	2.37	
R2/202 R2/202	W3/202 W4/202	32.63 32.49	31.75 31.56	0.88 0.93	2.70 2.86	RESIDENTIAL RESIDENTIAL	0.88 0.88	1.77	0.87 0.86	1.73	0.04	2.21	
R3/202 R3/202	W5/202 W6/202	32.37 32.26	31.46 31.33	0.91 0.93	2.81 2.88	RESIDENTIAL RESIDENTIAL	0.93 0.92	1.85	0.91 0.90	1.81	0.04	2.27	
R4/202 R4/202	W7/202 W8/202	32.04 31.58	31.05 30.72	0.99 0.86	3.09 2.72	RESIDENTIAL RESIDENTIAL	0.87 0.86	1.73	0.85 0.84	1.69	0.04	2.37	
R5/202 R5/202	W9/202 W10/202	30.66 27.24	29.88 26.45	0.78 0.79	2.54 2.90	RESIDENTIAL RESIDENTIAL	0.93 0.85	1.77	0.91 0.83	1.74	0.04	1.98	
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Existing v Pro	946 (REL_09_4946) oposed Estimated from Pho			TWYMAN HOUSE Prop110328 DAYLIGHT ANALYSIS										
		Vertical Sky C	omponent		Average Daylight Factor Existing Proposed									
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	osed Total	Loss	%		
41-45 Camd	len Road (Comme	rical)												
R1/401	W1/401	30.29	29.79	0.50	1.65	RESIDENTIAL	0.53	0.53	0.52	0.52	0.01	1.14		
R2/401	W2/401	33.44	32.15	1.29	3.86	RESIDENTIAL	2.04	2.04	1.97	1.97	0.07	3.24		
R3/401	W3/401	31.56	29.40	2.16	6.84	RESIDENTIAL	2.35	2.35	2.22	2.22	0.13	5.41		
41 Camden	Road													
R1/410	W1/410	15.44	13.87	1.57	10.17	RESIDENTIAL	0.92	0.92	0.86	0.86	0.06	6.00		
R1/411	W1/411	18.22	16.34	1.88	10.32	RESIDENTIAL	1.44	1.44	1.35	1.35	0.09	6.37		
R1/412	W1/412	24.82	22.62	2.20	8.86	RESIDENTIAL	1.85	1.85	1.74	1.74	0.11	6.05		
R1/413	W1/413	27.83	25.29	2.54	9.13	RESIDENTIAL	1.47	1.47	1.37	1.37	0.10	6.61		
R1/414 R1/414	W1/414 W2/414	34.05 35.11	32.45 32.59	1.60 2.52	4.70 7.18	RESIDENTIAL RESIDENTIAL	0.78 0.81	1.59	0.75 0.76	1.50	0.08	5.23		
R2/414 R2/414	W3/414 W4/414	31.04 23.26	27.93 21.99	3.11 1.27	10.02 5.46	RESIDENTIAL RESIDENTIAL	0.82 0.67	1.49	0.76 0.64	1.40	0.09	5.85		
R1/420	W1/420	15.37	14.96	0.41	2.67	RESIDENTIAL	0.91	0.91	0.90	0.90	0.02	1.64		
R1/421	W1/421	17.60	17.10	0.50	2.84	RESIDENTIAL	1.23	1.23	1.20	1.20	0.02	1.80		
R2/421	W2/421	13.50	12.89	0.61	4.52	RESIDENTIAL	0.17	0.17	0.16	0.16	0.00	2.38		
R1/422	W1/422	19.60	18.98	0.62	3.16	RESIDENTIAL	1.37	1.37	1.34	1.34	0.03	1.97		
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Existing v Pro	946 (REL_09_4946) posed stimated from Pho				TWYMAN HOUSE Prop110328 DAYLIGHT ANALYSIS							
		Vertical Sky C	omponent					Average Day				
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	ting Total	Prop ADF	osed Total	Loss	%
96 Camden I	Road											
R1/701	W1/701	29.76	27.59	2.17	7.29	RESIDENTIAL	1.68	1.68	1.59	1.59	0.09	5.52
R2/701	W2/701	29.64	27.21	2.43	8.20	RESIDENTIAL	1.71	1.71	1.60	1.60	0.11	6.15
R1/702	W1/702	32.48	30.42	2.06	6.34	RESIDENTIAL	1.64	1.64	1.56	1.56	0.08	5.12
R2/702	W2/702	32.33	30.03	2.30	7.11	RESIDENTIAL	1.66	1.66	1.57	1.57	0.10	5.71
R1/703	W1/703	34.16	32.26	1.90	5.56	RESIDENTIAL	1.45	1.45	1.39	1.39	0.07	4.75
R2/703	W2/703	34.02	31.89	2.13	6.26	RESIDENTIAL	1.47	1.47	1.40	1.40	0.08	5.29
94 Camden I	Road											
R1/801	W1/801	30.12	27.33	2.79	9.26	RESIDENTIAL	2.06	2.06	1.91	1.91	0.14	7.00
R2/801	W2/801	30.08	26.96	3.12	10.37	RESIDENTIAL	1.98	1.98	1.83	1.83	0.16	7.82
R1/802	W1/802	31.57	28.94	2.63	8.33	RESIDENTIAL	1.49	1.49	1.39	1.39	0.10	6.53
R2/802	W2/802	31.51	28.56	2.95	9.36	RESIDENTIAL	1.43	1.43	1.33	1.33	0.10	7.28
R1/803	W1/803	33.79	31.38	2.41	7.13	RESIDENTIAL	1.61	1.61	1.51	1.51	0.10	6.04
R2/803	W2/803	33.72	31.01	2.71	8.04	RESIDENTIAL	1.55	1.55	1.44	1.44	0.10	6.73

Existing v Pro	946 (REL_09_4946) oposed stimated from Pho	tographs					/YMAN HOUSE Prop110328 LIGHT ANALYS	IS				
		Vertical Sky Co	omponent				Fxis	Average Day sting	light Factor Prop	osed		
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	Total	Loss	%
84-92 Highs	tone Mansions, Ca	mden Road										
R1/901	W1/901	29.75	26.29	3.46	11.63	RESIDENTIAL	2.51	2.51	2.29	2.29	0.22	8.68
R2/901	W2/901	28.37	24.66	3.71	13.08	RESIDENTIAL	2.24	2.24	2.03	2.03	0.21	9.41
R3/901	W3/901	28.34	24.42	3.92	13.83	RESIDENTIAL	2.18	2.18	1.96	1.96	0.22	9.97
R4/901	W4/901	29.85	25.76	4.09	13.70	RESIDENTIAL	2.45	2.45	2.20	2.20	0.25	10.22
R5/901	W5/901	29.84	25.57	4.27	14.31	RESIDENTIAL	2.51	2.51	2.24	2.24	0.27	10.63
R6/901	W6/901	28.31	23.87	4.44	15.68	RESIDENTIAL	2.24	2.24	1.99	1.99	0.25	11.30
R7/901	W7/901	28.42	24.00	4.42	15.55	RESIDENTIAL	2.25	2.25	1.99	1.99	0.25	11.22
R8/901	W8/901	29.86	25.38	4.48	15.00	RESIDENTIAL	2.48	2.48	2.20	2.20	0.28	11.13
R9/901	W9/901	30.05	25.58	4.47	14.88	RESIDENTIAL	2.46	2.46	2.19	2.19	0.27	11.09
R10/901	W10/901	28.97	24.64	4.33	14.95	RESIDENTIAL	2.21	2.21	1.96	1.96	0.24	10.93
R11/901	W11/901	29.07	24.70	4.37	15.03	RESIDENTIAL	2.18	2.18	1.94	1.94	0.24	10.99
R12/901	W12/901	30.34	26.20	4.14	13.65	RESIDENTIAL	2.49	2.49	2.23	2.23	0.26	10.25
R1/902	W1/902	32.12	28.78	3.34	10.40	RESIDENTIAL	3.01	3.01	2.76	2.76	0.25	8.24
R2/902	W2/902	30.67	27.10	3.57	11.64	RESIDENTIAL	1.64	1.64	1.50	1.50	0.15	8.89
R3/902	W3/902	30.62	26.85	3.77	12.31	RESIDENTIAL	1.60	1.60	1.45	1.45	0.15	9.32
R4/902	W4/902	32.12	28.15	3.97	12.36	RESIDENTIAL	2.93	2.93	2.64	2.64	0.28	9.71
R5/902	W5/902	32.09	27.93	4.16	12.96	RESIDENTIAL	3.00	3.00	2.70	2.70	0.31	10.17
R6/902	W6/902	30.49	26.19	4.30	14.10	RESIDENTIAL	2.17	2.17	1.94	1.94	0.23	10.69
R7/902	W7/902	30.58	26.27	4.31	14.09	RESIDENTIAL	2.18	2.18	1.94	1.94	0.23	10.67
R8/902	W8/902	32.01	27.62	4.39	13.71	RESIDENTIAL	2.96	2.96	2.64	2.64	0.32	10.69
R9/902	W9/902	32.10	27.74	4.36	13.58	RESIDENTIAL	2.93	2.93	2.62	2.62	0.31	10.66
R10/902	W10/902	30.94	26.73	4.21	13.61	RESIDENTIAL	1.61	1.61	1.44	1.44	0.17	10.39
R11/902	W11/902	31.00	26.77	4.23	13.65	RESIDENTIAL	1.59	1.59	1.42	1.42	0.17	10.40
R12/902	W12/902	32.24	28.24	4.00	12.41	RESIDENTIAL	2.95	2.95	2.66	2.66	0.29	9.81

Existing v Pro	46 (REL_09_4946) posed stimated from Phot						/YMAN HOUSE Prop110328 LIGHT ANALYSI	s				
		Vertical Sky C	omponent				Exis	Average Day ting	light Factor Prop	osed		
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	Total	Loss	%
R1/903	W1/903	34.31	31.19	3.12	9.09	RESIDENTIAL	3.20	3.20	2.95	2.95	0.25	7.72
R2/903	W2/903	32.82	29.47	3.35	10.21	RESIDENTIAL	1.75	1.75	1.60	1.60	0.14	8.25
R3/903	W3/903	32.75	29.23	3.52	10.75	RESIDENTIAL	1.70	1.70	1.55	1.55	0.15	8.66
R4/903	W4/903	34.23	30.51	3.72	10.87	RESIDENTIAL	3.10	3.10	2.82	2.82	0.28	9.12
R5/903	W5/903	34.17	30.26	3.91	11.44	RESIDENTIAL	3.18	3.18	2.88	2.88	0.30	9.56
R6/903	W6/903	32.54	28.49	4.05	12.45	RESIDENTIAL	1.75	1.75	1.58	1.58	0.17	9.87
R7/903	W7/903	32.60	28.55	4.05	12.42	RESIDENTIAL	1.74	1.74	1.57	1.57	0.17	9.93
R8/903	W8/903	34.01	29.87	4.14	12.17	RESIDENTIAL	3.13	3.13	2.81	2.81	0.32	10.07
R9/903	W9/903	34.02	29.91	4.11	12.08	RESIDENTIAL	3.09	3.09	2.78	2.78	0.31	9.97
R10/903	W10/903	32.79	28.85	3.94	12.02	RESIDENTIAL	1.69	1.69	1.53	1.53	0.16	9.62
R11/903	W11/903	32.81	28.88	3.93	11.98	RESIDENTIAL	1.67	1.67	1.51	1.51	0.16	9.63
R12/903	W12/903	33.99	30.29	3.70	10.89	RESIDENTIAL	3.10	3.10	2.82	2.82	0.28	9.07
R1/904	W1/904	36.10	33.26	2.84	7.87	RESIDENTIAL	3.05	3.05	2.83	2.83	0.22	7.09
R2/904	W2/904	34.72	31.69	3.03	8.73	RESIDENTIAL	1.84	1.84	1.70	1.70	0.14	7.50
R3/904	W3/904	34.64	31.47	3.17	9.15	RESIDENTIAL	1.79	1.79	1.65	1.65	0.14	7.83
R4/904	W4/904	35.95	32.59	3.36	9.35	RESIDENTIAL	2.95	2.95	2.70	2.70	0.25	8.34
R5/904	W5/904	36.02	32.48	3.54	9.83	RESIDENTIAL	3.32	3.32	3.03	3.03	0.29	8.75
R6/904	W6/904	34.35	30.71	3.64	10.60	RESIDENTIAL	1.84	1.84	1.68	1.68	0.17	8.96
R7/904	W7/904	34.39	30.73	3.66	10.64	RESIDENTIAL	1.83	1.83	1.67	1.67	0.16	8.97
R8/904	W8/904	35.79	32.03	3.76	10.51	RESIDENTIAL	3.26	3.26	2.96	2.96	0.30	9.23
R9/904	W9/904	35.70	32.00	3.70	10.36	RESIDENTIAL	3.22	3.22	2.92	2.92	0.29	9.11
R10/904	W10/904	34.42	30.87	3.55	10.31	RESIDENTIAL	1.77	1.77	1.62	1.62	0.15	8.69
R11/904	W11/904	34.40	30.89	3.51	10.20	RESIDENTIAL	1.75	1.75	1.60	1.60	0.15	8.60
R12/904	W12/904	35.55	32.22	3.33	9.37	RESIDENTIAL	3.21	3.21	2.95	2.95	0.26	8.22
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Existing v Pro	946 (REL_09_4946) posed stimated from Pho	tographs										
		Vertical Sky C	omponent				Exis	Average Day		osed		
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	Total	Loss	%
R1/905	W1/905	37.49	35.24	2.25	6.00	RESIDENTIAL	3.42	3.42	3.22	3.22	0.20	5.84
R2/905	W2/905	35.91	33.54	2.37	6.60	RESIDENTIAL	1.85	1.85	1.74	1.74	0.11	5.99
R3/905	W3/905	35.86	33.39	2.47	6.89	RESIDENTIAL	1.80	1.80	1.69	1.69	0.11	6.21
R4/905	W4/905	37.38	34.72	2.66	7.12	RESIDENTIAL	3.32	3.32	3.09	3.09	0.23	6.78
R5/905	W5/905	37.28	34.52	2.76	7.40	RESIDENTIAL	3.40	3.40	3.16	3.16	0.24	7.07
R6/905	W6/905	35.60	32.76	2.84	7.98	RESIDENTIAL	1.86	1.86	1.73	1.73	0.13	7.05
R7/905	W7/905	35.62	32.77	2.85	8.00	RESIDENTIAL	1.85	1.85	1.72	1.72	0.13	7.10
R8/905	W8/905	37.06	34.10	2.96	7.99	RESIDENTIAL	3.33	3.33	3.08	3.08	0.25	7.50
R9/905	W9/905	36.95	34.03	2.92	7.90	RESIDENTIAL	3.28	3.28	3.04	3.04	0.24	7.40
R10/905	W10/905	35.63	32.84	2.79	7.83	RESIDENTIAL	1.79	1.79	1.66	1.66	0.13	6.99
R11/905	W11/905	35.61	32.85	2.76	7.75	RESIDENTIAL	1.76	1.76	1.64	1.64	0.12	6.87
R12/905	W12/905	36.77	34.13	2.64	7.18	RESIDENTIAL	3.28	3.28	3.06	3.06	0.22	6.74
R1/906	W1/906	37.65	36.37	1.28	3.40	RESIDENTIAL	3.15	3.15	3.04	3.04	0.11	3.40
R2/906	W2/906	35.43	34.14	1.29	3.64	RESIDENTIAL	1.51	1.51	1.46	1.46	0.05	3.32
R3/906	W3/906	35.41	34.06	1.35	3.81	RESIDENTIAL	1.47	1.47	1.41	1.41	0.05	3.48
R4/906	W4/906	37.58	36.09	1.49	3.96	RESIDENTIAL	3.06	3.06	2.94	2.94	0.12	3.93
R5/906	W5/906	37.52	35.98	1.54	4.10	RESIDENTIAL	3.13	3.13	3.01	3.01	0.13	4.05
R6/906	W6/906	35.38	33.82	1.56	4.41	RESIDENTIAL	1.52	1.52	1.46	1.46	0.06	4.02
R7/906	W7/906	35.34	33.75	1.59	4.50	RESIDENTIAL	1.51	1.51	1.45	1.45	0.06	4.05
R8/906	W8/906	37.36	35.65	1.71	4.58	RESIDENTIAL	3.08	3.08	2.94	2.94	0.14	4.48
R9/906	W9/906	37.52	35.80	1.72	4.58	RESIDENTIAL	3.42	3.42	3.26	3.26	0.16	4.53
R10/906	W10/906	36.20	34.57	1.63	4.50	RESIDENTIAL	1.87	1.87	1.79	1.79	0.08	4.17
R11/906	W11/906	36.20	34.59	1.61	4.45	RESIDENTIAL	1.84	1.84	1.77	1.77	0.08	4.13
R12/906	W12/906	37.41	35.81	1.60	4.28	RESIDENTIAL	3.42	3.42	3.27	3.27	0.14	4.18
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Existing v Pro	946 (REL_09_4946) pposed stimated from Phote	ographs Vertical Sky C	omponent				YMAN HOUSE Prop110328 LIGHT ANALYSI		aylight Factor Proposed						
Room	Window	Existing	Proposed	Loss	%	Room Use	Exis ADF	ting Total		osed Total	Loss	%			
1 to 28 Came		Existing	Troposed	2033			nor	Total	no.	Total	2035	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
R1/2200	W1/2200	1.44	1.44	0.00	0.00	RESIDENTIAL	0.14	0.14	0.14	0.14	0.00	0.00			
R2/2200	W2/2200	2.61	2.61	0.00	0.00	RESIDENTIAL	0.17	0.17	0.17	0.17	0.00	0.00			
R3/2200	W3/2200	24.17	24.17	0.00	0.00	RESIDENTIAL	1.41	1.41	1.41	1.41	0.00	0.00			
R4/2200	W4/2200	24.35	24.35	0.00	0.00	RESIDENTIAL	1.43	1.43	1.43	1.43	0.00	0.00			
R5/2200	W5/2200	2.98	2.98	0.00	0.00	RESIDENTIAL	0.18	0.18	0.18	0.18	0.00	0.00			
R6/2200	W6/2200	1.42	1.42	0.00	0.00	RESIDENTIAL	0.15	0.15	0.15	0.15	0.00	0.00			
R7/2200	W7/2200	15.82	15.82	0.00	0.00	RESIDENTIAL	1.04	1.04	1.04	1.04	0.00	0.00			
R8/2200	W8/2200	4.36	4.35	0.01	0.23	RESIDENTIAL	0.23	0.23	0.23	0.23	0.00	0.00			
R9/2200	W9/2200	2.09	2.08	0.01	0.48	RESIDENTIAL	0.19	0.19	0.19	0.19	0.00	0.00			
R10/2200	W10/2200	3.38	3.38	0.00	0.00	RESIDENTIAL	0.24	0.24	0.24	0.24	0.00	0.00			
R11/2200	W11/2200	5.26	5.27	-0.01	-0.19	RESIDENTIAL	0.25	0.25	0.25	0.25	0.00	0.00			
R12/2200	W12/2200	27.33	27.31	0.02	0.07	RESIDENTIAL	1.57	1.57	1.57	1.57	0.00	0.06			
R13/2200	W13/2200	27.08	27.01	0.07	0.26	RESIDENTIAL	1.56	1.56	1.56	1.56	0.00	0.13			
R14/2200	W14/2200	4.71	4.62	0.09	1.91	RESIDENTIAL	0.22	0.22	0.22	0.22	0.00	0.89			
R15/2200	W15/2200	2.83	2.73	0.10	3.53	RESIDENTIAL	0.22	0.22	0.22	0.22	0.00	1.80			
R16/2200	W16/2200	2.95	2.95	0.00	0.00	RESIDENTIAL	0.23	0.23	0.23	0.23	0.00	0.00			
R17/2200	W17/2200	5.34	5.26	0.08	1.50	RESIDENTIAL	0.25	0.25	0.24	0.24	0.00	0.81			
R18/2200	W18/2200	16.92	16.74	0.18	1.06	RESIDENTIAL	1.00	1.00	0.99	0.99	0.01	0.70			
R19/2200	W19/2200	17.33	17.33	0.00	0.00	RESIDENTIAL	0.43	0.43	0.43	0.43	0.00	0.00			
R20/2200	W20/2200	31.32	31.11	0.21	0.67	RESIDENTIAL	2.08	2.08	2.07	2.07	0.01	0.53			
R21/2200	W21/2200	21.49	21.49	0.00	0.00	RESIDENTIAL	0.72	0.72	0.72	0.72	0.00	0.00			
R22/2200	W22/2200	31.79	31.60	0.19	0.60	RESIDENTIAL	2.10	2.10	2.09	2.09	0.01	0.48			
R1/2201	W1/2201	10.47	10.39	0.08	0.76	BATHROOM	0.40	0.40	0.40	0.40	0.00	0.50			
R2/2201	W2/2201	14.43	14.36	0.07	0.49	KITCHEN	1.21	1.21	1.21	1.21	0.00	0.25			
R3/2201	W3/2201	14.83	14.76	0.07	0.47	KITCHEN	1.24	1.24	1.24	1.24	0.00	0.24			
R4/2201	W4/2201	10.59	10.52	0.07	0.66	BATHROOM	0.39	0.39	0.39	0.39	0.00	0.26			
R5/2201	W5/2201	10.02	10.02	0.00	0.00	RESIDENTIAL	0.93	0.93	0.93	0.93	0.00	0.00			

Existing v Pro	946 (REL_09_4946) oposed stimated from Phot	ographs Vertical Sky C	omponent									
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Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	Total	Loss	%
R6/2201	W6/2201	9.44	9.33	0.11	1.17	BATHROOM	0.38	0.38	0.38	0.38	0.00	0.52
R7/2201	W7/2201	13.62	13.59	0.03	0.22	BATHROOM	0.46	0.46	0.46	0.46	0.00	0.00
R8/2201	W8/2201	16.26	16.21	0.05	0.31	RESIDENTIAL	1.34	1.34	1.34	1.34	0.00	0.15
R9/2201	W9/2201	16.73	16.66	0.07	0.42	RESIDENTIAL	1.35	1.35	1.35	1.35	0.00	0.30
R10/2201	W10/2201	12.46	12.35	0.11	0.88	BATHROOM	0.44	0.44	0.44	0.44	0.00	0.45
R11/2201	W11/2201	12.61	12.43	0.18	1.43	BATHROOM	0.44	0.44	0.44	0.44	0.00	0.68
R12/2201	W12/2201	14.43	14.23	0.20	1.39	RESIDENTIAL	1.22	1.22	1.21	1.21	0.01	0.82
R13/2201	W13/2201	33.38	33.18	0.20	0.60	RESIDENTIAL	2.44	2.44	2.43	2.43	0.01	0.49
R14/2201	W14/2201	27.86	27.68	0.18	0.65	BATHROOM	0.98	0.98	0.98	0.98	0.01	0.51
R15/2201	W15/2201	31.54	31.36	0.18	0.57	RESIDENTIAL	1.96	1.96	1.95	1.95	0.01	0.46
R2/2202	W3/2202	29.32	28.94	0.38	1.30	RESIDENTIAL	2.09	2.09	2.07	2.07	0.02	1.01
R3/2202	W4/2202	14.83	14.45	0.38	2.56	BATHROOM	0.45	0.45	0.44	0.44	0.01	1.55
R4/2202	W5/2202	18.06	17.70	0.36	1.99	KITCHEN	1.18	1.18	1.16	1.16	0.01	1.19
R5/2202	W6/2202	18.32	17.96	0.36	1.97	KITCHEN	1.19	1.19	1.18	1.18	0.02	1.26
R6/2202	W7/2202	15.17	14.82	0.35	2.31	BATHROOM	0.45	0.45	0.45	0.45	0.01	1.33
R7/2202	W8/2202	30.89	30.54	0.35	1.13	RESIDENTIAL	2.22	2.22	2.20	2.20	0.02	0.90
R8/2202	W9/2202	11.47	11.47	0.00	0.00	RESIDENTIAL	0.86	0.86	0.86	0.86	0.00	0.00
R9/2202	W10/2202	12.56	12.48	0.08	0.64	BATHROOM	0.41	0.41	0.41	0.41	0.00	0.24
R10/2202	W11/2202	29.70	29.48	0.22	0.74	RESIDENTIAL	2.09	2.09	2.08	2.08	0.01	0.57
R11/2202	W12/2202	30.58	30.41	0.17	0.56	RESIDENTIAL	2.14	2.14	2.13	2.13	0.01	0.42
R12/2202	W13/2202	16.52	16.36	0.16	0.97	BATHROOM	0.49	0.49	0.48	0.48	0.00	0.62
R13/2202	W14/2202	20.03	19.88	0.15	0.75	RESIDENTIAL	1.28	1.28	1.28	1.28	0.01	0.47
R14/2202	W15/2202	20.00	19.82	0.18	0.90	RESIDENTIAL	1.28	1.28	1.27	1.27	0.01	0.55
R15/2202	W16/2202	16.40	16.21	0.19	1.16	BATHROOM	0.48	0.48	0.48	0.48	0.00	0.62
R16/2202	W17/2202	31.60	31.42	0.18	0.57	RESIDENTIAL	2.20	2.20	2.19	2.19	0.01	0.41
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Existing v Pro	46 (REL_09_4946) posed stimated from Phote	ographs Vertical Sky C	omnonent	Existing Proposed								
Room	Window	Existing	Proposed	Loss	%	Room Use	Exis ADF			osed Total	Loss	%
R17/2202	W18/2202	31.56	31.38	0.18	0.57	RESIDENTIAL	2.19	2.19	2.18	2.18	0.01	0.50
R18/2202	W19/2202	16.60	16.38	0.22	1.33	BATHROOM	0.49	0.49	0.48	0.48	0.00	0.62
R19/2202	W20/2202	20.05	19.86	0.22	0.95	RESIDENTIAL	1.02	1.02	1.01	1.01	0.01	0.59
R20/2202 R20/2202	W21/2202 W22/2202	10.95 33.83	10.82 33.63	0.13 0.20	1.19 0.59	RESIDENTIAL	0.28	5.30	0.28	5.27	0.03	0.53
R21/2202	W23/2202	29.15	28.96	0.19	0.65	RESIDENTIAL	1.97	1.97	1.96	1.96	0.01	0.51
R22/2202	W24/2202	11.43	11.26	0.17	1.49	BATHROOM	0.41	0.41	0.40	0.40	0.00	0.74
R23/2202	W25/2202	16.97	16.80	0.17	1.00	RESIDENTIAL	1.16	1.16	1.16	1.16	0.01	0.60
R1/2203	W1/2203	9.14	8.78	0.36	3.94	RESIDENTIAL	1.00	1.00	0.98	0.98	0.02	2.20
R2/2203	W2/2203	9.89	9.51	0.38	3.84	BATHROOM	0.37	0.37	0.36	0.36	0.01	2.17
R3/2203	W3/2203	18.28	17.90	0.38	2.08	KITCHEN	1.32	1.32	1.30	1.30	0.02	1.29
R4/2203	W4/2203	18.29	17.95	0.34	1.86	KITCHEN	1.31	1.31	1.30	1.30	0.02	1.14
R5/2203	W5/2203	10.10	9.78	0.32	3.17	BATHROOM	0.37	0.37	0.36	0.36	0.01	1.91
R6/2203	W6/2203	5.17	4.86	0.31	6.00	RESIDENTIAL	0.73	0.73	0.71	0.71	0.02	3.27
R7/2203	W7/2203	17.35	17.35	0.00	0.00	RESIDENTIAL	1.24	1.24	1.24	1.24	0.00	0.00
R8/2203	W8/2203	8.42	8.26	0.16	1.90	BATHROOM	0.34	0.34	0.34	0.34	0.00	0.87
R9/2203	W9/2203	7.41	7.15	0.26	3.51	RESIDENTIAL	0.91	0.91	0.90	0.90	0.02	1.86
R10/2203	W10/2203	7.48	7.33	0.15	2.01	RESIDENTIAL	0.93	0.93	0.92	0.92	0.01	1.08
R11/2203	W11/2203	9.13	8.89	0.24	2.63	BATHROOM	0.36	0.36	0.35	0.35	0.01	1.40
R12/2203	W12/2203	21.05	20.83	0.22	1.05	RESIDENTIAL	1.52	1.52	1.51	1.51	0.01	0.72
R13/2203	W13/2203	21.17	20.95	0.22	1.04	RESIDENTIAL	1.52	1.52	1.51	1.51	0.01	0.66
R14/2203	W14/2203	9.32	9.10	0.22	2.36	BATHROOM	0.36	0.36	0.36	0.36	0.01	1.39
R15/2203	W15/2203	8.04	7.84	0.20	2.49	RESIDENTIAL	0.96	0.96	0.94	0.94	0.01	1.26
R16/2203	W16/2203	8.08	8.04	0.04	0.50	RESIDENTIAL	0.96	0.96	0.95	0.95	0.00	0.31
R17/2203	W17/2203	9.53	9.34	0.19	1.99	BATHROOM	0.37	0.37	0.36	0.36	0.00	1.10
R18/2203	W18/2203	21.42	21.23	0.19	0.89	RESIDENTIAL	1.50	1.50	1.49	1.49	0.01	0.60
R19/2203	W19/2203	8.03	8.03	0.00	0.00	RESIDENTIAL	0.87	0.87	0.87	0.87	0.00	0.00
R20/2203	W20/2203	11.25	11.09	0.16	1.42	BATHROOM	0.42	0.42	0.41	0.41	0.00	0.72

Existing v Prop	46 (REL_09_4946) bosed timated from Photo	ographs					/YMAN HOUSE Prop110328 LIGHT ANALYS	S								
		Vertical Sky C	omponent					Average Day								
							Exis	ting	Prop	osed						
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	Total	Loss	%				
R21/2203	W21/2203	18.58	18.41	0.17	0.91	RESIDENTIAL	1.37	1.37	1.36	1.36	0.01	0.59				

Existing v Pro	946 (REL_09_4946) oposed Estimated from Pho						/YMAN HOUSE Prop110328 LIGHT ANALYS		erage Daylight Factor					
		Vertical Sky C	omponent				Fxis	Average Day sting		osed				
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	Total	Loss	%		
148 Camder	n Street													
R1/2100 R1/2100	W1/2100 W2/2100	28.36 27.72	28.10 27.45	0.26 0.27	0.92 0.97	RESIDENTIAL RESIDENTIAL	1.27 2.46	3.73	1.26 2.45	3.71	0.03	0.67		
R1/2101 R1/2101	W1/2101 W2/2101	34.40 30.20	34.40 29.88	0.00 0.32	0.00 1.06	KITCHEN KITCHEN	3.75 1.37	5.12	3.75 1.36	5.11	0.01	0.21		
R3/2101	W4/2101	33.08	32.72	0.36	1.09	RESIDENTIAL	3.10	3.10	3.07	3.07	0.03	0.90		
R1/2102 R1/2102	W1/2102 W2/2102	35.73 31.43	35.73 31.12	0.00 0.31	0.00 0.99	KITCHEN KITCHEN	3.51 1.43	4.95	3.51 1.42	4.93	0.01	0.22		
R3/2102	W4/2102	34.48	34.13	0.35	1.02	RESIDENTIAL	3.31	3.31	3.28	3.28	0.03	0.91		
R1/2103 R1/2103	W1/2103 W2/2103	36.66 32.46	36.66 32.21	0.00 0.25	0.00 0.77	KITCHEN KITCHEN	3.02 1.63	4.65	3.02 1.62	4.64	0.01	0.21		
R3/2103 R3/2103	W4/2103 W5/2103	29.69 38.09	29.42 37.80	0.27 0.29	0.91 0.76	BEDROOM BEDROOM	0.51 0.66	1.17	0.51 0.66	1.17	0.01	0.68		
2 Bonny Str	eet													
R1/1000	W1/1000	14.62	12.61	2.01	13.75	RESIDENTIAL	0.71	0.71	0.65	0.65	0.06	8.16		
R1/1001	W1/1001	18.79	16.22	2.57	13.68	RESIDENTIAL	1.04	1.04	0.95	0.95	0.09	8.45		
R2/1001	W2/1001	19.20	16.58	2.62	13.65	RESIDENTIAL	1.00	1.00	0.92	0.92	0.09	8.50		
R1/1002	W1/1002	23.25	20.95	2.30	9.89	RESIDENTIAL	1.16	1.16	1.09	1.09	0.08	6.55		
R2/1002	W2/1002	23.95	21.65	2.30	9.60	RESIDENTIAL	1.18	1.18	1.10	1.10	0.08	6.44		
R1/1003	W1/1003	28.09	26.02	2.07	7.37	RESIDENTIAL	1.32	1.32	1.25	1.25	0.07	5.36		
R2/1003	W2/1003	25.24	23.18	2.06	8.16	RESIDENTIAL	0.55	0.55	0.52	0.52	0.03	5.61		
4 Bonny Str	eet													
R1/1100	W1/1100	18.38	16.26	2.12	11.53	RESIDENTIAL	0.74	0.74	0.69	0.69	0.05	7.00		
R1/1101	W1/1101	23.31	20.63	2.68	11.50	RESIDENTIAL	1.04	1.04	0.96	0.96	0.08	7.60		
R1/1102	W1/1102	25.99	23.52	2.47	9.50	RESIDENTIAL	1.13	1.13	1.06	1.06	0.08	6.63		
R1/1103	W1/1103	27.38	25.15	2.23	8.14	RESIDENTIAL	1.13	1.13	1.07	1.07	0.07	5.83		
R1/1110	W1/1110	25.05	22.56	2.49	9.94	HALL	1.48	1.48	1.38	1.38	0.10	6.81		
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Existing v Pro	946 (REL_09_4946) posed stimated from Photo						/YMAN HOUSE Prop110328 LIGHT ANALYS								
		Vertical Sky C	omponent				Fxis	Average Day	light Factor	osed					
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	Total	ADF	Total	Loss	%			
6 Bonny Stre	et														
R1/1201	W1/1201	23.20	20.49	2.71	11.68	RESIDENTIAL	1.04	1.04	0.96	0.96	0.08	7.71			
R1/1202	W1/1202	25.03	22.46	2.57	10.27	RESIDENTIAL	0.97	0.97	0.90	0.90	0.07	7.00			
R1/1203	W1/1203	26.40	24.00	2.40	9.09	RESIDENTIAL	1.04	1.04	0.98	0.98	0.07	6.32			
R1/1210	W1/1210	24.64	22.04	2.60	10.55	HALL	1.38	1.38	1.28	1.28	0.10	7.17			
R1/1220 R1/1220	W1/1220 DW2/1220	22.01 18.87	18.70 15.31	3.31 3.56	15.04 18.87	RESIDENTIAL RESIDENTIAL	3.63 0.17	3.79	3.27 0.15	3.42	0.38	9.88			
8 Bonny Stre	et														
R1/1301	W1/1301	21.33	18.70	2.63	12.33	RESIDENTIAL	0.99	0.99	0.91	0.91	0.08	7.97			
R1/1302	W1/1302	24.09	21.43	2.66	11.04	RESIDENTIAL	1.01	1.01	0.94	0.94	0.08	7.43			
R1/1303	W1/1303	27.19	24.60	2.59	9.53	RESIDENTIAL	1.05	1.05	0.98	0.98	0.07	6.74			
R1/1310	W1/1310	23.38	20.82	2.56	10.95	HALL	1.27	1.27	1.18	1.18	0.09	7.33			
R1/1320 R1/1320 R1/1320	W1/1320 DW2/1320 W3/1320	20.98 21.01 18.27	17.42 17.66 15.36	3.56 3.35 2.91	16.97 15.94 15.93	RESIDENTIAL RESIDENTIAL RESIDENTIAL	0.79 1.14 0.72	2.65	0.70 1.02 0.65	2.37	0.28	10.38			
12 Bonny Str	reet														
R1/1400 R1/1400	W1/1400 W2/1400	7.28 14.59	7.09 14.59	0.19 0.00	2.61 0.00	RESIDENTIAL RESIDENTIAL	0.23 0.47	0.70	0.23 0.47	0.70	0.00	0.43			
R1/1401 R1/1401 R1/1401	W1/1401 W2/1401 W3/1401	11.16 12.92 20.27	11.06 12.79 19.97	0.10 0.13 0.30	0.90 1.01 1.48	RESIDENTIAL RESIDENTIAL RESIDENTIAL	0.28 0.31 0.68		0.28 0.30 0.67						
R1/1401	W4/1401	19.95	19.95	0.00	0.00	RESIDENTIAL	0.40	1.66	0.40	1.65	0.01	0.54			
R1/1402 R1/1402	W1/1402 W4/1402	17.32 24.63	17.31 24.63	0.01 0.00	0.06 0.00	RESIDENTIAL RESIDENTIAL	0.54 0.73	1.27	0.54 0.73	1.27	0.00	0.00			
R2/1402 R2/1402	W2/1402 W3/1402	20.68 25.27	20.56 25.04	0.12 0.23	0.58 0.91	RESIDENTIAL RESIDENTIAL	0.76 0.86	1.62	0.75 0.86	1.61	0.01	0.49			
R1/1403 R1/1403 R1/1403	W1/1403 W2/1403 W4/1403	27.47 27.31 23.14	27.47 27.21 23.14	0.00 0.10 0.00	0.00 0.37 0.00	RESIDENTIAL RESIDENTIAL RESIDENTIAL	0.39 0.37 0.15		0.39 0.37 0.15						
R1/1403	W5/1403	23.40	23.40	0.00	0.00	RESIDENTIAL	0.15	1.06	0.15	1.05	0.00	0.09			
R1/1404 R1/1404	W1/1404 W2/1404	30.81 34.58	30.81 33.23	0.00 1.35	0.00 3.90	RESIDENTIAL RESIDENTIAL	0.37 2.94	3.31	0.37 2.84	3.21	0.10	3.05			

Existing v Pro	roject No: 4946 (REL_09_4946) xisting v Proposed oom Uses Estimated from Photographs Vertical Sky Component						VYMAN HOUSE Prop110328 LIGHT ANALYS					
		Vertical Sky C	omponent					Average Day	light Factor			
Room	Window	Existing	Proposed	Loss	%	Room Use	ADF	sting Total	Prop ADF	osed Total	Loss	%
12b Bonny S		Lineting	. Toptota					. otu				
R1/1501 R1/1501	W1/1501 W2/1501	25.29 25.88	24.73 23.09	0.56 2.79	2.21 10.78	RECEPTION RECEPTION	0.88 1.35	2.23	0.86 1.25	2.11	0.11	5.12
R1/1502	W1/1502	28.00	25.57	2.43	8.68	BEDROOM	1.61	1.61	1.51	1.51	0.10	6.27
R1/1503	W1/1503	32.21	29.83	2.38	7.39	STUDY	3.82	3.82	3.59	3.59	0.23	5.94
12a Bonny S	treet											
R1/1601	W1/1601	26.19	22.56	3.63	13.86	RECEPTION	1.68	1.68	1.52	1.52	0.16	9.59
R1/1602	W1/1602	28.28	24.93	3.35	11.85	BEDROOM	1.51	1.51	1.38	1.38	0.13	8.60
R1/1603	W1/1603	30.84	28.30	2.54	8.24	STUDY	3.63	3.63	3.40	3.40	0.23	6.34
14 Bonny Str	reet											
R1/1701	W1/1701	24.30	20.68	3.62	14.90	RECEPTION	1.64	1.64	1.48	1.48	0.16	10.01
R1/1702	W1/1702	26.32	22.92	3.40	12.92	BEDROOM	1.48	1.48	1.35	1.35	0.13	8.98
R1/1703	W1/1703	28.87	26.37	2.50	8.66	STUDY	3.49	3.49	3.27	3.27	0.22	6.36
14a Bonny S	treet											
R1/1801	W1/1801	21.86	18.34	3.52	16.10	RECEPTION	1.47	1.47	1.32	1.32	0.15	10.48
R2/1801 R2/1801	W2/1801 W3/1801	19.39 21.23	18.71 21.23	0.68 0.00	3.51 0.00	KITCHEN KITCHEN	0.67 1.60	2.28	0.66 1.60	2.26	0.02	0.66
R1/1802	W1/1802	23.67	20.46	3.21	13.56	BEDROOM	1.46	1.46	1.33	1.33	0.13	8.96
R1/1803 R1/1803	W1/1803 W2/1803	25.81 21.42	24.00 20.05	1.81 1.37	7.01 6.40	BEDROOM BEDROOM	2.79 0.53	3.32	2.66 0.51	3.16	0.16	4.73

Daylight Distribution (No-Sky)

Room/		Whole	Prev	New	Loss	%Loss
Floor	Room Use	Room	sq ft	sq ft	sq ft	
1a & 1b Bonny St	reet					
la a lo bonny ot						
R1/100	RESIDENTIAL	132.5	120.4	120.4	0.0	0.0
R2/100	RESIDENTIAL	149.2	147.0	147.0	0.0	0.0
R4/100	RESIDENTIAL	110.0	106.3	106.3	0.0	0.0
R5/100	RESIDENTIAL	66.5	16.3	16.3	0.0	0.0
R1/101	RESIDENTIAL	157.5	155.3	155.3	0.0	0.0
R2/101	RESIDENTIAL	99.8	97.3	97.3	0.0	0.0
R3/101	RESIDENTIAL	78.6	75.2	75.2	0.0	0.0
R4/101	RESIDENTIAL	74.8	47.3	47.3	0.0	0.0
R1/102	RESIDENTIAL	165.4	161.6	161.6	0.0	0.0
R2/102	RESIDENTIAL	178.8	173.2	173.2	0.0	0.0
3-11 Bonny Stree	et					
R1/200	RESIDENTIAL	148.8	142.4	142.4	0.0	0.0
R1/200	RESIDENTIAL	134.4	129.1	129.1	0.0	0.0
R3/200	RESIDENTIAL	123.0	118.7	118.7	0.0	0.0
R4/200	RESIDENTIAL	136.6	131.1	131.1	0.0	0.0
R5/200	RESIDENTIAL	134.4	129.1	129.1	0.0	0.0
R1/201	RESIDENTIAL	212.7	209.6	209.6	0.0	0.0
R2/201	RESIDENTIAL	225.6	221.8	221.8	0.0	0.0
R3/201	RESIDENTIAL	209.8	206.7	206.7	0.0	0.0
R4/201	RESIDENTIAL	225.7	221.6	221.6	0.0	0.0
R5/201	RESIDENTIAL	198.2	194.6	194.6	0.0	0.0
R1/202	RESIDENTIAL	212.7	208.7	208.7	0.0	0.0
R2/202	RESIDENTIAL	225.6	220.9	220.9	0.0	0.0
R3/202	RESIDENTIAL	209.8	205.8	205.8	0.0	0.0
R4/202	RESIDENTIAL	225.7	221.2	221.2	0.0	0.0
R5/202	RESIDENTIAL	198.2	193.3	193.3	0.0	0.0
41-45 Camden Ro	oad					
R1/401	RESIDENTIAL	109.3	104.4	103.5	0.9	0.9
R2/401	RESIDENTIAL	107.7	104.7	104.7	0.0	0.0
R3/401	RESIDENTIAL	126.4	124.0	123.9	0.1	0.1
41 Camden Road						
R1/410	RESIDENTIAL	115.7	97.3	92.2	5.1	5.2
R1/411	RESIDENTIAL	115.7	110.1	108.2	1.8	1.6
R1/412	RESIDENTIAL	115.7	111.2	109.7	1.6	1.4
R1/413	RESIDENTIAL	115.7	111.2	109.5	1.7	1.5
R1/414	RESIDENTIAL	233.3	221.8	220.5	1.2	0.5
R2/414	RESIDENTIAL	217.1	195.2	186.0	9.2	4.7
R1/420	RESIDENTIAL	77.7	62.2	58.0	4.2	6.8
R1/421	RESIDENTIAL	77.7	67.6	62.6	4.9	7.2
R2/421	RESIDENTIAL	65.7	21.2	21.0	0.2	0.9
R1/422	RESIDENTIAL	77.7	67.3	62.4	4.9	7.3

Room/		Whole	Prev	New	Loss	%Loss
Floor	Room Use	Room	sq ft	sq ft	sq ft	
96 Camden Road						
, o cumuon nouu						
R1/701	RESIDENTIAL	115.7	113.5	110.9	2.6	2.3
R2/701	RESIDENTIAL	112.4	110.6	106.4	4.2	3.8
R1/702	RESIDENTIAL	115.7	113.0	113.0	0.0	0.0
R2/702	RESIDENTIAL	112.4	110.1	110.1	0.0	0.0
R1/703	RESIDENTIAL	115.7	113.0	113.0	0.0	0.0
R2/703	RESIDENTIAL	112.4	110.1	110.1	0.0	0.0
94 Camden Road						
R1/801	RESIDENTIAL	108.5	103.4	97.9	5.6	5.4
R2/801	RESIDENTIAL	115.3	109.7	97.5	12.2	11.1
R1/802	RESIDENTIAL	108.5	105.9	100.9	5.0	4.7
R2/802	RESIDENTIAL	115.3	112.7	102.2	10.4	9.2
R1/803	RESIDENTIAL	108.5	105.9	105.9	0.0	0.0
R2/803	RESIDENTIAL	115.3	112.7	112.7	0.0	0.0
84-92 Highstone	Mansions, Cam	den Road				
R1/901	RESIDENTIAL	123.8	104.8	82.8	22.0	21.0
R2/901	RESIDENTIAL	43.8	43.7	32.8	10.8	24.7
R3/901	RESIDENTIAL	46.4	46.1	34.5	11.6	25.2
R4/901	RESIDENTIAL	129.3	110.9	82.0	28.8	26.0
R5/901	RESIDENTIAL	124.3 43.9	109.1	75.6	33.5	30.7
R6/901 R7/901	RESIDENTIAL RESIDENTIAL	43.9 43.8	43.7 43.7	26.9 26.9	16.8 16.8	38.4 38.4
R8/901	RESIDENTIAL	43.8 126.7	43.7 113.0	80.4	32.6	28.8
R9/901	RESIDENTIAL	129.3	122.6	94.8	27.9	22.8
R10/901	RESIDENTIAL	46.7	46.4	34.1	12.4	26.7
R11/901	RESIDENTIAL	48.1	47.7	35.2	12.5	26.2
R12/901	RESIDENTIAL	128.5	126.3	107.2	19.1	15.1
R1/902	RESIDENTIAL	123.8	122.5	111.8	10.7	8.7
R2/902	RESIDENTIAL	62.4	60.7	49.4	11.3	18.6
R3/902	RESIDENTIAL	65.9	64.2	52.2	11.9	18.5
R4/902	RESIDENTIAL	129.3	128.1	111.8	16.3	12.7
R5/902	RESIDENTIAL	124.3	123.1	100.3	22.8	18.5
R6/902	RESIDENTIAL	43.9	42.2	39.9	2.3	5.5
R7/902	RESIDENTIAL	43.8	42.2	39.4	2.8	6.6
R8/902	RESIDENTIAL	126.7	125.5	102.5	22.9	18.2
R9/902	RESIDENTIAL	129.3	128.3	112.5	15.8	12.3
R10/902	RESIDENTIAL	66.4	64.6	43.7	20.9	32.4
R11/902	RESIDENTIAL	68.4	66.5	45.9	20.6	31.0
R12/902	RESIDENTIAL	128.5	127.3	117.4	9.9	7.8
R1/903	RESIDENTIAL	123.8	122.5	122.5	0.0	0.0
R2/903	RESIDENTIAL	62.4	60.7	60.7	0.0	0.0
R3/903	RESIDENTIAL	65.9 120.2	64.2	64.2	0.0	0.0
R4/903	RESIDENTIAL	129.3	128.1	128.1	0.0 E 1	0.0
R5/903	RESIDENTIAL	124.3	123.1	117.9	5.1	4.1

Room/		Whole	Prev	New	Loss	%Loss
Floor	Room Use	Room	sq ft	sq ft	sq ft	
R6/903	RESIDENTIAL	61.0	59.3	54.0	5.4	9.1
R7/903	RESIDENTIAL	62.0	60.3	52.4	7.9	13.1
R8/903	RESIDENTIAL	126.7	125.5	118.0	7.5	6.0
R9/903	RESIDENTIAL	129.3	128.3	120.5	7.8	6.1
R10/903	RESIDENTIAL	66.4	64.6	50.8	13.8	21.4
R11/903	RESIDENTIAL	68.4	66.5	53.5	13.1	19.7
R11/903	RESIDENTIAL	128.5	127.3	119.2	8.1	6.4
R1/904	RESIDENTIAL	123.8	122.5	122.5	0.0	0.0
R1/904 R2/904	RESIDENTIAL	62.4	61.7	61.7	0.0	0.0
R3/904	RESIDENTIAL	65.9	65.2	65.2	0.0	0.0
R4/904	RESIDENTIAL	129.3	128.1	128.1	0.0	0.0
R5/904	RESIDENTIAL	124.3	123.9	122.8	1.2	1.0
R6/904	RESIDENTIAL	61.0	60.3	59.1	1.2	2.0
R7/904	RESIDENTIAL	62.0	61.3	59.3	2.0	3.3
R8/904	RESIDENTIAL	126.7	126.3	124.1	2.2	1.7
R9/904	RESIDENTIAL	129.3	128.8	127.2	1.5	1.2
R10/904	RESIDENTIAL	66.4	65.6	63.1	2.5	3.8
R11/904	RESIDENTIAL	68.4	67.6	65.1	2.5	3.7
R12/904	RESIDENTIAL	128.5	128.1	126.4	1.7	1.3
R1/905	RESIDENTIAL	123.8	122.5	122.5	0.0	0.0
R2/905	RESIDENTIAL	62.4	60.7	60.7	0.0	0.0
R3/905	RESIDENTIAL	65.9	64.2	64.2	0.0	0.0
R4/905	RESIDENTIAL	129.3	128.1	128.1	0.0	0.0
R5/905	RESIDENTIAL	124.3	123.1	123.1	0.0	0.0
R6/905	RESIDENTIAL	61.0	59.3	59.3	0.0	0.0
R7/905	RESIDENTIAL	62.0	60.3	60.3	0.0	0.0
R8/905	RESIDENTIAL	126.7	125.5	125.5	0.0	0.0
R9/905	RESIDENTIAL	129.3	128.0	128.0	0.0	0.0
R10/905	RESIDENTIAL	66.4	64.6	64.6	0.0	0.0
R11/905	RESIDENTIAL	68.4	66.5	66.5	0.0	0.0
R12/905	RESIDENTIAL	128.5	127.3	127.3	0.0	0.0
R1/906	RESIDENTIAL	123.8	122.5	122.5	0.0	0.0
R2/906	RESIDENTIAL	62.4	60.7	60.7	0.0	0.0
R3/906	RESIDENTIAL	65.9	64.2	64.2	0.0	0.0
R4/906	RESIDENTIAL	129.3	128.1	128.1	0.0	0.0
R5/906	RESIDENTIAL	124.3	123.1	123.1	0.0	0.0
R6/906	RESIDENTIAL	61.0	59.3	59.3	0.0	0.0
R7/906	RESIDENTIAL	62.0	60.3	60.3	0.0	0.0
R8/906	RESIDENTIAL	126.7	125.5	125.5	0.0	0.0
R9/906	RESIDENTIAL	129.3	128.2	128.2	0.0	0.0
R10/906	RESIDENTIAL	66.4	64.6	64.6	0.0	0.0
R11/906	RESIDENTIAL	68.4	66.5	66.5	0.0	0.0
R12/906	RESIDENTIAL	128.5	127.3	127.3	0.0	0.0

Room/		Whole	Prev	New	Loss	%Loss
Floor	Room Use	Room	sq ft	sq ft	sq ft	
1 to 28 Camden S	Street					
R1/2200	RESIDENTIAL	76.0	42.3	42.3	0.0	0.0
R2/2200	RESIDENTIAL	96.3	48.5	48.5	0.0	0.0
R3/2200	RESIDENTIAL	122.3	115.7	115.7	0.0	0.0
R4/2200	RESIDENTIAL	122.1	116.1	116.1	0.0	0.0
R5/2200	RESIDENTIAL	95.1	73.0	73.0	0.0	0.0
R6/2200	RESIDENTIAL	66.0	47.6	47.6	0.0	0.0
R7/2200	RESIDENTIAL	136.1	123.5	123.5	0.0	0.0
R8/2200	RESIDENTIAL	92.4	68.4	68.4	0.0	0.0
R9/2200	RESIDENTIAL	69.1	56.5	56.5	0.0	0.0
R10/2200	RESIDENTIAL	69.2	58.2	58.2	0.0	0.0
R11/2200	RESIDENTIAL	94.9	67.0	67.0	0.0	0.0
R12/2200	RESIDENTIAL	123.2	120.9	120.9	0.0	0.0
R13/2200	RESIDENTIAL	123.1	120.5	120.5	0.0	0.0
R14/2200	RESIDENTIAL	99.6	61.1	61.1	0.0	0.0
R15/2200	RESIDENTIAL	65.5	54.8	54.8	0.0	0.0
R16/2200	RESIDENTIAL	65.6	51.8	51.8	0.0	0.0
R17/2200	RESIDENTIAL	96.1	68.6	68.6	0.0	0.0
R18/2200	RESIDENTIAL	151.6	137.9	137.9	0.0	0.0
R19/2200	RESIDENTIAL	110.6	91.3	91.3	0.0	0.0
R20/2200	RESIDENTIAL	122.1	120.3	120.3	0.0	0.0
R21/2200	RESIDENTIAL	57.8	52.0	52.0	0.0	0.0
R22/2200	RESIDENTIAL	122.8	121.0	121.0	0.0	0.0
R1/2201	BATHROOM	94.0	82.6	82.6	0.0	0.0
R2/2201	KITCHEN	111.8	110.0	110.0	0.0	0.0
R3/2201	KITCHEN	111.8	110.0	110.0	0.0	0.0
R4/2201	BATHROOM	95.0	82.6	82.6	0.0	0.0
R5/2201	RESIDENTIAL	124.6	115.6	115.6	0.0	0.0
R6/2201	BATHROOM	93.0	63.8	63.8	0.0	0.0
R7/2201	BATHROOM	94.5	83.5	83.5	0.0	0.0
R8/2201	RESIDENTIAL	111.2	109.1	109.1	0.0	0.0
R9/2201	RESIDENTIAL	112.3	110.3	110.3	0.0	0.0
R10/2201	BATHROOM	94.0	82.2	82.2	0.0	0.0
R11/2201	BATHROOM	94.4	83.1	83.1	0.0	0.0
R12/2201	RESIDENTIAL	114.8	112.7	112.7	0.0	0.0
R13/2201	RESIDENTIAL	122.1	120.3	120.3	0.0	0.0
R14/2201	BATHROOM	57.8	53.4	53.4	0.0	0.0
R15/2201 R2/2202	RESIDENTIAL RESIDENTIAL	122.8 121.1	120.6 119.3	120.6 119.3	0.0 0.0	0.0 0.0
R3/2202	BATHROOM	76.2	65.1	65.1	0.0	0.0
R4/2202	KITCHEN	106.4	99.8	99.8	0.0	0.0
R5/2202	KITCHEN	106.4	99.8	99.8	0.0	0.0
R6/2202	BATHROOM	75.4	63.3	63.3	0.0	0.0
R7/2202	RESIDENTIAL	120.7	119.0	119.0	0.0	0.0
R8/2202	RESIDENTIAL	120.3	109.9	109.9	0.0	0.0
R9/2202	BATHROOM	75.4	58.2	58.2	0.0	0.0
R10/2202	RESIDENTIAL	122.5	120.8	120.8	0.0	0.0
R11/2202	RESIDENTIAL	122.7	120.6	120.6	0.0	0.0
R12/2202	BATHROOM	75.5	64.5	64.5	0.0	0.0
R13/2202	RESIDENTIAL	106.8	100.1	100.1	0.0	0.0
R14/2202	RESIDENTIAL	107.0	100.3	100.3	0.0	0.0
R15/2202	BATHROOM	76.1	65.0	65.0	0.0	0.0
R16/2202	RESIDENTIAL	122.2	120.4	120.4	0.0	0.0

Room/		Whole	Prev	New	Loss	%Loss
Floor	Room Use	Room	sq ft	sq ft	sq ft	
R17/2202	RESIDENTIAL	123.1	121.3	121.3	0.0	0.0
R18/2202	BATHROOM	75.6	64.6	64.6	0.0	0.0
R19/2202	RESIDENTIAL	153.9	143.3	143.3	0.0	0.0
R20/2202	RESIDENTIAL	133.0	132.9	132.9	0.0	0.0
R21/2202	RESIDENTIAL	106.3	103.3	103.3	0.0	0.0
R22/2202	BATHROOM	71.4	56.7	56.7	0.0	0.0
R23/2202	RESIDENTIAL	105.7	98.6	98.6	0.0	0.0
R1/2203	RESIDENTIAL	89.3	85.2	85.2	0.0	0.0
R2/2203	BATHROOM	94.8	82.9	82.9	0.0	0.0
R3/2203 R4/2203	KITCHEN KITCHEN	111.6 111.6	110.4 110.4	110.4 110.4	0.0 0.0	0.0 0.0
R4/2203 R5/2203	BATHROOM	95.0	83.5	83.5	0.0	0.0
R6/2203	RESIDENTIAL	95.0 90.8	89.3	89.3	0.0	0.0
R7/2203	RESIDENTIAL	90.8 125.9	122.2	122.2	0.0	0.0
R8/2203	BATHROOM	93.0	80.7	80.7	0.0	0.0
R9/2203	RESIDENTIAL	95.3	92.3	92.3	0.0	0.0
R10/2203	RESIDENTIAL	93.2	90.5	90.5	0.0	0.0
R11/2203	BATHROOM	93.7	81.4	81.4	0.0	0.0
R12/2203	RESIDENTIAL	109.6	108.0	108.0	0.0	0.0
R13/2203	RESIDENTIAL	111.1	109.4	109.4	0.0	0.0
R14/2203	BATHROOM	94.6	82.0	82.0	0.0	0.0
R15/2203	RESIDENTIAL	94.8	91.8	91.8	0.0	0.0
R16/2203	RESIDENTIAL	95.4	92.4	92.4	0.0	0.0
R17/2203	BATHROOM	94.3	81.5	81.5	0.0	0.0
R18/2203	RESIDENTIAL	115.0	113.3	113.3	0.0	0.0
R19/2203	RESIDENTIAL	111.3	104.7	104.7	0.0	0.0
R20/2203	BATHROOM	88.4	78.2	78.2	0.0	0.0
R21/2203	RESIDENTIAL	109.6	107.9	107.9	0.0	0.0
148 Camden Stre	et					
R1/2100	RESIDENTIAL	52.3	51.9	51.9	0.0	0.0
R1/2101	KITCHEN	52.3	52.1	52.1	0.0	0.0
R3/2101	RESIDENTIAL	59.7	57.5	57.5	0.0	0.0
R1/2102	KITCHEN	52.3	52.1	52.1	0.0	0.0
R3/2102	RESIDENTIAL	59.7	57.5	57.5	0.0	0.0
R1/2103 R3/2103	KITCHEN BEDROOM	52.3 105.5	52.1 97.1	52.1 97.1	0.0 0.0	0.0 0.0
K3/2103	DEDROOM	105.5	97.1	97.1	0.0	0.0
2 Bonny Street						
R1/1000	RESIDENTIAL	88.8	60.0	33.6	26.4	44.0
R1/1001	RESIDENTIAL	88.8	80.2	70.8	9.4	11.7
R2/1001	RESIDENTIAL	52.6	41.4	34.4	7.1	17.1
R1/1002	RESIDENTIAL	88.8	80.3	72.4	7.9	9.8
R2/1002	RESIDENTIAL	52.6	45.6	45.5	0.1	0.2
R1/1003	RESIDENTIAL	88.8	80.3	73.3	6.9	8.6
R2/1003	RESIDENTIAL	52.6	37.5	37.3	0.2	0.5
A Ponny Street						
4 Bonny Street						
R1/1100	RESIDENTIAL	102.1	58.3	33.8	24.5	42.0
R1/1101	RESIDENTIAL	102.1	89.3	75.1	14.2	15.9
R1/1102	RESIDENTIAL	102.1	90.9	77.9	13.0	14.3
R1/1103	RESIDENTIAL	102.1	90.8	79.0	11.7	12.9
R1/1110	HALL	47.2	45.8	45.8	0.0	0.0

Room/		Whole	Prev	New	Loss	%Loss
Floor	Room Use	Room	sq ft	sq ft	sq ft	
6 Bonny Street						
R1/1201	RESIDENTIAL	101.0	88.6	72.8	15.8	17.8
R1/1202	RESIDENTIAL	101.0	91.7	76.6	15.1	16.5
R1/1203	RESIDENTIAL	101.0	92.1	78.5	13.6	14.8
R1/1210	HALL	52.1	50.5	50.5	0.0	0.0
R1/1220	RESIDENTIAL	133.1	131.4	125.6	5.8	4.4
8 Bonny Street						
R1/1301	RESIDENTIAL	104.8	82.2	64.8	17.5	21.3
R1/1302	RESIDENTIAL	104.8	93.8	74.2	19.6	20.9
R1/1303	RESIDENTIAL	104.8	93.7	79.5	14.3	15.3
R1/1310	HALL	53.3	50.1	49.0	1.1	2.2
R1/1320	RESIDENTIAL	134.5	130.4	107.4	23.0	17.6
12 Bonny Street						
,						
R1/1400	RESIDENTIAL	279.8	170.8	168.5	2.3	1.3
R1/1401	RESIDENTIAL	279.8	270.9	270.6	0.3	0.1
R1/1402	RESIDENTIAL	168.7 109.2	151.4	151.4	0.0	0.0
R2/1402 R1/1403	RESIDENTIAL RESIDENTIAL	272.4	98.8 257.7	98.8 257.7	0.0 0.0	0.0 0.0
R1/1403	RESIDENTIAL	163.6	163.6	159.2	4.3	2.6
						2.0
12b Bonny Street						
R1/1501	RECEPTION	205.2	199.8	177.7	22.1	11.1
R1/1502	BEDROOM	154.8	138.6	99.6	39.0	28.1
R1/1503	STUDY	129.2	127.2	127.8	-0.6	-0.5
12a Bonny Street						
12a Bonny Street						
R1/1601	RECEPTION	236.4	216.8	138.7	78.0	36.0
R1/1602	BEDROOM	172.9	153.2	116.3	36.9	24.1
R1/1603	STUDY	132.4	130.7	131.2	-0.5	-0.4
14 Bonny Street						
R1/1701	RECEPTION	226.7	183.2	123.6	59.6	32.5
R1/1702	BEDROOM	165.3	116.8	108.3	8.5	7.3
R1/1703	STUDY	130.2	129.4	128.3	1.1	0.9
14a Bonny Street						
R1/1801	RECEPTION	240.7	181.3	116.6	64.6	35.6
R2/1801	KITCHEN	85.1	82.9	82.6	0.3	0.4
R1/1802	BEDROOM	161.6	123.0	117.8	5.2	4.2
R1/1803	BEDROOM	159.0	157.1	155.2	1.9	1.2

Sunlight (APSH)

TWYMAN HOUSE Prop110328

	v Proposed ses Estimated fi	rom Photog	raphs		Prop110328 LIGHT ANAL				
		3	Existing		-	Proposed		% L	.0SS
Position	Room Use	Summer	Winter	Total	Summer	Winter	Total	Winter	Total
1a & 1b Bo	nny Street								
W1/100	RESIDENTIAL	37	14	51	37	14	51	0.00	0.00
W2/100	RESIDENTIAL	43	17	60	43	17	60	0.00	0.00
W3/100	RESIDENTIAL	43	16	59	43	16	59	0.00	0.00
W4/100	HALL	30	16	46	30	16	46	0.00	0.00
W5/100	RESIDENTIAL	43	17	60	43	17	60	0.00	0.00
W1/101	RESIDENTIAL	44	23	67	44	22	66	4.35	1.49
W2/101	RESIDENTIAL	44	23	67	44	23	67	0.00	0.00
W3/101	RESIDENTIAL	44	22	66	44	22	66	0.00	0.00
W4/101	RESIDENTIAL	44	21	65	44	21	65	0.00	0.00
W1/102	RESIDENTIAL	37	22	59	37	21	58	4.55	1.69
W2/102	RESIDENTIAL	40	22	62	40	21	61	4.55	1.61
W3/102	RESIDENTIAL	37	22	59	37	21	58	4.55	1.69
W4/102	RESIDENTIAL	38	21	59	38	21	59	0.00	0.00
W5/102	RESIDENTIAL	40	21	61	40	21	61	0.00	0.00
W6/102	RESIDENTIAL	37	21	58	37	21	58	0.00	0.00
3-11 Bonny	y Street								
W1/200	RESIDENTIAL	44	15	59	44	15	59	0.00	0.00
W2/200	RESIDENTIAL	43	14	57	43	14	57	0.00	0.00
W3/200	RESIDENTIAL	43	14	57	43	14	57	0.00	0.00
W4/200	RESIDENTIAL	43	16	59	43	17	60	-6.25	-1.69
W5/200	RESIDENTIAL	39	16	55	39	15	54	6.25	1.82
W1/201	RESIDENTIAL	45	23	68	45	21	66	8.70	2.94
W2/201	RESIDENTIAL	44	22	66	44	20	64	9.09	3.03
W3/201	RESIDENTIAL	44	23	67	44	22	66	4.35	1.49
W4/201	RESIDENTIAL	44	23	67	44	22	66	4.35	1.49
W5/201	RESIDENTIAL	43	22	65	43	20	63	9.09	3.08
W6/201	RESIDENTIAL	43	22	65	43	21	64	4.55	1.54
W7/201	RESIDENTIAL	43	23	66	43	21	64	8.70	3.03
W8/201	RESIDENTIAL	43	20	63	43	20	63	0.00	0.00
W9/201	RESIDENTIAL	41	20	61	41	19	60	5.00	1.64
W10/201	RESIDENTIAL	35	21	56	35	20	55	4.76	1.79
W1/202	RESIDENTIAL	44	23	67	44	23	67	0.00	0.00
W2/202	RESIDENTIAL	44	23	67	44	23	67	0.00	0.00
W3/202	RESIDENTIAL	44	24	68	44	24	68	0.00	0.00
W4/202	RESIDENTIAL	44	24	68	44	24	68	0.00	0.00
W5/202	RESIDENTIAL	43	24	67	43	24	67	0.00	0.00
W6/202	RESIDENTIAL	43	24	67	43	24	67	0.00	0.00
W7/202	RESIDENTIAL	42	24	66	42	24	66	0.00	0.00
W8/202	RESIDENTIAL	42	24	66	42	24	66	0.00	0.00
W9/202	RESIDENTIAL	41	24	65	41	24	65	0.00	0.00
W10/202	RESIDENTIAL	33	24	57	33	23	56	4.17	1.75
43-45 Cam	den Road (Cor	nmerical)							
W3/400	RESIDENTIAL	16	0	16	10	0	10	-	37.50
1 to 28 Car	nden Street								
W21/2202	RESIDENTIAL	20	4	24	20	4	24	0.00	0.00

Project No: 4946 (REL_09_4946)	
Existing v Proposed	

TWYMAN HOUSE Prop110328

	v Proposed ses Estimated fi	rom Photoa	raphs	SUN	Prop110328 LIGHT ANAL	YSIS			
		g	Existing			Proposed		% L	.OSS
Position	Room Use	Summer	Winter	Total	Summer	Winter	Total	Winter	Total
148 Camde	en Street								
W1/2100	RESIDENTIAL	44	22	66	44	22	66	0.00	0.00
W1/2101	KITCHEN	37	16	53	37	16	53	0.00	0.00
W2/2101 W4/2101	KITCHEN RESIDENTIAL	44 47	23 25	67 72	44 47	23 25	67 72	0.00 0.00	0.00 0.00
				F (
W1/2102 W2/2102	KITCHEN KITCHEN	37 44	19 24	56 68	37 44	19 24	56 68	0.00 0.00	0.00 0.00
W4/2102	RESIDENTIAL	47	25	72	47	25	72	0.00	0.00
W1/2103	KITCHEN	37	20	57	37	20	57	0.00	0.00
W2/2103 W4/2103	KITCHEN BEDROOM	44 37	24 24	68 61	44 37	24 24	68 61	0.00 0.00	0.00 0.00
		57	24	01	57	24	01	0.00	0.00
2 Bonny St		05				0	0.4	50.00	10.04
W1/1000	RESIDENTIAL	25	4	29	24	2	26	50.00	10.34
W1/1001 W2/1001	RESIDENTIAL RESIDENTIAL	29 34	5 8	34 42	29 32	3 6	32 38	40.00 25.00	5.88 9.52
W1/1002	RESIDENTIAL	37	9	46	36	8	44	11.11	4.35
W2/1002	RESIDENTIAL	39	12	51	39	11	50	8.33	1.96
W1/1003 W2/1003	RESIDENTIAL RESIDENTIAL	39 36	18 18	57 54	38 36	17 17	55 53	5.56 5.56	3.51 1.85
4 Bonny St	reet								
W1/1100	RESIDENTIAL	32	8	40	29	5	34	37.50	15.00
W1/1101	RESIDENTIAL	36	12	48	34	9	43	25.00	10.42
W1/1102	RESIDENTIAL	35	16	51	36	14	50	12.50	1.96
W1/1103	RESIDENTIAL	38	18	56	39	16	55	11.11	1.79
W1/1110	HALL	36	17	53	36	14	50	17.65	5.66
6 Bonny St	reet								
W1/1201	RESIDENTIAL	35	12	47	33	11	44	8.33	6.38
W1/1202	RESIDENTIAL	35	14	49	35	12	47	14.29	4.08
W1/1203	RESIDENTIAL	37	19	56	37	15	52	21.05	7.14
W1/1210	HALL	38	17	55	35	15	50	11.76	9.09
W1/1220 DW2/1220	RESIDENTIAL RESIDENTIAL	39 33	8 10	47 43	35 28	7 9	42 37	12.50 10.00	10.64 13.95
8 Bonny St	reet								
W1/1301	RESIDENTIAL	30	13	43	28	10	38	23.08	11.63
W1/1302	RESIDENTIAL	36	14	50	33	12	45	14.29	10.00
W1/1303	RESIDENTIAL	39	17	56	38	14	52	17.65	7.14
W1/1310	HALL	34	16	50	33	14	47	12.50	6.00
W1/1320	RESIDENTIAL	35	10	45	30 21	8	38	20.00	15.56
DW2/1320 W3/1320	RESIDENTIAL RESIDENTIAL	32 27	10 10	42 37	31 25	8 7	39 32	20.00 30.00	7.14 13.51

Existing	No: 4946 (REL_(v Proposed ses Estimated fi	raphs		TWYMAN HOUSE Prop110328 SUNLIGHT ANALYSIS					
Position	Doom Use	Summor	Existing	Total	Summor	Proposed Winter	Total		.oss Total
Position	Room Use	Summer	Winter	Total	Summer	winter	Total	Winter	Total
12 Bonny S	Street								
W1/1400	RESIDENTIAL	6	9	15	6	8	14	11.11	6.67
W1/1401	RESIDENTIAL	8	8	16	8	8	16	0.00	0.00
N2/1401	RESIDENTIAL	10	12	22	10	12	22	0.00	0.00
N3/1401	RESIDENTIAL	22	14	36	22	13	35	7.14	2.78
N1/1402	RESIDENTIAL	18	6	24	18	6	24	0.00	0.00
N2/1402	RESIDENTIAL	18	15	33	18	15	33	0.00	0.00
V3/1402	RESIDENTIAL	25	15	40	25	15	40	0.00	0.00
N1/1403	RESIDENTIAL	35	10	45	35	10	45	0.00	0.00
N2/1403	RESIDENTIAL	29	13	42	29	13	42	0.00	0.00
V1/1404	RESIDENTIAL	30	15	45	30	15	45	0.00	0.00
V2/1404	RESIDENTIAL	49	26	75	49	22	71	15.38	5.33
2b Bonny	Street								
V1/1501	RECEPTION	30	11	41	30	11	41	0.00	0.00
V2/1501	RECEPTION	41	13	54	38	11	49	15.38	9.26
V1/1502	BEDROOM	41	19	60	39	15	54	21.05	10.00
V1/1503	STUDY	47	23	70	48	19	67	17.39	4.29
2a Bonny	Street								
W1/1601	RECEPTION	43	13	56	39	10	49	23.08	12.50
V1/1602	BEDROOM	45	17	62	41	14	55	17.65	11.29
W1/1603	STUDY	44	22	66	45	17	62	22.73	6.06
4 Bonny S	Street								
W1/1701	RECEPTION	42	10	52	35	9	44	10.00	15.38
W1/1702	BEDROOM	43	15	58	37	12	49	20.00	15.52
W1/1703	STUDY	41	19	60	44	15	59	21.05	1.67
4a Bonny	Street								
N1/1801 N2/1801	RECEPTION KITCHEN	35 19	11 0	46 19	31 18	8 0	39 18	27.27	15.22 5.26
V1/1802	BEDROOM	37	13	50	34	11	45	15.38	10.00
V1/1803 V2/1803	BEDROOM BEDROOM	37 19	15 0	52 19	38 18	13 0	51 18	13.33 -	1.92 5.26