DAYLIGHT & SUNLIGHT REPORT

ST. EDMUND'S TERRACE

Prepared by: GIA

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AUTHOR FOR AND BEHALF OF GIA:

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1.0 INSTRUCTIONS

Regents Park Estates (GP) Ltd have instructed this practice to provide them with a Technical Analysis in respect of Daylight and Sunlight for the above site. This has been undertaken in accordance with our instructions and our standard Terms and Conditions.

We have assessed the proposed development against two base line scenarios. The first being against a notional mass of development on the site (Notional Baseline) that matches the massing of the existing buildings on the opposite side of St. Edmund's Terrace – i.e. a terrace of buildings running east-west along St Edmund's Terrace.

The reason for assessing this alternative scenario is that as the site is substantially undeveloped currently it would be un-representative to consider the new development on the basis of the change resulting. Consequently if the site had been developed historically with buildings that matched the street this would give a more representative study as to the impact of the now proposed scheme of development.

The second baseline study is the site as currently exists (Current Baseline) as an open and un-built on piece of land.

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 the 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.

INTERNAL DAYLIGHT AND SUNLIGHT

DAYLIGHT

With regard to internal levels of daylight and sunlight, our methodology is based upon the guidance provided in the Building Research Establishment (BRE) guidelines "**site layout for planning for daylight and sunlight**". This makes reference to the advice provided in the British Standard (BS806 Part 2) for daylight and CIBSE applications manual: Window Design. Three methods of assessing daylight have been used in our analysis these are the Vertical Sky Component, Average Daylight Factor and the Room Depth Criteria. With regards to sunlight we have used the Annual Probably Sunlight Hours method which is similar to that used for the assessment of existing surrounding properties.

Vertical Sky Component (VSC)

This method of assessment can be undertaken using a skylight indicator or a Waldram diagram. It measures a single point at the centre of the window if known at the early design stage, the quantum of sky visible from this point taking into account all external obstructions where these are either other buildings or the general landscape. Trees are usually ignored unless they form a continuous or dense belt of obstruction.

This method is a useful "rule of thumb" but has some significant limitation in determining the true quality of daylight within a proposed building. It does not take into account the size of the window, any reflected light off external obstructions or indeed the reflected light within the room, or the use to which that room is put. Appendix C of the guide goes into more detail on these mattes and sets forward alternative methods for assessment to overcome these limitations.

Average Daylight Factor (ADF)

The BRE handbook states:
"*if a predominantly day lit appearance is required, then DF should be 5% or more if there is no supplementary electric lighting, or 2% or more if supplementary electric lighting is provided. There are additional recommendations for dwellings, of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms. These last are minimum values of average daylight factor, and should be attained even if a predominantly day lit appearance is not required."*

This method of assessment takes into account the total glazed area of the room, the transmittance quality of the glazing proposed, the total area of the room surfaces including ceilings and floors, and the internal average reflectance for the roof being assessed. The method also takes into account the vertical sky component and the quantum of reflected light off external surfaces.

This is, therefore, a significantly more detailed method of assessment than the vertical sky component method on its own.

In our analysis we have made the following assumptions in accordance with the BS8206-2;2008, Annex A, tables 8.1-8.6.

Reflectance Values

- Surrounding Walls 0.2
- Pavement 0.2
- Internal Walls 0.65
- Internal Ceiling 0.85
- Internal Floor 0.3

Transmittance Values

- Double Glazing 0.74
- Single Glazing 0.89
- Balustrades 0.8
- Framing Factor 0.8

Maintenance Factors

- Vertical Glazing 0.92
- Horizontal Glazing 0.76

Room Depth (RDC)

The depth of a room where it has access to daylight from windows in one wall only can become a factor in determining the quantity of light within the room. The BRE guidance provides a simple method for examining the ratio of room depth to window area. However, this method also has significant limitations in that it does not take into account any external obstructions outside the window, and therefore draws no input form the quantity of light entering the room via the window.

Sunlight

BRE provide guidance in respect of sunlight quality for new development under section 3.1 of the handbook. It is generally acknowledged that the presence of sunlight is more significant in residential accommodation that it is in commercial and this is reflected in the BRE document.

It states "*in housing, the main requirement for sunlight is in living rooms, where it is valued at anytime of the day, but especially in the afternoon. Sunlight is also*

required in conservatories. It is viewed as less important in bedrooms and kitchens, as people prefer it in the morning rather than in the afternoon."

The BRE guide considers the critical aspects of orientation and overshadowing in determining the availability if sunlight to the proposed development.

Again, these factors are of particular relevance when considering developments in urban areas, as the site in question may already be heavily overshadowed by existing buildings around the site, or it just may not be possible to orientate new buildings on that site, due to its other urban constraints, in order to ensure a south facing, or predominantly south facing aspect.

The summary in section 3.1 of the guide states as follows
"In general, a dwelling or non domestic building which has a particular requirement for sunlight will appear reasonably sun lit provided that:

- *At least one main window faces within 90 degrees of sue south: and*
- *On this window wall, all points on a line two metre above ground level are within four metres (measured sideways) of a point which receives at least a quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours in the winter months, between the 21sdt September and the 21st March.*

Clearly where the actual windows within a proposed scheme are known these can be taken as the points for assessment, rather than the two metre line above ground level as referred to above."

ASSESSMENT METHODOLOGY

In order to undertake the required internal daylight and sunlight assessments as set out above, we have prepared a 3D computer model and used specialist day lighting simulation software.

We first carry out a VSC façade analysis assessment on the proposed buildings to establish where the potential for daylight is good by reference to the BRE guideline of 27% VSC. This then determines the areas for which no further consideration is really necessary as good potential is clearly demonstrated.

It also highlights those areas where the sky visibility may be more constrained and consequently where the more detailed Average Daylight Factor and Room Depth Criteria assessments should be undertaken. The results of these assessments are set out in Appendix 4 of this report.

3.0 SOURCES OF INFORMATION

GIA

IR01-5428

IR06-5428

Squire & Partners

IR07-5428

IR08-5428

IR09-5428

4.0 ASSUMPTIONS

1. Where we have not obtained either access or plans we have made reasonable assumptions as to the internal layouts of the rooms behind the fenestration of adjoining properties. 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.

2. Where floor levels have been assumed it is to be noted that 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 in St John's Wood, adjacent to Primrose Hill. The surrounding park land provides a significant amount of natural daylight, largely within the proposal and to

the other surrounding residential properties. The site is largely hardstanding, with a few existing buildings and consequently represents an unusual baseline condition for a Daylight and Sunlight assessment in an urban area.

Our understanding of the existing site is shown on drawings 5428/09 and 11 and our representation of the notional buildings on the site are shown on drawings 5428/05 and 07.

6.0 THE PROPOSAL

The proposal from Squire & Partners Architects is for a residential development, comprising three blocks of 6, 6 and five storeys and a single house.

Our understanding of the proposal is shown on drawings 5428/15 and 16 in Appendix 2 of this report.

7.0 RELEVANT PLANNING HISTORY

Our analyses of the surrounding properties have confirmed that there are not any current and unimplemented planning consents.

8.0 SURROUNDING PROPERTIES

DAYLIGHT AND SUNLIGHT

GIA have conducted a quantitative daylight and sunlight analysis of the impact of the proposal upon all of the surrounding residential properties. This analysis has been conducted in accordance with the methods specified in the BRE Guidelines. The detailed results of this analysis are shown in the tables in Appendix 3 of this report.

The following residential properties surrounding the site have the potential to be impacted by the proposal:

- 4, 5 and 6 St Edmund' s Terrace
- Danes Court
- 1-5 Ormonde Terrance

The location of these properties in relation to the site is shown on the site plan on drawing 5428/15 and the window locations are shown on drawings 5428/17, 18 and 19 in Appendix 2 of this report.

The results of the two assessments for these properties are set out below.

Daylight

Notional Baseline

1-5 Ormonde Terrace

The VSC analysis shows that when the proposed development is compared with the notional mass for the site there will be significant improvements in daylight to nearly all of the windows in this building. This is supported further by the No Skyline analysis which again shows rooms gaining in light or seeing no change in their baseline position.

Likewise with the ADF results there are improvements in the ADF values to the majority of the rooms in this property and where any reductions do occur they are very minor and would not represent a notable change from the existing position. Retained ADF values remain high.

Danes Court

The VSC analysis shows that at the lower levels there are some substantial gains in VSC as a result of this proposal. At third and fourth floor levels there are two windows which are set back underneath a recessed balcony and therefore, have constrained daylight potential in any event. The proposal does result in a reduction in the VSC values to the two windows situated in these locations at both floor levels, which exceed the BRE 20% guideline threshold.

The No Skyline analysis however, again proves that there will be improvements in daylight distribution to the lower rooms in this building and that on the upper floors there is no noticeable change in daylight distribution with almost all rooms remaining unaffected to any extent. The reduction in VSC seen above therefore, must be viewed in this context and is understandable by reference to the recessed nature of the windows concerned.

The ADF analysis shows that at the lower levels there are only gains in ADF values and from third floor upwards, although there are reductions in ADF the total ADF values that are maintained under the proposed situation remain extremely high and well above the BRE and British Standards Minimum requirements for the specified room uses.

4 St. Edmund's Terrace

The VSC and No Skyline analysis show that there will either be gains or no noticeable change in the existing daylight position. This is supported by the ADF analysis which again demonstrates improvements or no material reduction in the ADF value with all ADF values remaining high and well above the BRE and British Standard minimum requirements.

5 St. Edmund's Terrace

The VSC and No Skyline analysis show that there will either be gains or no noticeable change in the existing daylight position. This is supported by the ADF analysis which again demonstrates improvements or no material reduction in the ADF value with all ADF values remaining high and well above the BRE and British Standard minimum requirements.

6 St. Edmund's Terrace

The VSC and No Skyline analysis show that there will either be gains or no noticeable change in the existing daylight position. This is supported by the ADF analysis which again demonstrates improvements or no material reduction in the ADF value with all ADF values remaining high and well above the BRE and British Standard minimum requirements.

Sunlight

Notional Baseline

Under the terms of the BRE criteria and methodology it is only those windows which face within 90 degrees of due south that a relevant for sunlight analysis.

There are a few such windows in the adjoining properties listed above with the exception of Danes Court which could be in any way impacted as a result of this development.

The results of the daylight analysis as can been seen from the tabulated results in the appendices in this report show that when the proposed massing is compared with the notional baseline, there will be no material impact, in fact, there would be improvements in total APSH values to a number of windows.

Summary

In daylight and sunlight terms therefore the proposed scheme when compared with a notional mass that matches the heights of the buildings on the opposite side on St Edmund's Terrace, demonstrates that there would be virtually no impact to the daylight and sunlight position of the adjoining properties and in reality most of the windows would see improvement in their daylight and sunlight values.

Consequently it is clear that that in this context, there would be no breach of the BRE criteria.

Daylight
Existing Baseline

1-5 Ormonde Terrace

The VSC analysis show as that there are four windows at ground floor level which will see more than a 20% change in their existing VSC value. However, two of these can be discounted as they relate to the entrance doorway under reference D4 and AD5/100 on the tabulated results. The remaining two windows are referenced W2/100 where there is a 21.12% reduction marginally above the BRE guideline and the other is W7/100 which has a 35% reduction.

However, as both these windows relate to dual aspect rooms it is important to consider the daylight distribution and ADF results and not just the VSC.

The Daylight Distribution / No Skyline analysis shows that both of these rooms will see no change in their No Skyline area as a result of the proposed development. These rooms are reference R1 and R3/100.

Likewise the ADF analysis shows that both of these rooms will retain ADF values which are well above the BRE minimum for all room uses. R1/100 has retained ADF of 4.7 % and R3/100 has a retained ADF value of 2.9%. All other rooms have good levels of daylight by reference to all methods of analysis.

Danes Court

The VSC analysis shows that there are 12 windows which see more than a 20% change in their existing VSC value. A number of these windows relate to rooms which have more than one window or relate to windows which are set under deep recesses on the elevation. It is important therefore, to consider the No Skyline and Average Daylight Factor results for this property. We do have plans for this building and therefore, understand the internal layouts of the building.

The No Skyline results show that all rooms retain No Skyline areas which comply with the BRE criteria and that there are, in reality only very minor reductions in the No Skyline as a result of the proposed development. The Average Daylight Factor results show that all rooms retain ADF values which meet or exceed and in most cases substantially exceed the ADF minimum requirements for all room uses. As such, it can be seen that these rooms will retain not only a good level of daylight but a good distribution of that daylight under the proposed situation.

4 St. Edmund's Terrace

The VSC analysis shows that there is full compliance with the BRE criteria with no windows seeing a reduction in its existing value by more than 20%. This is supported by the No Skyline analysis which shows that there will be no change in the No Skyline area to this property and that is further supported by the ADF analysis.

5 St. Edmund's Terrace

The VSC analysis shows that there is full compliance with the BRE criteria with no windows seeing a reduction in its existing value by more than 20%. This is supported by the No Skyline analysis which shows that there will be no change in the No Skyline area to this property and that is further supported by the ADF analysis.

6 St. Edmund's Terrace

The VSC analysis shows full compliance with the BRE criteria, the No Skyline analysis shows full BRE compliance and the ADF analysis shows that there will be virtually no change from the existing situation where retained levels are high and well above the minimum set out in the BRE and British standard documentation.

Sunlight

The sunlight analysis for the relevant windows clearly demonstrates that full BRE compliance is maintained under the proposed situation and that no reductions in winter or total APSH occur that exceed the BRE criteria.

Summary

The daylight and sunlight analysis shows that in overall terms the proposal has very little impact on the adjoining properties in terms of their existing enjoyment of daylight and sunlight. There will, as is recorded by the VSC results, be a change in daylight which is unavoidable and inevitable when placing new buildings on land which has previously been substantially undeveloped as in this situation. However, although there are changes in VSC the No Sky line and Average Daylight Factor results clearly demonstrate that good levels of daylight and daylight distribution are maintained and that as such there will not be any material harm or breach of the BRE's guidelines in that regard.

9.0 INTERNAL DAYLIGHT AND SUNLIGHT ANALYSIS

Daylight

The VSC façade analysis shows that the significant majority of the proposed scheme will enjoy excellent daylight potential with all windows on the principle external facades of the building enjoying VSC valued which are at 27% or more. This shows a high level of BRE compliance and a strong level of daylight potential to the proposed accommodation.

There are two notable areas where the VSC values are lower, these are the inward facing elevations of the proposed blocks and the area situated underneath the

overhang on block 1. There are also two more minor areas where the blocks interrelate with the topography of the hill and generate lower ground accommodation as a result. It is in these areas therefore, that we have concentrated the more detailed Average Daylight Factor analysis. The VSC façade assessments are shown on pages 1, 2 and 3 in Appendix 4.

The ADF and Room Depth Criteria analysis for all of those rooms which have fenestration in the areas identified in the VSC analysis as being less than 27% are set out on pages 4 to 8 in Appendix 4. The results of that analysis show that all of the proposed living rooms in these locations have ADF values which meet or exceed the BRE or British standard minimum requirements. It can be concluded therefore that all of the living rooms in the proposed blocks will have good daylight and will be compliant with BRE and British Standard recommendations.

All of the rooms in the more constrained locations also show compliance, where it is relevant, with the BRE Room Depth Criteria assessment. It is clear therefore that there will be a good distribution of daylight within the proposed accommodation.

Of the 51 bedrooms which have been assessed in this detailed analysis, 48 (94%) achieve ADF values which meet or exceed, and in most cases substantially exceed, the minimum ADF requirement of 1%.

All living rooms achieve compliance with ADF requirements. There are three flats where one bedroom is below the normally required ADF levels, but in two cases, this affects only the second bedroom, and in the case of the third, a one bedroom flat, the living room enjoys a double aspect and receives adequate light. Consequently, GIA consider that all the units have an acceptable level of daylight, with many having very good levels.

Summary

The scheme has been carefully considered and the internal layout and configuration of the units has been specifically tailored to the overall design of the scheme to ensure that the excellent daylight potential which is available to buildings on this site is maximised and that the principle habitable spaces of each of the units is able to enjoy good levels of natural daylight.

Sunlight

The results of the sunlight analysis are set out in the images contained on pages 9 and 10 within Appendix 4 of this report. These show the APSH façade studies for both the total and winter APSH position.

The analysis clearly demonstrates that on all the principle façades where living room accommodation exists, excellent APSH values are achieved in excess of the BRE's guideline recommendations. In certain locations notably at the lower levels of the inward facing facades and the façade underneath the overhang in block 1, there are more challenged levels of total APSH. However, in these locations there are still reasonable APSH values achieved, of around 15-17% in most cases and as these elevations are populated by windows to bedrooms, where the BRE acknowledge that sunlight is less important, this reduced level of the total APSH is not considered to be material.

The winter APSH values which are shown on page 10 in Appendix 4 show high levels of BRE compliance and that the orientation and layout of the proposed accommodation works well in relation to low angled winter sunlight.

Summary

The orientation and layout of the proposed buildings means that all of the principle living rooms received excellent sunlight potential throughout the year. Where sunlight is more restricted the layout of the proposed accommodation ensures that bedrooms or non habitable spaces are located in these areas, and consequently the scheme has been designed to comply with the guidance given in the BRE handbook.

10.0 OVERALL CONCLUSIONS

The assessment of the proposed development in terms of its impact upon the adjoining properties has demonstrated that if it is assessed against the existing undeveloped site there will, inevitably be a change in sky visibility to some of the windows in the surrounding properties as building are being located on land which has previously been undeveloped.

However, the more detailed daylight assessments under that scenario have confirmed that not withstanding that there is a change in sky visibility to some windows, the

retained level of daylight to the existing residential properties remains good, and that the BRE guidelines are complied with.

If the proposed development is assessed against a notional massing on the site for a building which matched the heights of the buildings on the opposite side of St Edmund's Terrace then it can be seen that the proposed development works extremely well and actually causes less impact to the adjoining properties in terms of both daylight and sunlight than a traditional terrace of buildings. There is full BRE compliance.

The internal daylight and sunlight position again demonstrates the scheme has been extremely carefully designed in this regard and that all of the proposed accommodation will enjoy good levels of daylight to their principle living rooms and that, with the exception of just three bedrooms in the entire scheme, all rooms show full BRE compliance.

Likewise with regard to sunlight it is clear that all of the living rooms have been located in areas where excellent sunlight availability occurs throughout the year. Where the sunlight potential is more constrained either non habitable uses or bedroom accommodation have been located. Consequently this scheme has been designed in accordance with the Building Research Establishment's guidelines.

Appendix 1

Principles of Daylight and Sunlight

PRINCIPLES OF DAYLIGHT AND SUNLIGHT

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 micro-climate 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'.

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

Methodology

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.

Criteria

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.

(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.

Criteria

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%

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.

Criteria

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 main window 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 at least 5% of annual probable sunlight hours 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.

It will be noted that the BRE clearly separate summer from winter and indicate that a 20% reduction for either may be material. The Handbook also states that *"To find out whether an existing building still receives enough sunlight, the British Standard can be used. It is suggested that all main living rooms of dwellings and conservatories, 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 ……..... The British Standard recommends that a 'window reference point', at the centre of each window on the plane of the inside surface of the wall, should be used for the calculations"* and thus this practice gives greater consideration to the effect on the main window of a living room.

(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.

Appendix 2

Existing and proposed Drawings
window maps

Sources of Information

Squire & Partners
IR07-5428
IR08-5428
IR09-5428

GIA
IR01-5428
IR06-5428

Notes

N.B. DO NOT SCALE OFF THIS DRAWING

N
Indicative Only

Rev	Date	Description	Initials
A		Initial Issue	

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

PLAN VIEW
EXISTING SCENARIO

Scale	Date
1:400 @ A3	JUL'10
Drawn	Checked
LT	JH

Drawing No.	Rel No.	Revision
5428-09	05	A

gia
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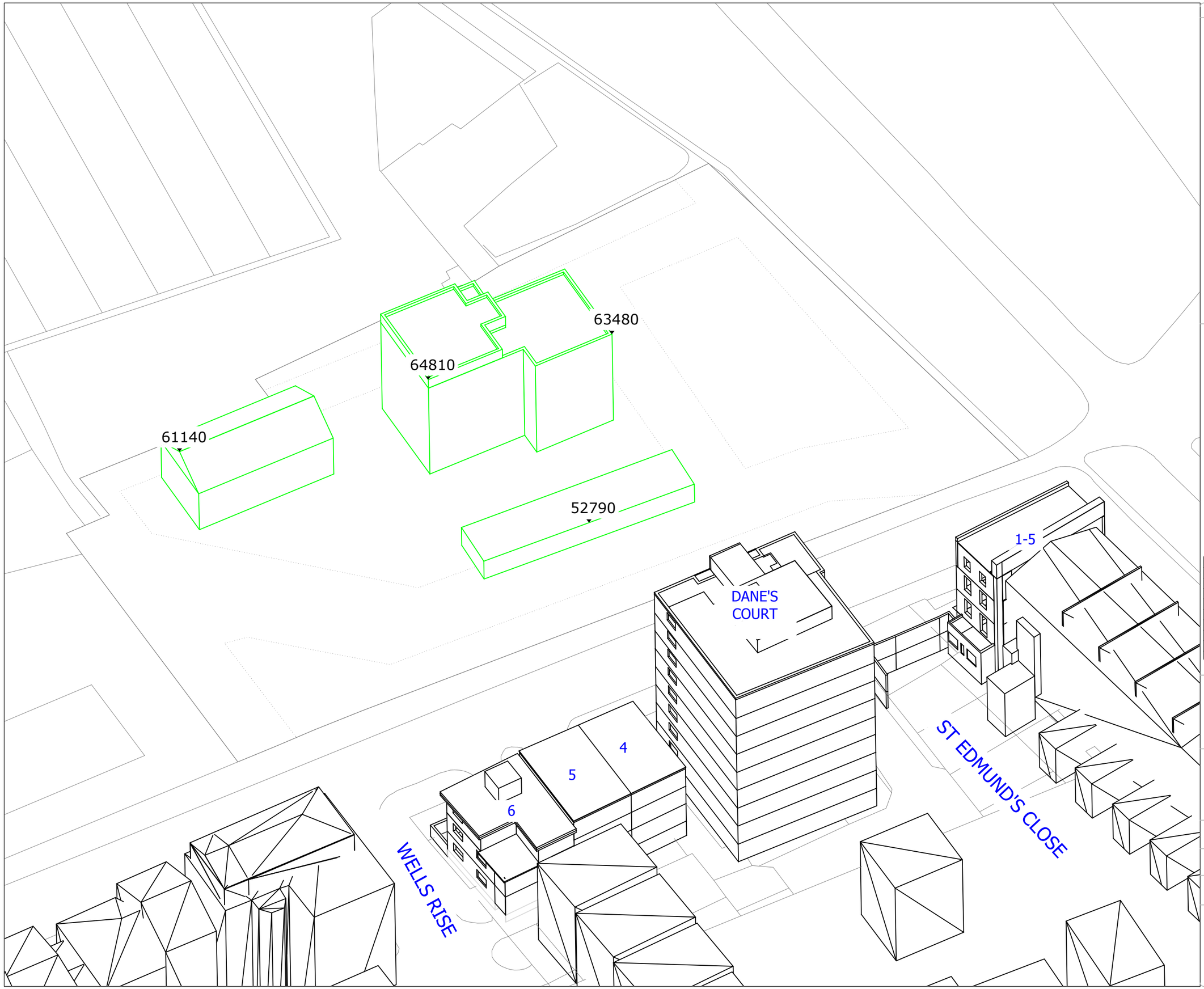

Sources of Information

Squire & Partners
IR07-5428
IR08-5428
IR09-5428

GIA
IR01-5428
IR06-5428

Notes

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Rev	Date	Description	Initials
A		Initial Issue	

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

3D VIEW
EXISTING SCENARIO

Scale	Date
NTS	JUL'10
Drawn	Checked
LT	JH

Drawing No.	Rel No.	Revision
5428-11	05	A

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Sources of Information

Squire & Partners
IR04-5428
IR05-5428

GIA
IR01-5428
IR06-5428

Notes

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N
Indicative Only

Rev	Date	Description	Initials
A		Initial Issue	

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

PLAN VIEW
NOTIONAL EXISTING SCENARIO

Scale	Date
1:400 @ A3	JUN'10
Drawn	Checked
JH	MF

Drawing No.	Rel No.	Revision
5428-05	03	A

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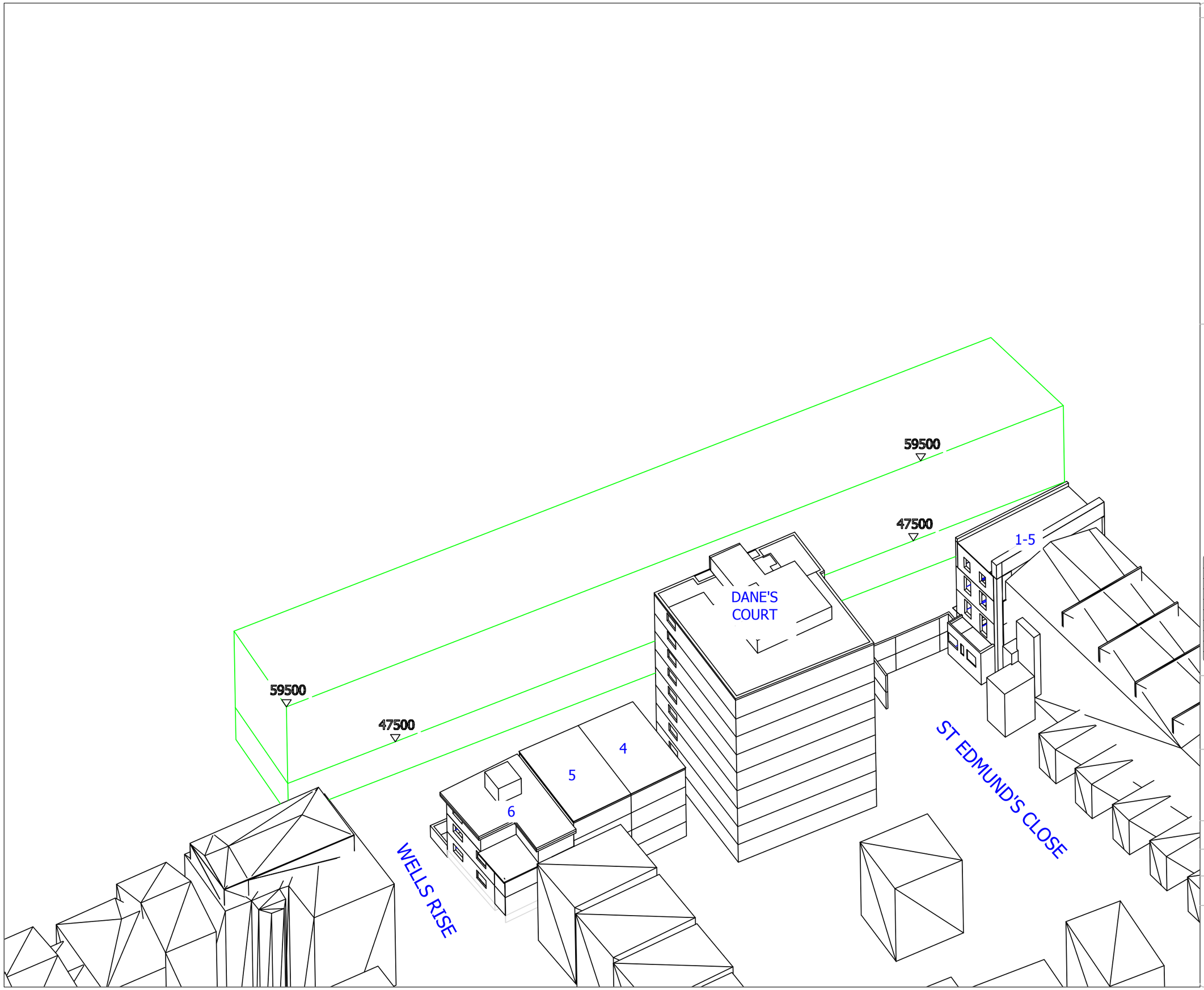

Sources of Information

Squire & Partners
IR04-5428
IR05-5428

GIA
IR01-5428
IR06-5428

Notes

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Rev	Date	Description	Initials
A		Initial Issue	

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

3D VIEW
NOTIONAL EXISTING SCENARIO

Scale	Date
NTS	JUN'10
Drawn	Checked
JH	MF

Drawing No.	Rel No.	Revision
5428-07	03	A

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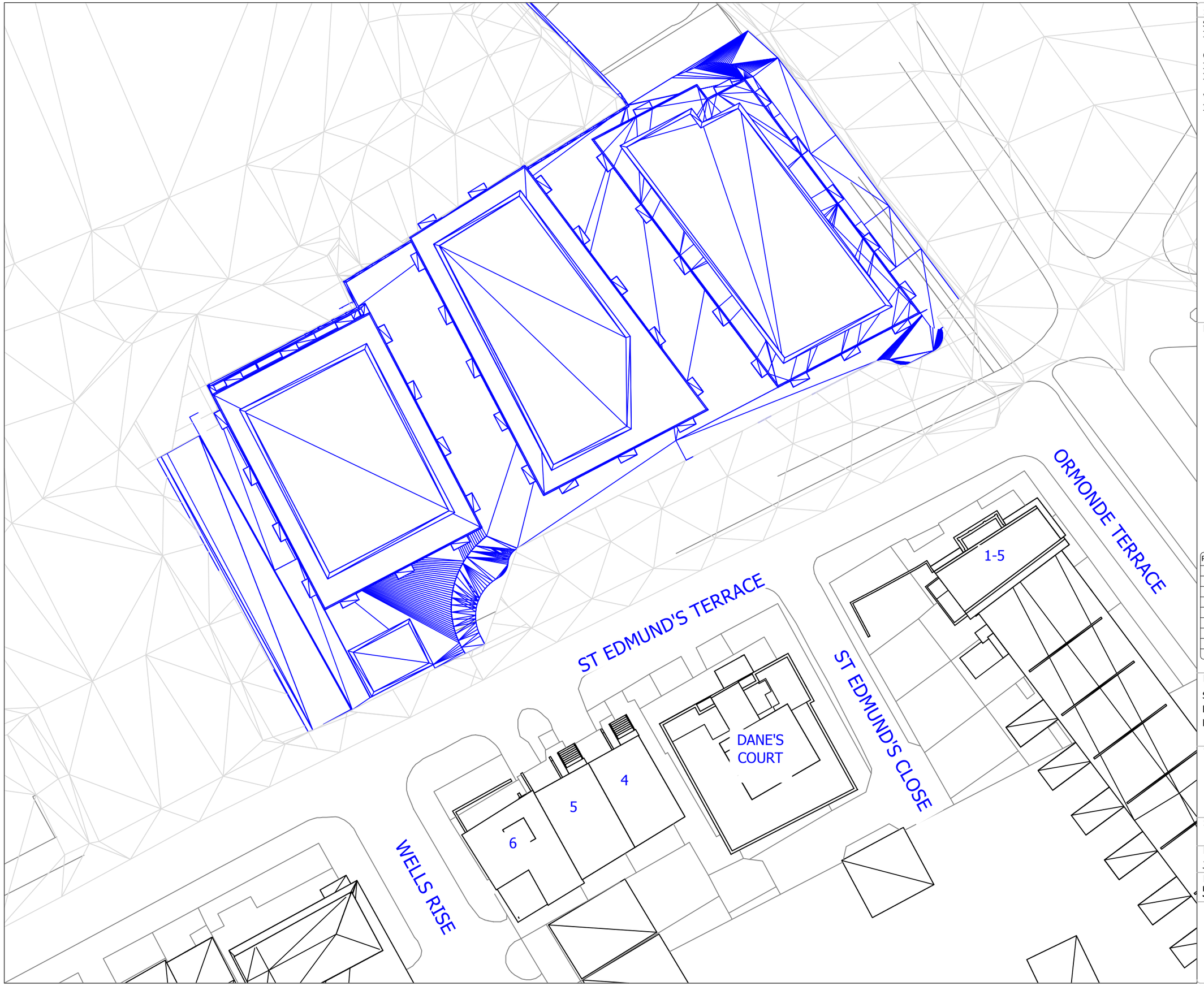

Sources of Information

Squire & Partners
IR17-5428

GIA
IR01-5428
IR06-5428

VERTEX MODELLING
IR12-5428

Notes

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Rev	Date	Description	Initials
A	Nov-10	Initial Issue	GF

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

PLAN VIEW
PROPOSED SCHEME (080211)

Scale	Date
1:400 @ A3	FEB'11

Drawn	Checked
JH	

Drawing No.	Rel No.	Revision
5428-15	10	A

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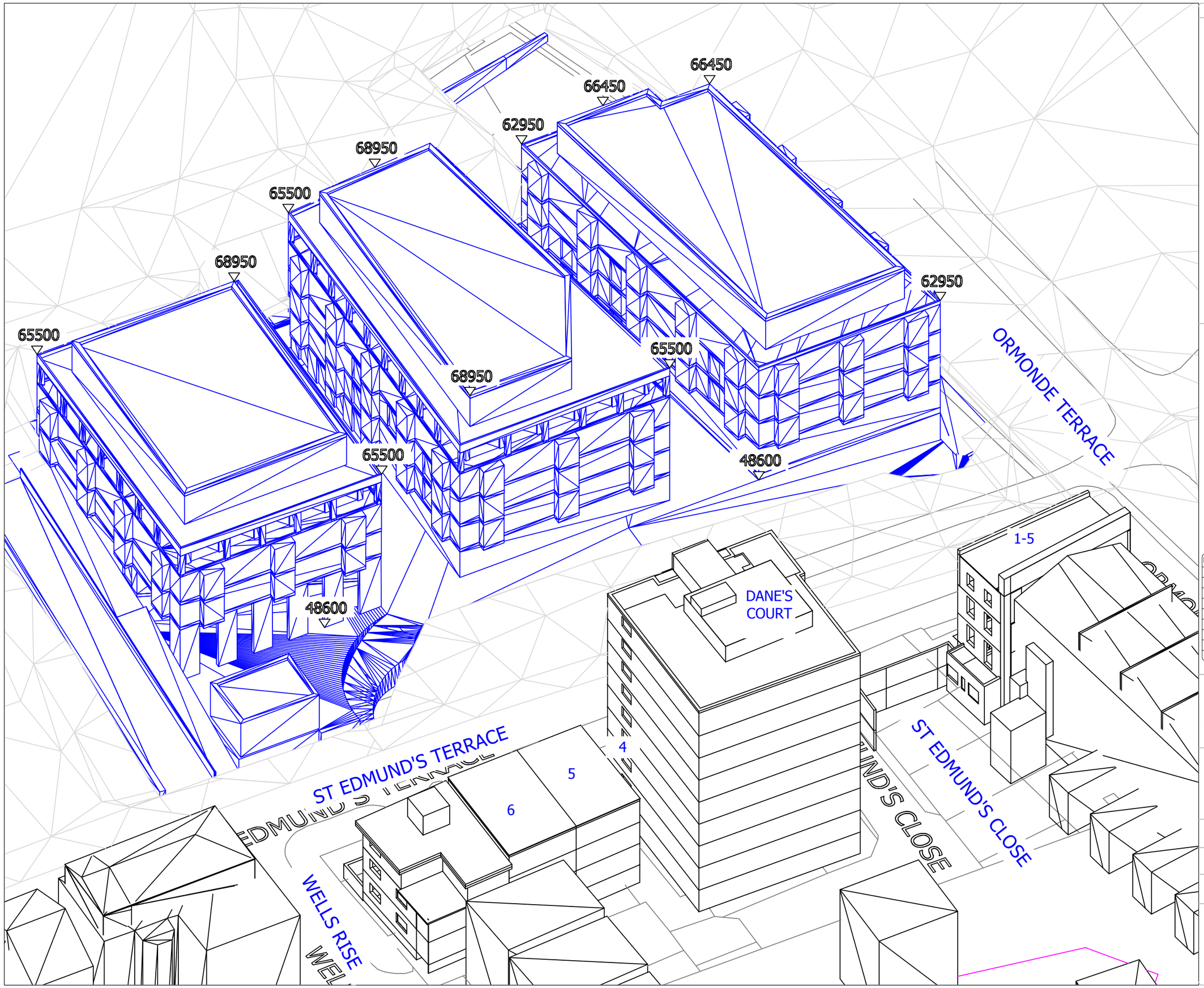

Sources of Information

Squire & Partners
IR17-5428

GIA
IR01-5428
IR06-5428

VERTEX MODELLING
IR12-5428

Notes

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Rev	Date	Description	Initials
A	Nov'10	Initial Issue	GF

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

3D VIEW
PROPOSED SCHEME (080211)

Scale	Date
NTS	FEB'11

Drawn	Checked
JH	

Drawing No.	Rel No.	Revision
5428-16	10	A

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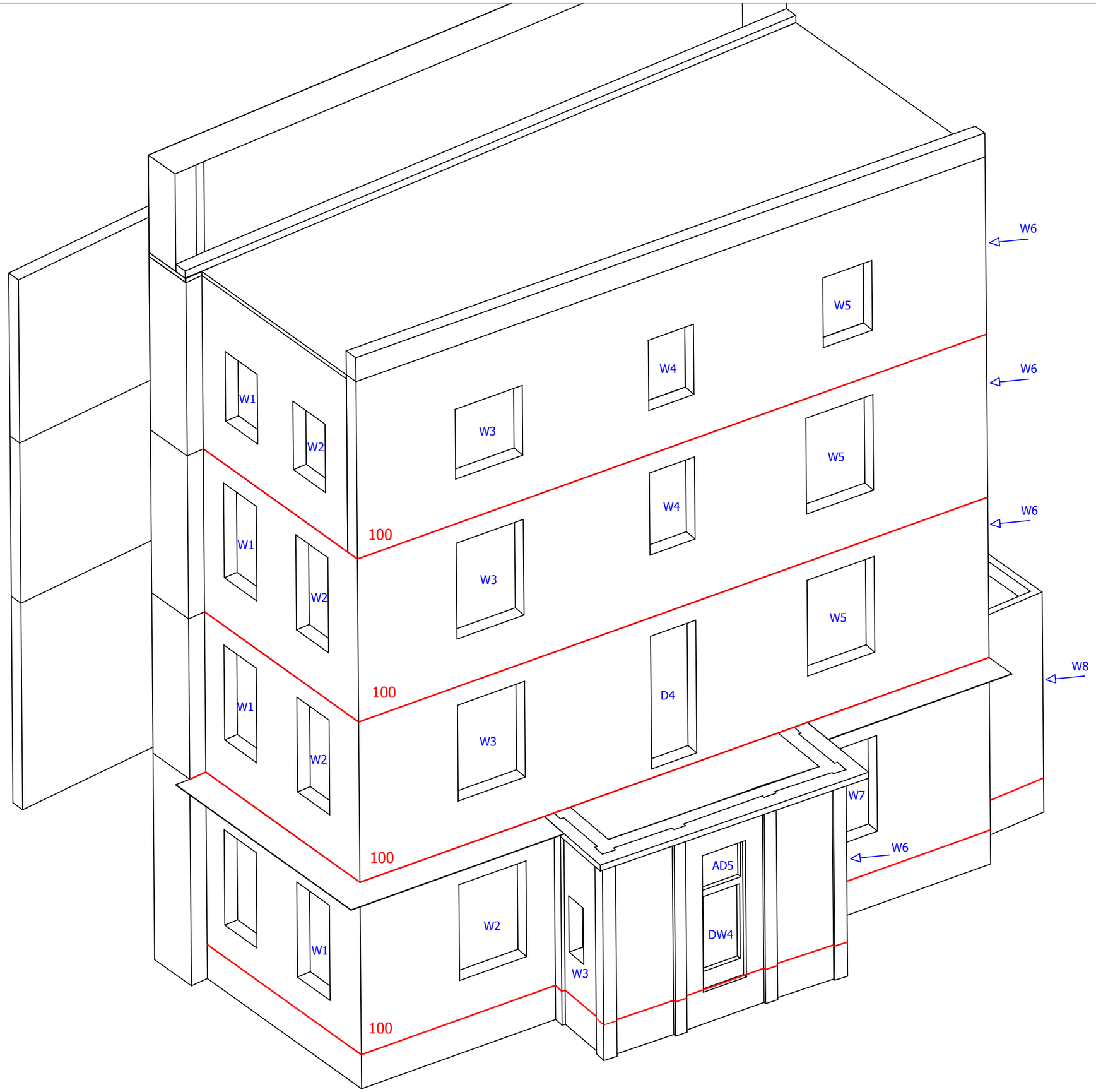

Sources of Information

Squire & Partners
IR17-5428

GIA
IR01-5428
IR06-5428

VERTEX MODELLING
IR12-5428

Notes

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Rev	Date	Description	Initials
A	Nov'10	Initial Issue	GF

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

3D WINDOW MAP
1-5 ORMANDE TERRACE

Scale: NTS
Date: FEB'11
Drawn: JH
Checked:
Drawing No.: 5428-17
Rel No.: 10
Revision: A

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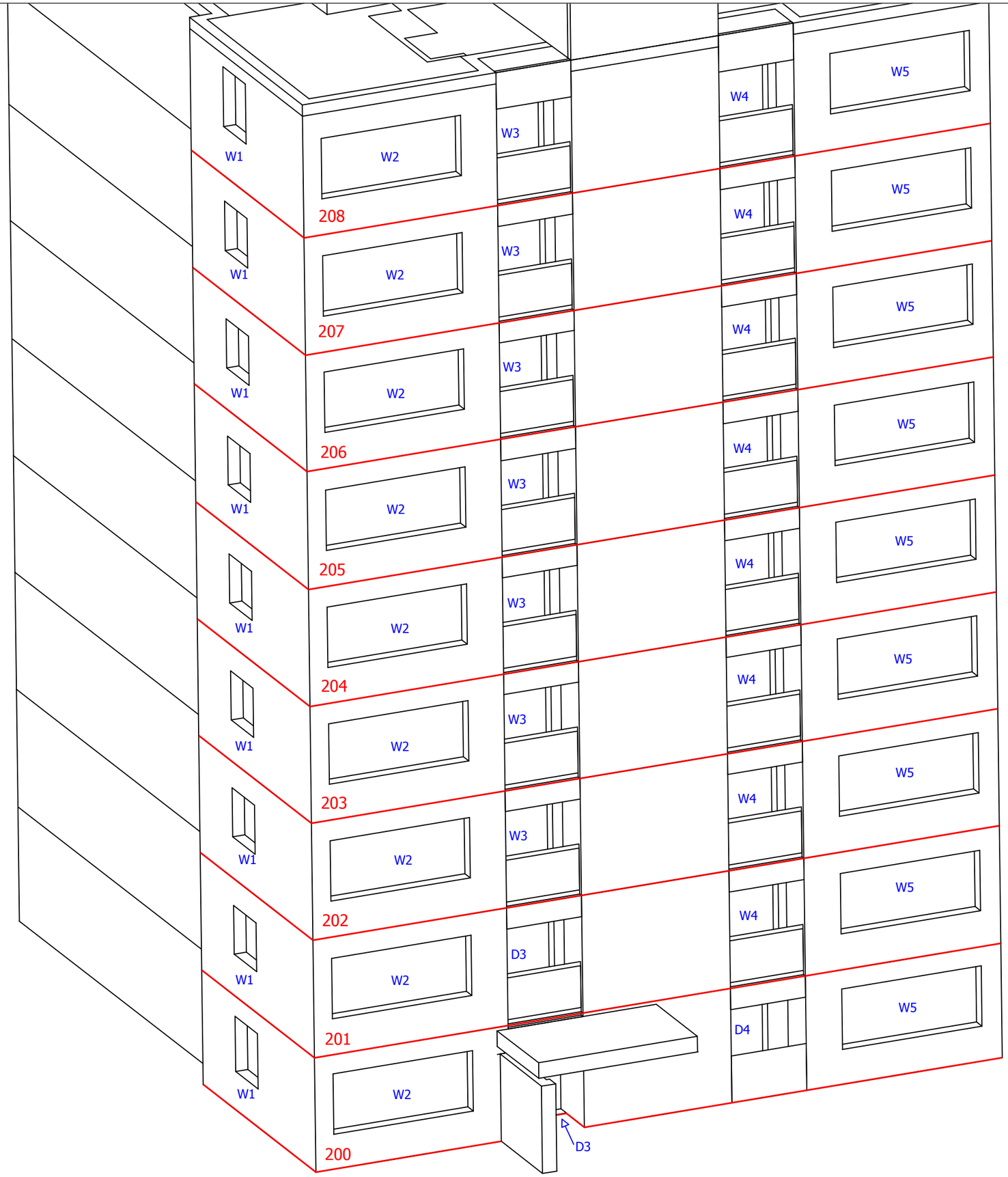

Sources of Information

Squire & Partners
IR17-5428

GIA
IR01-5428
IR06-5428

VERTEX MODELLING
IR12-5428

Notes

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Rev	Date	Description	Initials
A	Nov'10	Initial Issue	GF

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

3D WINDOW MAP
DANES COURT

Scale: NTS
Date: FEB'11
Drawn: JH
Checked:
Drawing No.: 5428-18
Rel No.: 10
Revision: A

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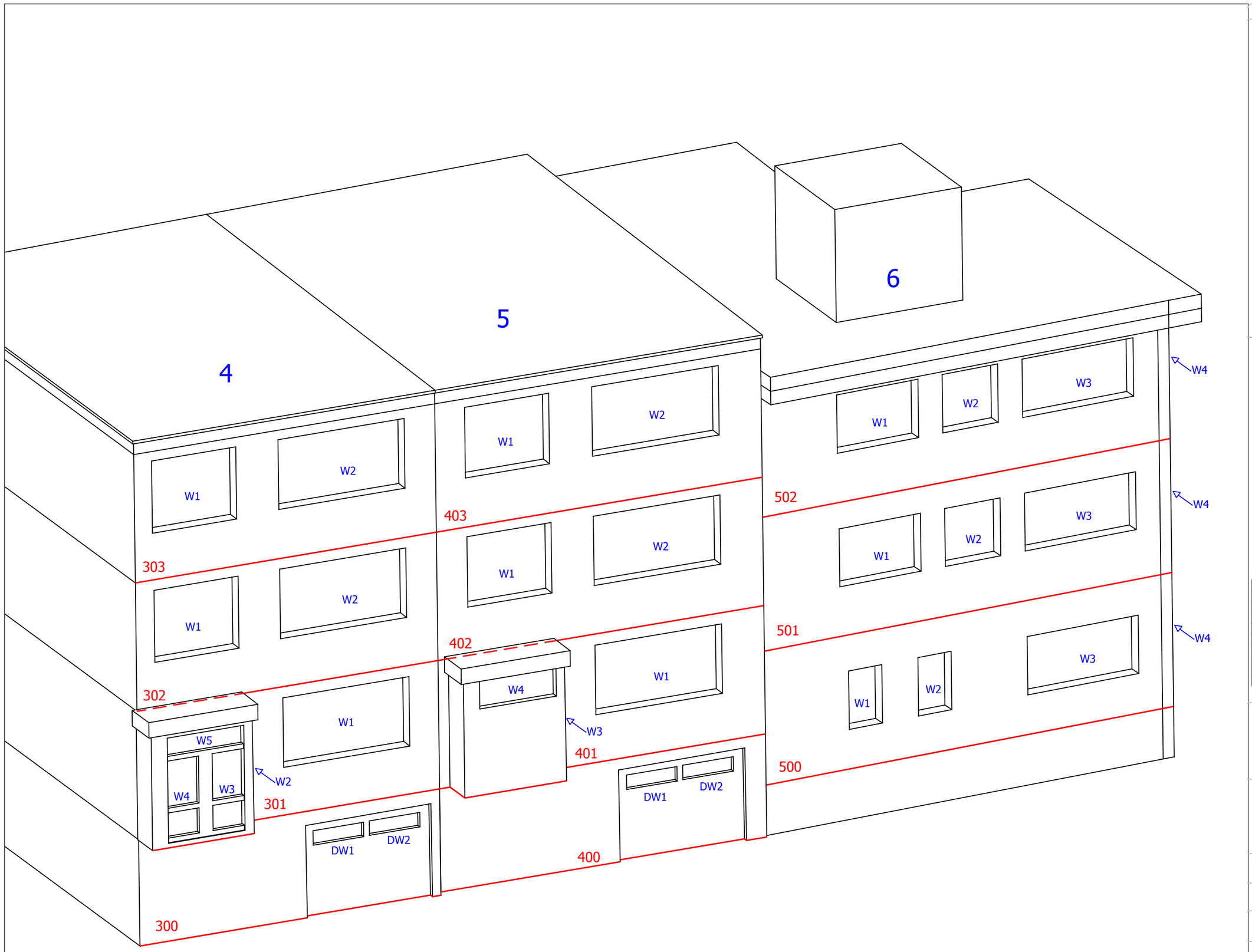

Sources of Information

Squire & Partners
IR17-5428

GIA
IR01-5428
IR06-5428

VERTEX MODELLING
IR12-5428

Notes

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Rev	Date	Description	Initials
A	Nov'10	Initial Issue	GF

Project

ST EDMUND'S TERRACE
LONDON
NW8

Title

3D WINDOW MAP
4-6 ST EDMUNDS TERRACE

Scale: NTS
Date: FEB'11
Drawn: JH
Checked:

Drawing No.: 5428-19
Rel No.: 10
Revision: A

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APPENDIX 3

DAYLIGHT AND SUNLIGHT - TABULATED RESULTS

Vertical Sky Component (VSC) / Average Daylight Factor (ADF) / Daylight Distribution (No-Sky) / Annual Probable Sunlight Hours (APSH)

EXISTING VS. PROPOSED

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
1-5 ORMONDE TERRACE					
R1/100	W1/100	34.66	34.66	0.00	0.00
R1/100	W2/100	26.66	21.03	5.63	21.12
R2/100	W3/100	17.36	17.36	0.00	0.00
R2/100	D4/100	33.85	25.26	8.59	25.38
R2/100	AD5/100	31.15	22.91	8.24	26.45
R2/100	W6/100	13.72	12.06	1.66	12.10
R3/100	W7/100	22.92	14.68	8.24	35.95
R3/100	W8/100	22.59	20.94	1.65	7.30
R1/101	W1/101	36.52	36.52	0.00	0.00
R1/101	W2/101	37.75	37.75	0.00	0.00
R1/101	W3/101	36.77	30.98	5.79	15.75
R2/101	D4/101	35.88	29.21	6.67	18.59
R3/101	W5/101	36.42	29.41	7.01	19.25
R4/101	W6/101	24.91	23.48	1.43	5.74
R1/102	W1/102	36.68	36.68	0.00	0.00
R1/102	W2/102	37.75	37.75	0.00	0.00
R1/102	W3/102	37.51	32.89	4.62	12.32
R2/102	W4/102	36.56	31.42	5.14	14.06
R3/102	W5/102	37.27	31.68	5.59	15.00
R4/102	W6/102	26.78	25.58	1.20	4.48

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R1/103	W1/103	36.57	36.57	0.00	0.00
R1/103	W2/103	37.42	37.42	0.00	0.00
R1/103	W3/103	37.61	34.22	3.39	9.01
R2/103	W4/103	36.87	33.05	3.82	10.36
R3/103	W5/103	36.96	32.81	4.15	11.23
R4/103	W6/103	28.19	27.22	0.97	3.44
DANE'S COURT, ST EDMUNDS TERRACE					
R1/200	W1/200	29.07	27.15	1.92	6.60
R1/200	W2/200	32.50	23.78	8.72	26.83
R3/200	D4/200	10.40	4.37	6.03	57.98
R3/200	W5/200	33.11	25.04	8.07	24.37
R1/201	W1/201	30.78	29.16	1.62	5.26
R1/201	W2/201	35.24	26.91	8.33	23.64
R2/201	D3/201	12.95	6.88	6.07	46.87
R3/201	W4/201	12.90	7.09	5.81	45.04
R3/201	W5/201	34.68	27.40	7.28	20.99
R1/202	W1/202	32.82	31.53	1.29	3.93
R1/202	W2/202	36.18	29.09	7.09	19.60
R2/202	W3/202	13.83	8.52	5.31	38.39
R3/202	W4/202	13.88	8.73	5.15	37.10

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R3/202	W5/202	35.81	29.52	6.29	17.56
R1/203	W1/203	34.72	33.78	0.94	2.71
R1/203	W2/203	37.01	31.25	5.76	15.56
R2/203	W3/203	14.62	10.18	4.44	30.37
R3/203	W4/203	14.72	10.38	4.34	29.48
R3/203	W5/203	36.77	31.60	5.17	14.06
R1/204	W1/204	36.43	35.81	0.62	1.70
R1/204	W2/204	37.67	33.36	4.31	11.44
R2/204	W3/204	15.29	11.81	3.48	22.76
R3/204	W4/204	15.44	12.02	3.42	22.15
R3/204	W5/204	37.56	33.61	3.95	10.52
R1/205	W1/205	37.26	36.95	0.31	0.83
R1/205	W2/205	38.16	35.38	2.78	7.29
R2/205	W3/205	15.79	13.38	2.41	15.26
R3/205	W4/205	15.97	13.60	2.37	14.84
R3/205	W5/205	38.12	35.52	2.60	6.82
R1/206	W1/206	37.30	37.24	0.06	0.16
R1/206	W2/206	38.36	37.18	1.18	3.08
R2/206	W3/206	16.02	14.85	1.17	7.30
R3/206	W4/206	15.85	14.67	1.18	7.44
R3/206	W5/206	38.34	37.19	1.15	3.00

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R1/207	W1/207	37.33	37.33	0.00	0.00
R1/207	W2/207	38.38	38.23	0.15	0.39
R2/207	W3/207	16.02	15.80	0.22	1.37
R3/207	W4/207	16.14	15.91	0.23	1.43
R3/207	W5/207	38.37	38.22	0.15	0.39
R1/208	W1/208	37.77	37.77	0.00	0.00
R1/208	W2/208	38.39	38.39	0.00	0.00
R2/208	W3/208	16.02	16.02	0.00	0.00
R3/208	W4/208	16.22	16.22	0.00	0.00
R3/208	W5/208	38.39	38.39	0.00	0.00
4 ST EDMUNDS TERRACE					
R1/301	W1/301	33.38	26.60	6.78	20.31
R2/301	W2/301	17.02	15.90	1.12	6.58
R2/301	W3/301	34.04	26.72	7.32	21.50
R2/301	W4/301	34.02	26.63	7.39	21.72
R2/301	W5/301	28.82	21.70	7.12	24.71
R1/302	W1/302	35.31	29.12	6.19	17.53
R2/302	W2/302	35.39	29.39	6.00	16.95
R1/303	W1/303	36.32	31.09	5.23	14.40

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R2/303	W2/303	36.41	31.31	5.10	14.01
5 ST EDMUNDS TERRACE					
R1/401	W1/401	33.72	27.15	6.57	19.48
R2/401	W3/401	17.19	16.59	0.60	3.49
R2/401	W4/401	29.13	22.30	6.83	23.45
R1/402	W1/402	35.24	29.32	5.92	16.80
R2/402	W2/402	35.37	29.53	5.84	16.51
R1/403	W1/403	36.28	31.22	5.06	13.95
R2/403	W2/403	36.36	31.35	5.01	13.78
6 ST EDMUNDS TERRACE					
R1/500	W1/500	29.31	23.20	6.11	20.85
R2/500	W2/500	31.35	25.48	5.87	18.72
R3/500	W3/500	33.05	27.81	5.24	15.85
R3/500	W4/500	21.72	21.72	0.00	0.00
R1/501	W1/501	34.35	28.92	5.43	15.81
R2/501	W2/501	34.02	28.94	5.08	14.93
R3/501	W3/501	34.44	29.75	4.69	13.62
R3/501	W4/501	24.61	24.61	0.00	0.00

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R1/502	W1/502	27.00	22.23	4.77	17.67
R2/502	W2/502	26.89	22.45	4.44	16.51
R3/502	W3/502	27.05	22.97	4.08	15.08
R3/502	W4/502	18.90	18.90	0.00	0.00

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
1-5 ORMONDE TERRACE								
R1/100	W1/100		2.28		2.28			
R1/100	W2/100		2.84	5.12	2.42	4.70	0.42	8.17
R2/100	W3/100		0.30		0.30			
R2/100	D4/100		0.77		0.62			
R2/100	AD5/100		0.48		0.39			
R2/100	W6/100		0.26	1.82	0.24	1.55	0.27	14.86
R3/100	W7/100		2.01		1.53			
R3/100	W8/100		1.43	3.44	1.36	2.89	0.55	16.03
R1/101	W1/101		1.59		1.59			
R1/101	W2/101		1.65		1.65			
R1/101	W3/101		2.42	5.66	2.08	5.32	0.34	5.95
R2/101	D4/101		2.87	2.87	2.41	2.41	0.45	15.80
R3/101	W5/101		6.26	6.26	5.23	5.23	1.04	16.57
R4/101	W6/101		3.63	3.63	3.49	3.49	0.14	3.91
R1/102	W1/102		1.62		1.62			
R1/102	W2/102		1.64		1.64			
R1/102	W3/102		2.47	5.73	2.19	5.45	0.28	4.92
R2/102	W4/102		2.22	2.22	1.94	1.94	0.28	12.49
R3/102	W5/102		6.41	6.41	5.54	5.54	0.87	13.59
R4/102	W6/102		3.84	3.84	3.71	3.71	0.12	3.18

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R1/103	W1/103		1.11		1.11			
R1/103	W2/103		1.12		1.12			
R1/103	W3/103		1.72	3.95	1.57	3.80	0.15	3.77
R2/103	W4/103		1.81	1.81	1.64	1.64	0.17	9.46
R3/103	W5/103		3.18	3.18	2.86	2.86	0.33	10.30
R4/103	W6/103		2.54	2.54	2.47	2.47	0.06	2.52
DANE'S COURT, ST EDMUNDS TERRACE								
R1/200	W1/200	BEDROOM	1.18		1.13			
R1/200	W2/200	BEDROOM	3.87	5.05	3.07	4.20	0.86	16.93
R3/200	D4/200	BEDROOM	0.87		0.55			
R3/200	W5/200	BEDROOM	4.23	5.10	3.43	3.98	1.13	22.09
R1/201	W1/201	BEDROOM	1.09		1.04			
R1/201	W2/201	BEDROOM	4.18	5.27	3.37	4.42	0.86	16.24
R2/201	D3/201		2.16	2.16	1.53	1.53	0.63	29.27
R3/201	W4/201	BEDROOM	1.21		0.87			
R3/201	W5/201	BEDROOM	4.44	5.65	3.68	4.55	1.10	19.47
R1/202	W1/202	BEDROOM	1.16		1.12			
R1/202	W2/202	BEDROOM	4.29	5.44	3.57	4.69	0.76	13.87
R2/202	W3/202		2.24	2.24	1.71	1.71	0.53	23.61
R3/202	W4/202	BEDROOM	1.27		0.98			

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R3/202	W5/202	BEDROOM	4.57	5.84	3.89	4.86	0.97	16.68
R1/203	W1/203	BEDROOM	1.22		1.19			
R1/203	W2/203	BEDROOM	4.38	5.60	3.77	4.96	0.64	11.41
R2/203	W3/203		2.32	2.32	1.89	1.89	0.43	18.44
R3/203	W4/203	BEDROOM	1.31		1.07			
R3/203	W5/203	BEDROOM	4.69	6.00	4.10	5.17	0.83	13.75
R1/204	W1/204	BEDROOM	1.27		1.25			
R1/204	W2/204	BEDROOM	4.46	5.73	3.98	5.23	0.50	8.72
R2/204	W3/204		2.38	2.38	2.05	2.05	0.33	13.76
R3/204	W4/204	BEDROOM	1.35		1.17			
R3/204	W5/204	BEDROOM	4.79	6.14	4.32	5.48	0.66	10.67
R1/205	W1/205	BEDROOM	1.29		1.28			
R1/205	W2/205	BEDROOM	4.53	5.82	4.20	5.48	0.34	5.83
R2/205	W3/205		2.42	2.42	2.20	2.20	0.22	9.21
R3/205	W4/205	BEDROOM	1.37		1.25			
R3/205	W5/205	BEDROOM	4.87	6.24	4.54	5.79	0.45	7.26
R1/206	W1/206	BEDROOM	1.30		1.30			
R1/206	W2/206	BEDROOM	4.55	5.85	4.40	5.70	0.15	2.55
R2/206	W3/206		2.44	2.44	2.34	2.34	0.11	4.34
R3/206	W4/206	BEDROOM	1.37		1.31			
R3/206	W5/206	BEDROOM	4.90	6.26	4.74	6.05	0.22	3.43

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R1/207	W1/207	BEDROOM	1.31		1.31			
R1/207	W2/207	BEDROOM	4.55	5.87	4.53	5.85	0.02	0.32
R2/207	W3/207		2.44	2.44	2.42	2.42	0.02	0.82
R3/207	W4/207	BEDROOM	1.38		1.37			
R3/207	W5/207	BEDROOM	4.90	6.28	4.88	6.25	0.03	0.53
R1/208	W1/208		1.61		1.61			
R1/208	W2/208		4.55	6.16	4.55	6.16	0.00	0.00
R2/208	W3/208		2.44	2.44	2.44	2.44	0.00	0.00
R3/208	W4/208		1.39		1.39			
R3/208	W5/208		4.90	6.29	4.90	6.29	0.00	0.00
4 ST EDMUNDS TERRACE								
R1/301	W1/301		4.11	4.11	3.45	3.45	0.66	16.12
R2/301	W2/301		1.19		1.14			
R2/301	W3/301		2.09		1.73			
R2/301	W4/301		2.09		1.73			
R2/301	W5/301		1.65	7.03	1.36	5.96	1.07	15.17
R1/302	W1/302		4.26	4.26	3.63	3.63	0.63	14.74
R2/302	W2/302		4.67	4.67	4.00	4.00	0.67	14.32
R1/303	W1/303		4.39	4.39	3.83	3.83	0.56	12.68

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R2/303	W2/303		4.81	4.81	4.22	4.22	0.60	12.39
5 ST EDMUNDS TERRACE								
R1/401	W1/401		4.17	4.17	3.52	3.52	0.65	15.61
R2/401	W3/401		1.01		0.99			
R2/401	W4/401		2.19	3.20	1.81	2.81	0.39	12.29
R1/402	W1/402		3.80	3.80	3.26	3.26	0.54	14.12
R2/402	W2/402		4.44	4.44	3.82	3.82	0.62	13.98
R1/403	W1/403		3.91	3.91	3.43	3.43	0.48	12.27
R2/403	W2/403		4.57	4.57	4.02	4.02	0.56	12.16
6 ST EDMUNDS TERRACE								
R1/500	W1/500		1.09	1.09	0.92	0.92	0.17	15.19
R2/500	W2/500		3.27	3.27	2.81	2.81	0.47	14.26
R3/500	W3/500		3.80		3.32			
R3/500	W4/500		1.97	5.77	1.97	5.29	0.48	8.32
R1/501	W1/501		3.30	3.30	2.87	2.87	0.43	13.02
R2/501	W2/501		2.65	2.65	2.32	2.32	0.33	12.27
R3/501	W3/501		3.68		3.26			
R3/501	W4/501		2.00	5.67	2.00	5.26	0.42	7.35

Room	Window	Room Use	Average Daylight Factor Existing ADF	Existing Total	Proposed ADF	Proposed Total	Loss	%
R1/502	W1/502		2.75	2.75	2.41	2.41	0.34	12.39
R2/502	W2/502		2.22	2.22	1.96	1.96	0.26	11.58
R3/502	W3/502		3.06		2.74			
R3/502	W4/502		1.67	4.73	1.67	4.41	0.33	6.87

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT DISTRIBUTION ANALYSIS

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
1-5 ORMONDE TERRACE						
R1/100		120.1	119.4	119.4	0.0	0.0
R2/100		213.7	208.1	201.4	6.7	3.2
R3/100		155.0	138.4	138.4	0.0	0.0
R1/101		252.7	252.1	252.1	0.0	0.0
R2/101		108.2	95.4	95.4	0.0	0.0
R3/101		57.5	56.8	56.8	0.0	0.0
R4/101		52.9	49.9	49.9	0.0	0.0
R1/102		252.7	252.1	252.1	0.0	0.0
R2/102		108.2	93.9	93.9	0.0	0.0
R3/102		57.5	56.8	56.8	0.0	0.0
R4/102		52.9	49.9	49.9	0.0	0.0
R1/103		252.7	252.1	252.1	0.0	0.0
R2/103		108.2	94.9	94.9	0.0	0.0
R3/103		57.5	56.6	56.6	0.0	0.0
R4/103		52.9	49.6	49.6	0.0	0.0
DANE'S COURT, ST EDMUNDS TERRACE						
R1/200		225.4	224.4	220.9	3.5	1.6
R3/200		182.5	181.2	166.3	15.0	8.3
R1/201		225.4	224.1	220.8	3.2	1.4
R2/201		93.5	89.3	81.9	7.5	8.4
R3/201		182.5	180.4	171.4	9.0	5.0
R1/202		225.4	224.8	224.6	0.1	0.0
R2/202		93.5	89.3	86.0	3.4	3.8
R3/202		182.5	180.4	176.9	3.5	1.9
R1/203		225.4	224.8	224.8	0.0	0.0
R2/203		93.5	89.3	89.3	0.0	0.0
R3/203		182.5	180.4	180.4	0.0	0.0
R1/204		225.4	224.8	224.8	0.0	0.0
R2/204		93.5	89.3	89.3	0.0	0.0

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
R3/204		182.5	180.4	180.4	0.0	0.0
R1/205		225.4	224.8	224.8	0.0	0.0
R2/205		93.5	89.3	89.3	0.0	0.0
R3/205		182.5	180.4	180.4	0.0	0.0
R1/206		225.4	224.8	224.8	0.0	0.0
R2/206		93.5	89.3	89.3	0.0	0.0
R3/206		182.5	180.4	180.4	0.0	0.0
R1/207		225.4	224.8	224.8	0.0	0.0
R2/207		93.5	89.3	89.3	0.0	0.0
R3/207		182.5	180.4	180.4	0.0	0.0
R1/208		225.4	224.8	224.8	0.0	0.0
R2/208		93.5	89.3	89.3	0.0	0.0
R3/208		182.5	180.4	180.4	0.0	0.0
4 ST EDMUNDS TERRACE						
R1/301		186.5	184.7	184.7	0.0	0.0
R2/301		40.5	39.7	39.7	0.0	0.0
R1/302		108.2	107.3	107.3	0.0	0.0
R2/302		167.6	166.1	166.1	0.0	0.0
R1/303		108.2	107.3	107.3	0.0	0.0
R2/303		167.6	166.1	166.1	0.0	0.0
5 ST EDMUNDS TERRACE						
R1/401		186.5	184.7	184.7	0.0	0.0
R2/401		49.1	48.0	48.0	0.0	0.0
R1/402		125.6	124.4	122.0	2.4	1.9
R2/402		180.1	176.3	176.3	0.0	0.0
R1/403		125.6	124.4	124.4	0.0	0.0
R2/403		180.1	176.3	176.3	0.0	0.0

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT DISTRIBUTION ANALYSIS

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
6 ST EDMUNDS TERRACE						
R1/500		116.9	109.6	94.0	15.6	14.2
R2/500		24.2	23.6	23.6	0.0	0.0
R3/500		131.9	131.0	130.9	0.1	0.1
R1/501		103.9	103.0	97.0	6.0	5.8
R2/501		75.2	74.5	65.2	9.4	12.6
R3/501		145.7	145.7	145.5	0.2	0.1
R1/502		103.9	101.1	99.3	1.9	1.9
R2/502		75.2	73.2	68.5	4.7	6.4
R3/502		145.7	145.6	145.6	0.0	0.0

Project No: 5428 (rel_10)
EXISTING vs PROPOSED_080211

ST EDMUNDS TERRACE
LONDON NW8
SUNLIGHT ANALYSIS

FEB 2011

Position	Room Use	Existing Summer	Existing Winter	Existing Total	Proposed Summer	Proposed Winter	Proposed Total	% Loss Winter	% Loss Total
1-5 ORMONDE TERRACE									
W8/100		29	13	42	25	13	38	0.00	9.52
W6/101		29	14	43	26	14	40	0.00	6.98
W6/102		32	14	46	30	14	44	0.00	4.35
W6/103		35	15	50	33	15	48	0.00	4.00
4 ST EDMUNDS TERRACE									
W2/301		15	2	17	14	2	16	0.00	5.88
5 ST EDMUNDS TERRACE									
W3/401		15	2	17	15	2	17	0.00	0.00
6 ST EDMUNDS TERRACE									
W4/500		23	12	35	23	12	35	0.00	0.00
W4/501		29	13	42	29	13	42	0.00	0.00
W4/502		23	12	35	23	12	35	0.00	0.00

NOTIONAL EXISTING VS. PROPOSED

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
1-5 ORMONDE TERRACE					
R1/100	**W1/100**	33.07	34.66	-1.59	-4.81
R1/100	**W2/100**	10.33	21.03	-10.70	-103.58
R2/100	**W3/100**	14.51	17.36	-2.85	-19.64
R2/100	**D4/100**	11.00	25.26	-14.26	-129.64
R2/100	**AD5/100**	9.44	22.91	-13.47	-142.69
R2/100	**W6/100**	10.27	12.06	-1.79	-17.43
R3/100	**W7/100**	8.23	14.68	-6.45	-78.37
R3/100	**W8/100**	19.55	20.94	-1.39	-7.11
R1/101	**W1/101**	35.79	36.52	-0.73	-2.04
R1/101	**W2/101**	36.42	37.75	-1.33	-3.65
R1/101	**W3/101**	22.39	30.98	-8.59	-38.37
R2/101	**D4/101**	20.47	29.21	-8.74	-42.70
R3/101	**W5/101**	21.88	29.41	-7.53	-34.41
R4/101	**W6/101**	22.98	23.48	-0.50	-2.18
R1/102	**W1/102**	36.27	36.68	-0.41	-1.13
R1/102	**W2/102**	37.01	37.75	-0.74	-2.00
R1/102	**W3/102**	29.42	32.89	-3.47	-11.79
R2/102	**W4/102**	28.73	31.42	-2.69	-9.36
R3/102	**W5/102**	29.29	31.68	-2.39	-8.16
R4/102	**W6/102**	25.84	25.58	0.26	1.01

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R1/103	W1/103	36.46	36.57	-0.11	-0.30
R1/103	W2/103	37.25	37.42	-0.17	-0.46
R1/103	W3/103	35.87	34.22	1.65	4.60
R2/103	W4/103	35.15	33.05	2.10	5.97
R3/103	W5/103	35.33	32.81	2.52	7.13
R4/103	W6/103	28.10	27.22	0.88	3.13
DANE'S COURT, ST EDMUNDS TERRACE					
R1/200	W1/200	24.70	27.15	-2.45	-9.92
R1/200	W2/200	18.01	23.78	-5.77	-32.04
R3/200	D4/200	1.39	4.37	-2.98	-214.39
R3/200	W5/200	18.95	25.04	-6.09	-32.14
R1/201	W1/201	27.55	29.16	-1.61	-5.84
R1/201	W2/201	23.20	26.91	-3.71	-15.99
R2/201	D3/201	5.28	6.88	-1.60	-30.30
R3/201	W4/201	5.51	7.09	-1.58	-28.68
R3/201	W5/201	23.75	27.40	-3.65	-15.37
R1/202	W1/202	30.81	31.53	-0.72	-2.34
R1/202	W2/202	28.74	29.09	-0.35	-1.22
R2/202	W3/202	9.05	8.52	0.53	5.86
R3/202	W4/202	9.28	8.73	0.55	5.93

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R3/202	W5/202	29.11	29.52	-0.41	-1.41
R1/203	W1/203	33.88	33.78	0.10	0.30
R1/203	W2/203	34.33	31.25	3.08	8.97
R2/203	W3/203	12.91	10.18	2.73	21.15
R3/203	W4/203	13.12	10.38	2.74	20.88
R3/203	W5/203	34.46	31.60	2.86	8.30
R1/204	W1/204	36.43	35.81	0.62	1.70
R1/204	W2/204	38.32	33.36	4.96	12.94
R2/204	W3/204	16.02	11.81	4.21	26.28
R3/204	W4/204	16.22	12.02	4.20	25.89
R3/204	W5/204	38.28	33.61	4.67	12.20
R1/205	W1/205	37.26	36.95	0.31	0.83
R1/205	W2/205	38.35	35.38	2.97	7.74
R2/205	W3/205	16.02	13.38	2.64	16.48
R3/205	W4/205	16.22	13.60	2.62	16.15
R3/205	W5/205	38.32	35.52	2.80	7.31
R1/206	W1/206	37.30	37.24	0.06	0.16
R1/206	W2/206	38.36	37.18	1.18	3.08
R2/206	W3/206	16.02	14.85	1.17	7.30
R3/206	W4/206	15.85	14.67	1.18	7.44
R3/206	W5/206	38.34	37.19	1.15	3.00

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R1/207	W1/207	37.33	37.33	0.00	0.00
R1/207	W2/207	38.38	38.23	0.15	0.39
R2/207	W3/207	16.02	15.80	0.22	1.37
R3/207	W4/207	16.14	15.91	0.23	1.43
R3/207	W5/207	38.37	38.22	0.15	0.39
R1/208	W1/208	37.77	37.77	0.00	0.00
R1/208	W2/208	38.39	38.39	0.00	0.00
R2/208	W3/208	16.02	16.02	0.00	0.00
R3/208	W4/208	16.22	16.22	0.00	0.00
R3/208	W5/208	38.39	38.39	0.00	0.00
4 ST EDMUNDS TERRACE					
R1/301	W1/301	22.07	26.60	-4.53	-20.53
R2/301	W2/301	14.00	15.90	-1.90	-13.57
R2/301	W3/301	20.81	26.72	-5.91	-28.40
R2/301	W4/301	20.73	26.63	-5.90	-28.46
R2/301	W5/301	16.88	21.70	-4.82	-28.55
R1/302	W1/302	27.30	29.12	-1.82	-6.67
R2/302	W2/302	27.59	29.39	-1.80	-6.52
R1/303	W1/303	32.48	31.09	1.39	4.28

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R2/303	W2/303	32.69	31.31	1.38	4.22
5 ST EDMUNDS TERRACE					
R1/401	W1/401	22.94	27.15	-4.21	-18.35
R2/401	W3/401	14.40	16.59	-2.19	-15.21
R2/401	W4/401	17.70	22.30	-4.60	-25.99
R1/402	W1/402	27.63	29.32	-1.69	-6.12
R2/402	W2/402	27.95	29.53	-1.58	-5.65
R1/403	W1/403	32.64	31.22	1.42	4.35
R2/403	W2/403	32.80	31.35	1.45	4.42
6 ST EDMUNDS TERRACE					
R1/500	W1/500	18.08	23.20	-5.12	-28.32
R2/500	W2/500	20.50	25.48	-4.98	-24.29
R3/500	W3/500	22.82	27.81	-4.99	-21.87
R3/500	W4/500	21.16	21.72	-0.56	-2.65
R1/501	W1/501	26.21	28.92	-2.71	-10.34
R2/501	W2/501	26.26	28.94	-2.68	-10.21
R3/501	W3/501	27.17	29.75	-2.58	-9.50
R3/501	W4/501	24.21	24.61	-0.40	-1.65

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

		Vertical Sky Component			
Room	Window	Existing	Proposed	Loss	%
R1/502	W1/502	22.45	22.23	0.22	0.98
R2/502	W2/502	22.54	22.45	0.09	0.40
R3/502	W3/502	22.99	22.97	0.02	0.09
R3/502	W4/502	18.67	18.90	-0.23	-1.23

Room	Window	Room Use	Average Daylight Factor Existing ADF	Existing Total	Proposed ADF	Proposed Total	Loss	%
1-5 ORMONDE TERRACE								
R1/100	**W1/100**		2.19		2.28			
R1/100	**W2/100**		1.60	3.78	2.42	4.70	-0.92	-24.27
R2/100	**W3/100**		0.27		0.30			
R2/100	**D4/100**		0.37		0.62			
R2/100	**AD5/100**		0.23		0.39			
R2/100	**W6/100**		0.22	1.10	0.24	1.55	-0.45	-41.28
R3/100	**W7/100**		1.11		1.53			
R3/100	**W8/100**		1.30	2.41	1.36	2.89	-0.48	-19.91
R1/101	**W1/101**		1.56		1.59			
R1/101	**W2/101**		1.59		1.65			
R1/101	**W3/101**		1.65	4.81	2.08	5.32	-0.52	-10.78
R2/101	**D4/101**		1.89	1.89	2.41	2.41	-0.52	-27.52
R3/101	**W5/101**		4.25	4.25	5.23	5.23	-0.97	-22.85
R4/101	**W6/101**		3.44	3.44	3.49	3.49	-0.05	-1.46
R1/102	**W1/102**		1.60		1.62			
R1/102	**W2/102**		1.61		1.64			
R1/102	**W3/102**		2.00	5.21	2.19	5.45	-0.24	-4.55
R2/102	**W4/102**		1.81	1.81	1.94	1.94	-0.13	-7.12
R3/102	**W5/102**		5.21	5.21	5.54	5.54	-0.33	-6.32
R4/102	**W6/102**		3.74	3.74	3.71	3.71	0.03	0.72

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R1/103	W1/103		1.11		1.11			
R1/103	W2/103		1.11		1.12			
R1/103	W3/103		1.64	3.87	1.57	3.80	0.06	1.60
R2/103	W4/103		1.73	1.73	1.64	1.64	0.09	5.27
R3/103	W5/103		3.05	3.05	2.86	2.86	0.19	6.33
R4/103	W6/103		2.53	2.53	2.47	2.47	0.06	2.33
DANE'S COURT, ST EDMUNDS TERRACE								
R1/200	W1/200	BEDROOM	1.05		1.13			
R1/200	W2/200	BEDROOM	2.57	3.63	3.07	4.20	-0.57	-15.66
R3/200	D4/200	BEDROOM	0.31		0.55			
R3/200	W5/200	BEDROOM	2.86	3.16	3.43	3.98	-0.81	-25.63
R1/201	W1/201	BEDROOM	1.00		1.04			
R1/201	W2/201	BEDROOM	3.05	4.05	3.37	4.42	-0.37	-9.12
R2/201	D3/201		1.33	1.33	1.53	1.53	-0.20	-15.07
R3/201	W4/201	BEDROOM	0.76		0.87			
R3/201	W5/201	BEDROOM	3.33	4.09	3.68	4.55	-0.46	-11.22
R1/202	W1/202	BEDROOM	1.10		1.12			
R1/202	W2/202	BEDROOM	3.54	4.64	3.57	4.69	-0.05	-1.14
R2/202	W3/202		1.77	1.77	1.71	1.71	0.06	3.22
R3/202	W4/202	BEDROOM	1.01		0.98			

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R3/202	W5/202	BEDROOM	3.84	4.85	3.89	4.86	-0.01	-0.16
R1/203	W1/203	BEDROOM	1.19		1.19			
R1/203	W2/203	BEDROOM	4.08	5.27	3.77	4.96	0.31	5.95
R2/203	W3/203		2.16	2.16	1.89	1.89	0.27	12.43
R3/203	W4/203	BEDROOM	1.23		1.07			
R3/203	W5/203	BEDROOM	4.41	5.64	4.10	5.17	0.46	8.23
R1/204	W1/204	BEDROOM	1.27		1.25			
R1/204	W2/204	BEDROOM	4.55	5.82	3.98	5.23	0.58	10.01
R2/204	W3/204		2.44	2.44	2.05	2.05	0.39	16.12
R3/204	W4/204	BEDROOM	1.39		1.17			
R3/204	W5/204	BEDROOM	4.89	6.27	4.32	5.48	0.79	12.61
R1/205	W1/205	BEDROOM	1.29		1.28			
R1/205	W2/205	BEDROOM	4.55	5.84	4.20	5.48	0.36	6.20
R2/205	W3/205		2.44	2.44	2.20	2.20	0.24	9.99
R3/205	W4/205	BEDROOM	1.39		1.25			
R3/205	W5/205	BEDROOM	4.89	6.28	4.54	5.79	0.49	7.84
R1/206	W1/206	BEDROOM	1.30		1.30			
R1/206	W2/206	BEDROOM	4.55	5.85	4.40	5.70	0.15	2.55
R2/206	W3/206		2.44	2.44	2.34	2.34	0.11	4.34
R3/206	W4/206	BEDROOM	1.37		1.31			
R3/206	W5/206	BEDROOM	4.90	6.26	4.74	6.05	0.22	3.43

Room	Window	Room Use	Average Daylight Factor Existing ADF	Existing Total	Proposed ADF	Proposed Total	Loss	%
R1/207	**W1/207**	BEDROOM	1.31		1.31			
R1/207	**W2/207**	BEDROOM	4.55	5.87	4.53	5.85	0.02	0.32
R2/207	**W3/207**		2.44	2.44	2.42	2.42	0.02	0.82
R3/207	**W4/207**	BEDROOM	1.38		1.37			
R3/207	**W5/207**	BEDROOM	4.90	6.28	4.88	6.25	0.03	0.53
R1/208	**W1/208**		1.61		1.61			
R1/208	**W2/208**		4.55	6.16	4.55	6.16	0.00	0.00
R2/208	**W3/208**		2.44	2.44	2.44	2.44	0.00	0.00
R3/208	**W4/208**		1.39		1.39			
R3/208	**W5/208**		4.90	6.29	4.90	6.29	0.00	0.00
4 ST EDMUNDS TERRACE								
R1/301	**W1/301**		3.04	3.04	3.45	3.45	-0.41	-13.45
R2/301	**W2/301**		1.06		1.14			
R2/301	**W3/301**		1.47		1.73			
R2/301	**W4/301**		1.46		1.73			
R2/301	**W5/301**		1.16	5.15	1.36	5.96	-0.81	-15.77
R1/302	**W1/302**		3.46	3.46	3.63	3.63	-0.17	-4.88
R2/302	**W2/302**		3.82	3.82	4.00	4.00	-0.18	-4.79
R1/303	**W1/303**		3.97	3.97	3.83	3.83	0.14	3.50

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R2/303	W2/303		4.37	4.37	4.22	4.22	0.15	3.48
5 ST EDMUNDS TERRACE								
R1/401	W1/401		3.13	3.13	3.52	3.52	-0.38	-12.26
R2/401	W3/401		0.91		0.99			
R2/401	W4/401		1.57	2.48	1.81	2.81	-0.32	-13.06
R1/402	W1/402		3.12	3.12	3.26	3.26	-0.14	-4.52
R2/402	W2/402		3.67	3.67	3.82	3.82	-0.15	-4.17
R1/403	W1/403		3.56	3.56	3.43	3.43	0.13	3.57
R2/403	W2/403		4.17	4.17	4.02	4.02	0.15	3.65
6 ST EDMUNDS TERRACE								
R1/500	W1/500		0.79	0.79	0.92	0.92	-0.14	-17.18
R2/500	W2/500		2.43	2.43	2.81	2.81	-0.38	-15.47
R3/500	W3/500		2.90		3.32			
R3/500	W4/500		1.94	4.84	1.97	5.29	-0.46	-9.45
R1/501	W1/501		2.67	2.67	2.87	2.87	-0.20	-7.40
R2/501	W2/501		2.17	2.17	2.32	2.32	-0.16	-7.29
R3/501	W3/501		3.05		3.26			
R3/501	W4/501		1.98	5.02	2.00	5.26	-0.23	-4.66

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT ANALYSIS

			Average Daylight Factor					
			Existing		Proposed			
Room	Window	Room Use	ADF	Total	ADF	Total	Loss	%
R1/502	W1/502		2.43	2.43	2.41	2.41	0.02	0.62
R2/502	W2/502		1.97	1.97	1.96	1.96	0.01	0.30
R3/502	W3/502		2.74		2.74			
R3/502	W4/502		1.66	4.40	1.67	4.41	-0.01	-0.25

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT DISTRIBUTION ANALYSIS

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
1-5 ORMONDE TERRACE						
R1/100		120.1	118.0	119.4	-1.3	-1.1
R2/100		213.7	155.3	201.4	-46.1	-29.7
R3/100		155.0	137.1	138.4	-1.3	-0.9
R1/101		252.7	250.5	252.1	-1.6	-0.6
R2/101		108.2	95.4	95.4	0.0	0.0
R3/101		57.5	56.8	56.8	0.0	0.0
R4/101		52.9	49.9	49.9	0.0	0.0
R1/102		252.7	252.1	252.1	0.0	0.0
R2/102		108.2	93.9	93.9	0.0	0.0
R3/102		57.5	56.8	56.8	0.0	0.0
R4/102		52.9	49.9	49.9	0.0	0.0
R1/103		252.7	252.1	252.1	0.0	0.0
R2/103		108.2	94.9	94.9	0.0	0.0
R3/103		57.5	56.6	56.6	0.0	0.0
R4/103		52.9	49.6	49.6	0.0	0.0
DANE'S COURT, ST EDMUNDS TERRACE						
R1/200		225.4	209.8	220.9	-11.2	-5.3
R3/200		182.5	107.5	166.3	-58.8	-54.7
R1/201		225.4	220.3	220.8	-0.5	-0.2
R2/201		93.5	45.8	81.9	-36.0	-78.6
R3/201		182.5	142.7	171.4	-28.7	-20.1
R1/202		225.4	221.7	224.6	-3.0	-1.4
R2/202		93.5	89.2	86.0	3.2	3.6
R3/202		182.5	180.4	176.9	3.5	1.9
R1/203		225.4	224.8	224.8	0.0	0.0
R2/203		93.5	89.3	89.3	0.0	0.0
R3/203		182.5	180.4	180.4	0.0	0.0
R1/204		225.4	224.8	224.8	0.0	0.0
R2/204		93.5	89.3	89.3	0.0	0.0

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
R3/204		182.5	180.4	180.4	0.0	0.0
R1/205		225.4	224.8	224.8	0.0	0.0
R2/205		93.5	89.3	89.3	0.0	0.0
R3/205		182.5	180.4	180.4	0.0	0.0
R1/206		225.4	224.8	224.8	0.0	0.0
R2/206		93.5	89.3	89.3	0.0	0.0
R3/206		182.5	180.4	180.4	0.0	0.0
R1/207		225.4	224.8	224.8	0.0	0.0
R2/207		93.5	89.3	89.3	0.0	0.0
R3/207		182.5	180.4	180.4	0.0	0.0
R1/208		225.4	224.8	224.8	0.0	0.0
R2/208		93.5	89.3	89.3	0.0	0.0
R3/208		182.5	180.4	180.4	0.0	0.0
4 ST EDMUNDS TERRACE						
R1/301		186.5	118.2	184.7	-66.5	-56.3
R2/301		40.5	39.7	39.7	0.0	0.0
R1/302		108.2	105.5	107.3	-1.8	-1.7
R2/302		167.6	165.3	166.1	-0.8	-0.5
R1/303		108.2	107.3	107.3	0.0	0.0
R2/303		167.6	166.1	166.1	0.0	0.0
5 ST EDMUNDS TERRACE						
R1/401		186.5	120.6	184.7	-64.2	-53.2
R2/401		49.1	48.0	48.0	0.0	0.0
R1/402		125.6	124.4	122.0	2.4	1.9
R2/402		180.1	176.3	176.3	0.0	0.0
R1/403		125.6	124.4	124.4	0.0	0.0
R2/403		180.1	176.3	176.3	0.0	0.0

ST EDMUNDS TERRACE
LONDON NW8
DAYLIGHT DISTRIBUTION ANALYSIS

Room / Floor	Room Use	Whole Room	Prev sq ft	New sq ft	Loss sq ft	%Loss
6 ST EDMUNDS TERRACE						
R1/500		116.9	47.0	94.0	-47.0	-100.0
R2/500		24.2	23.6	23.6	0.0	0.0
R3/500		131.9	130.9	130.9	0.0	0.0
R1/501		103.9	76.6	97.0	-20.4	-26.6
R2/501		75.2	55.5	65.2	-9.6	-17.3
R3/501		145.7	143.6	145.5	-1.9	-1.3
R1/502		103.9	101.1	99.3	1.9	1.9
R2/502		75.2	73.2	68.5	4.7	6.4
R3/502		145.7	145.6	145.6	0.0	0.0

Project No: 5428 (rel_10)
NOTIONAL EXISTING vs PROPOSED_080211

ST EDMUNDS TERRACE
LONDON NW8
SUNLIGHT ANALYSIS

FEB 2011

Position	Room Use	Existing Summer	Existing Winter	Existing Total	Proposed Summer	Proposed Winter	Proposed Total	% Loss Winter	% Loss Total	Pass / Fail
1-5 ORMONDE TERRACE										
W6/100		9	1	10	10	1	11	0.00	-10.00	PASS
W8/100		24	13	37	25	13	38	0.00	-2.70	PASS
W6/101		26	14	40	26	14	40	0.00	0.00	PASS
W6/102		32	14	46	30	14	44	0.00	4.35	PASS
W6/103		35	15	50	33	15	48	0.00	4.00	PASS
4 ST EDMUNDS TERRACE										
W2/301		9	2	11	14	2	16	0.00	-45.45	PASS
5 ST EDMUNDS TERRACE										
W3/401		10	2	12	15	2	17	0.00	-41.67	PASS
6 ST EDMUNDS TERRACE										
W4/500		23	12	35	23	12	35	0.00	0.00	PASS
W4/501		29	13	42	29	13	42	0.00	0.00	PASS
W4/502		23	12	35	23	12	35	0.00	0.00	PASS

Appendix 4

Internal Daylight & Sunlight Report

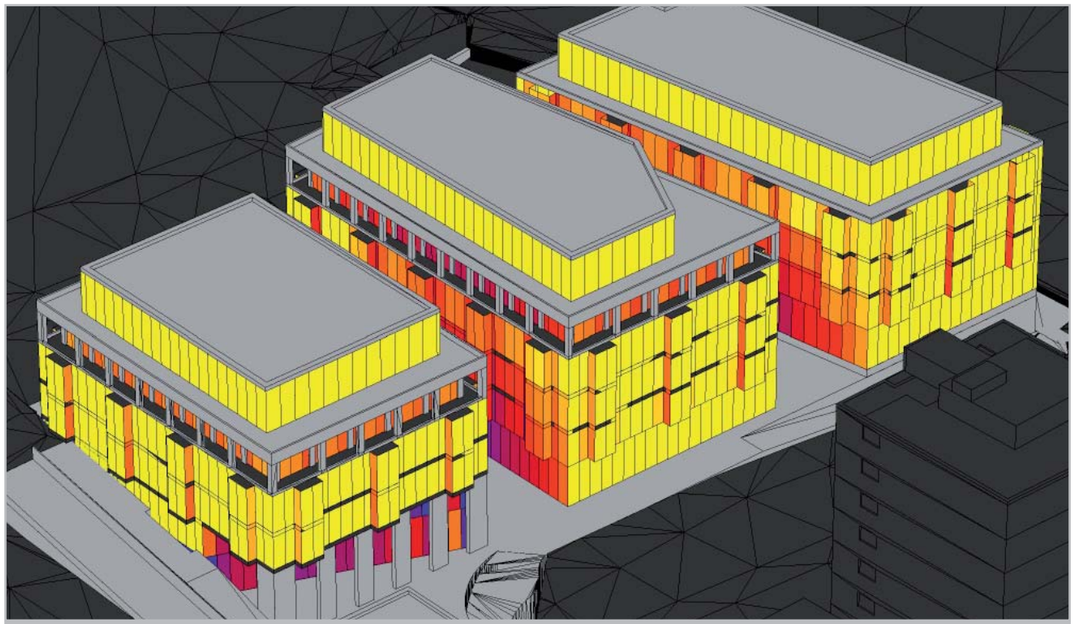


Figure 1: VSC, view from South-West

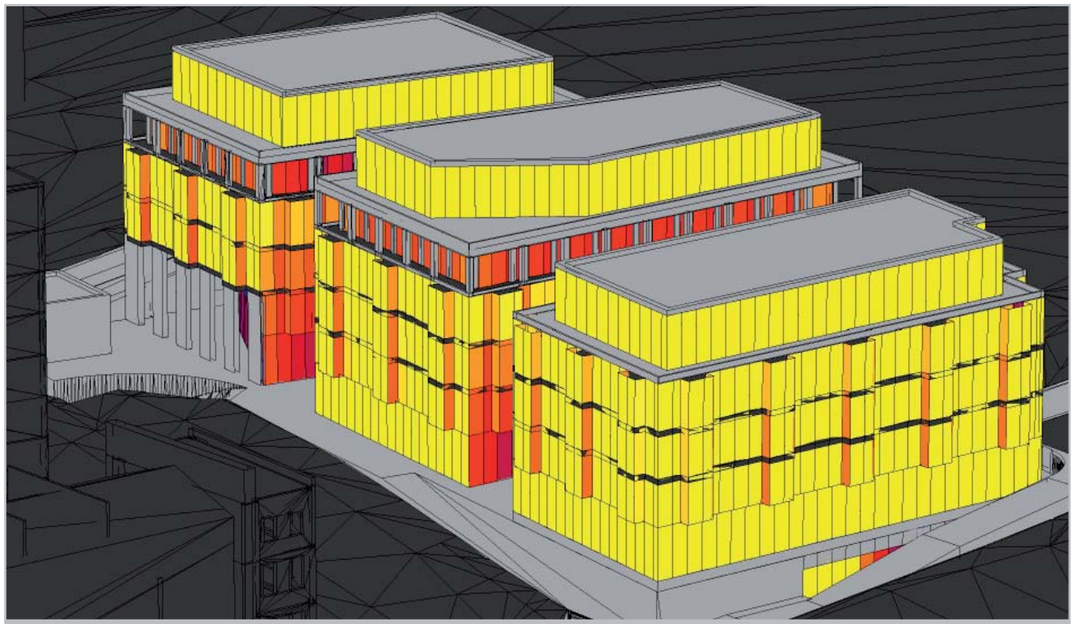


Figure 2: VSC, view from South-East

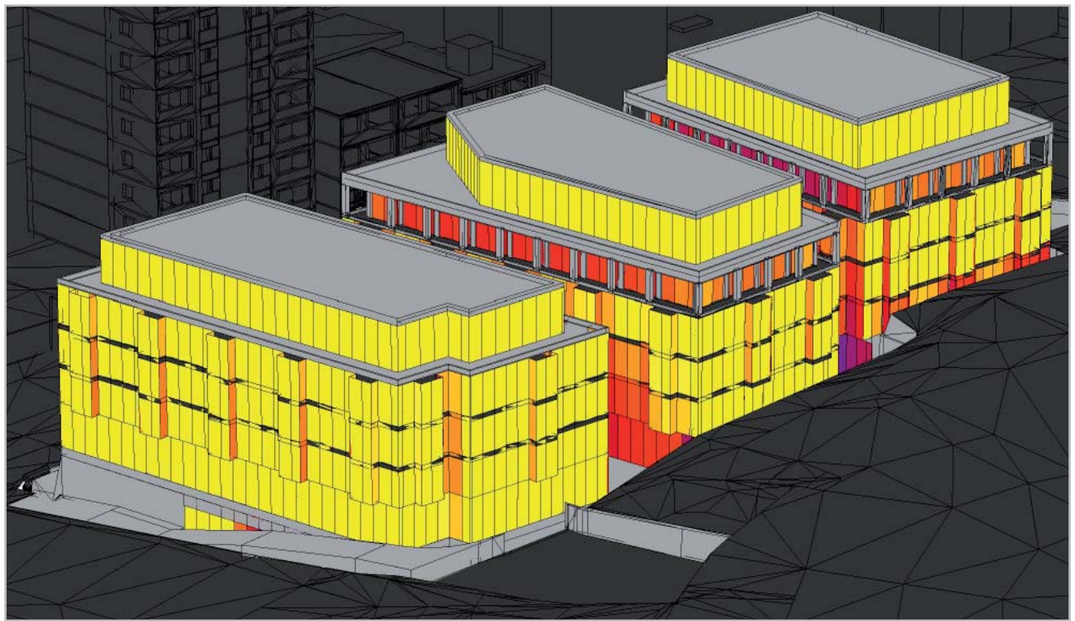


Figure 3: VSC, view from North-East

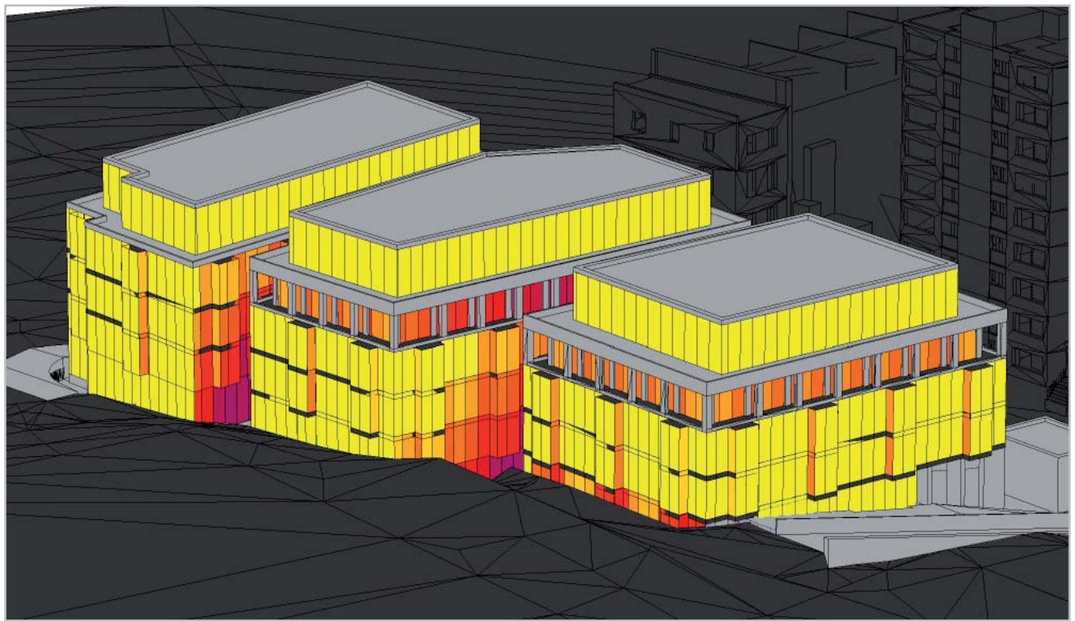


Figure 4: VSC, view from North-West

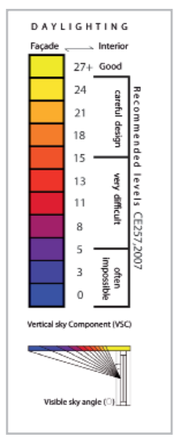


Figure 5: VSC, North-East elevation of building 1

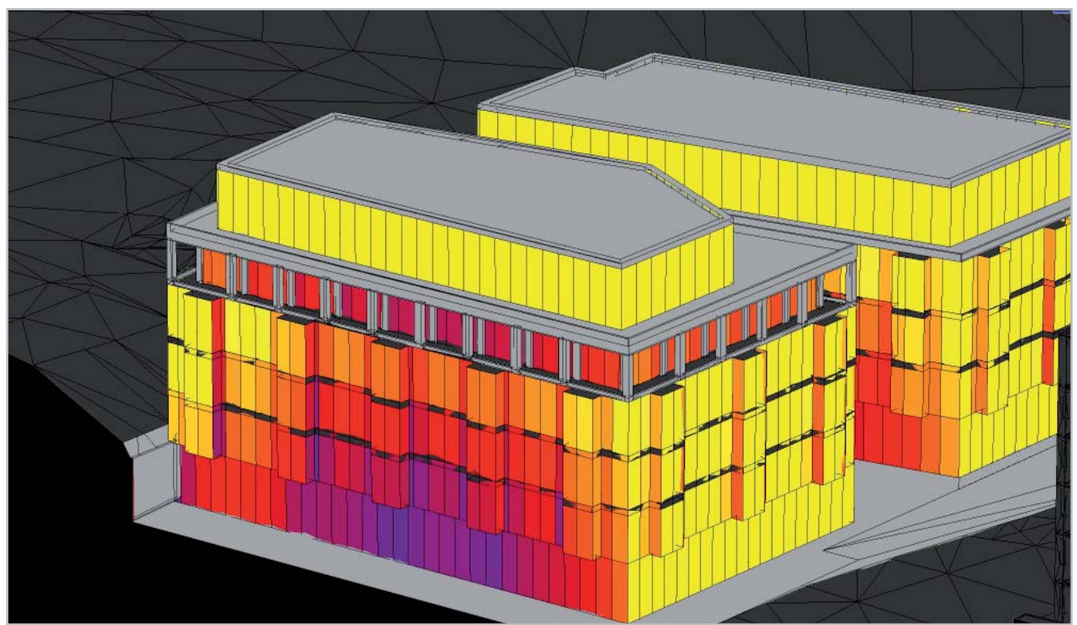


Figure 6: VSC, South-West elevation of building 2

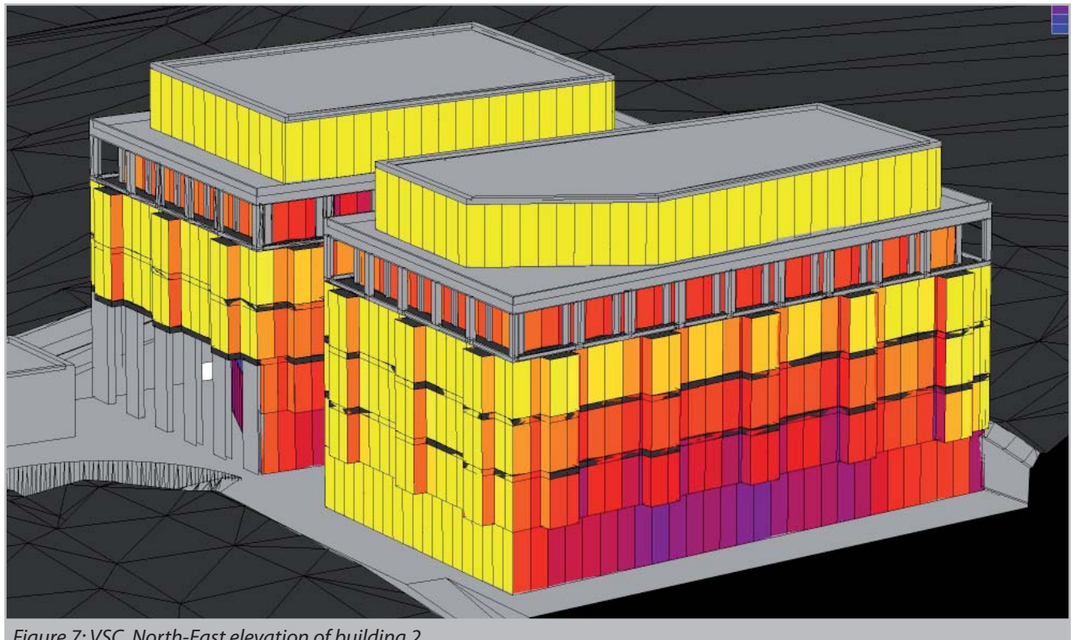


Figure 7: VSC, North-East elevation of building 2

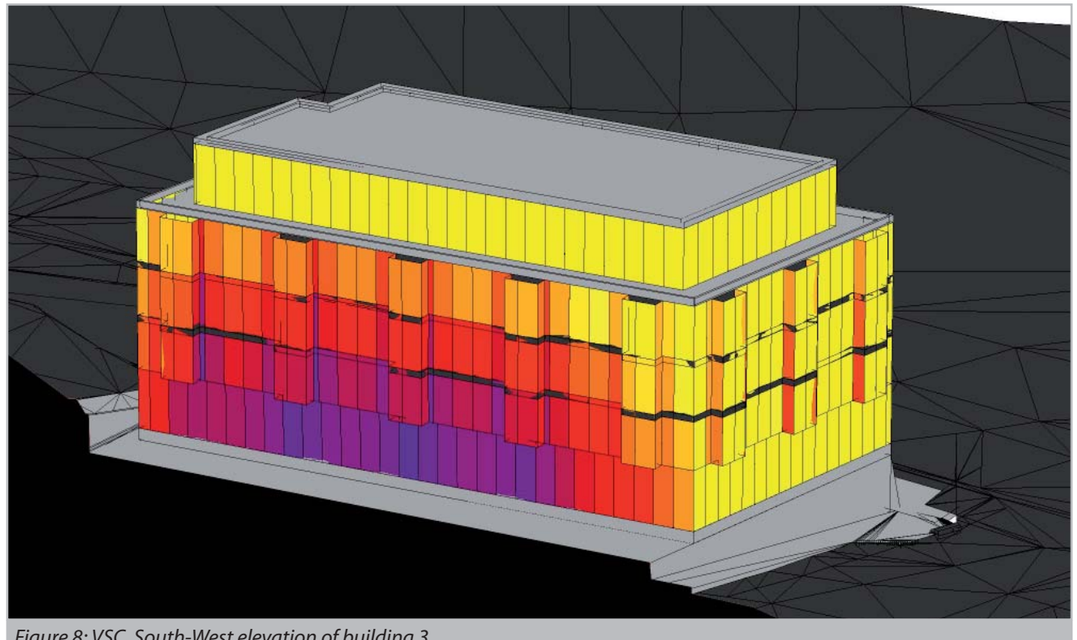
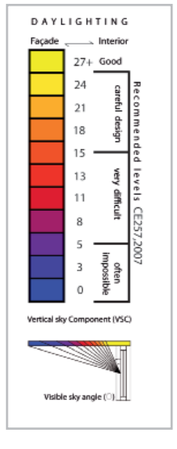


Figure 8: VSC, South-West elevation of building 3



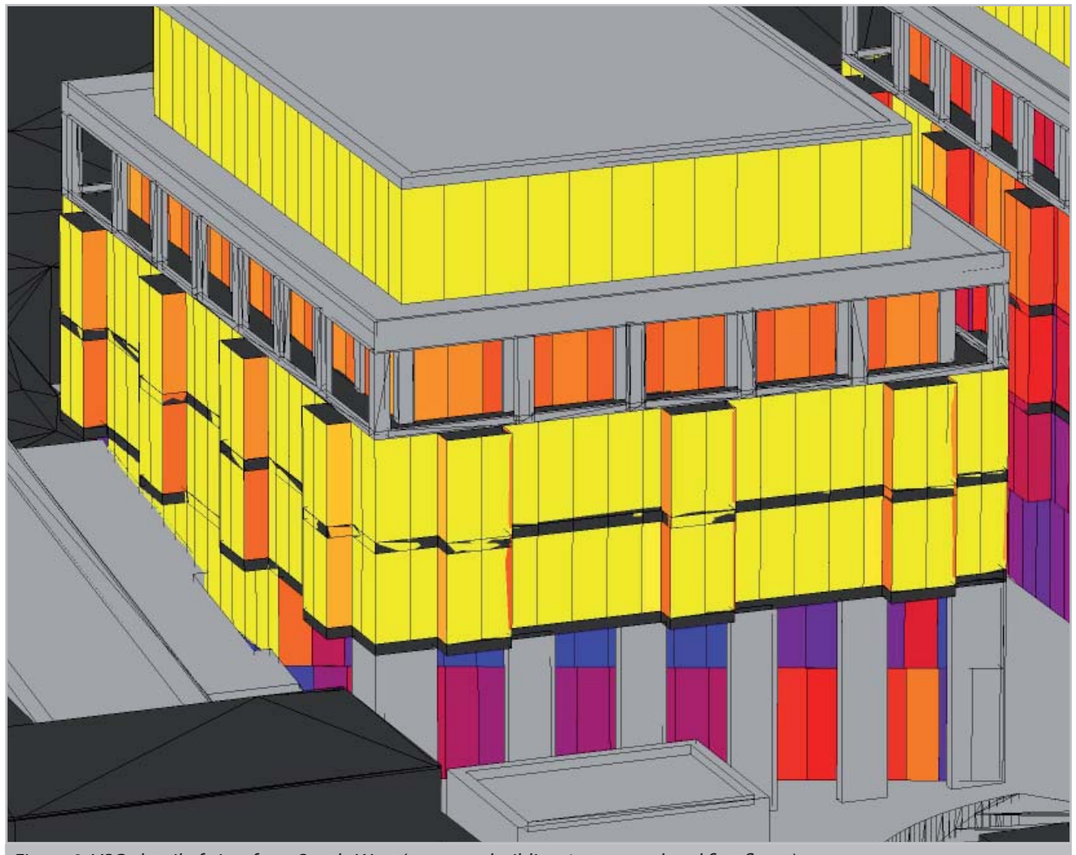


Figure 9: VSC, detail of view from South-West (recess on building 1 at ground and first floors)

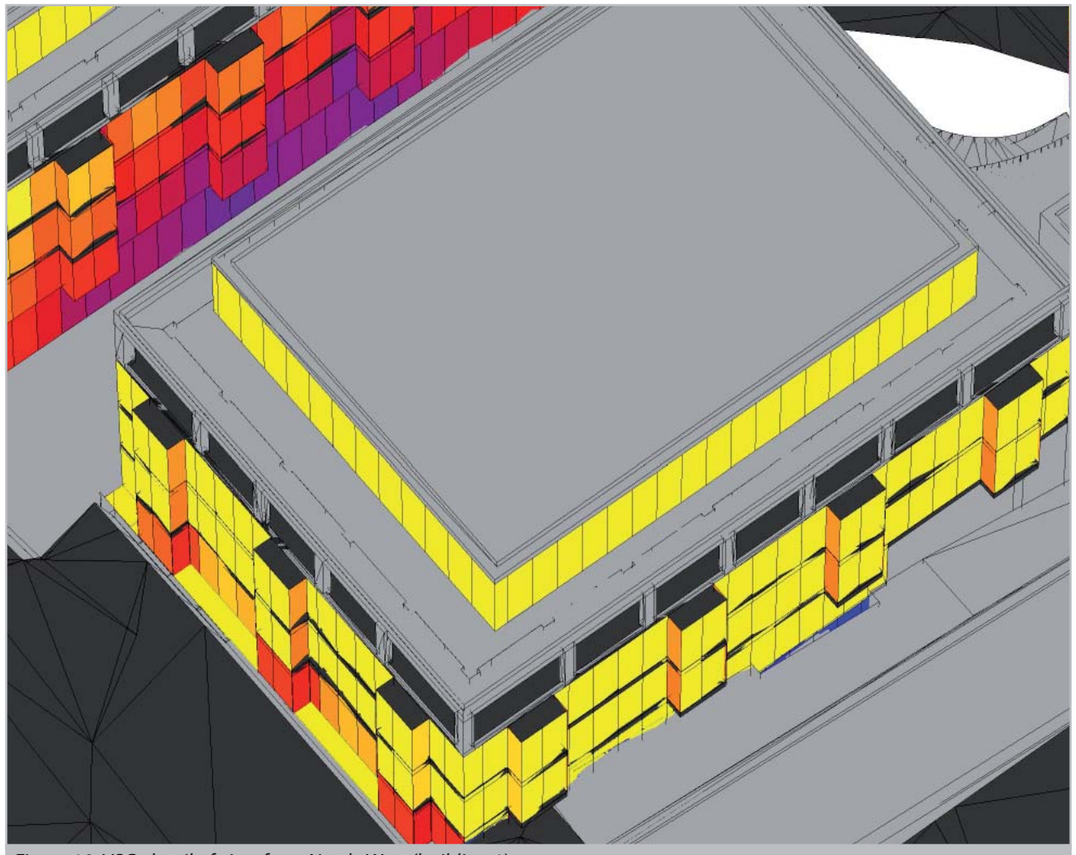
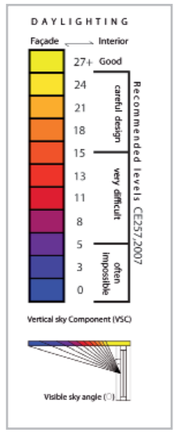


Figure 10: VSC, detail of view from North-West (building 1)



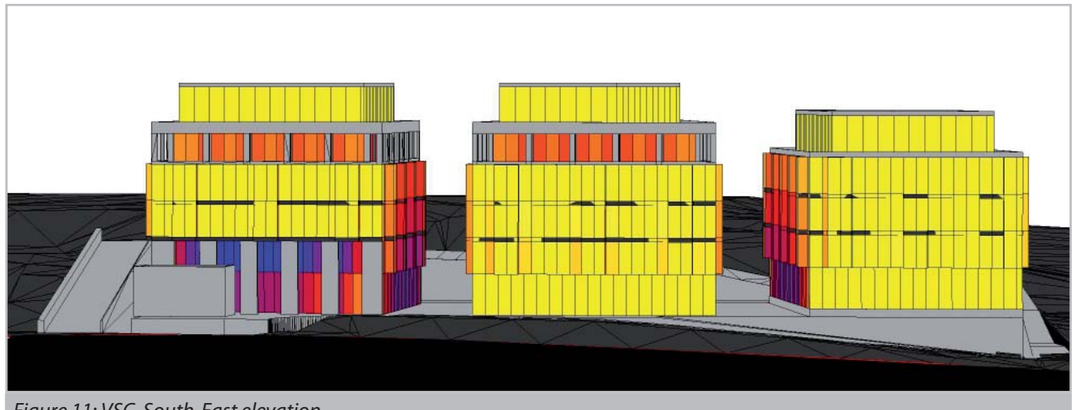


Figure 11: VSC, South-East elevation

		Daylight Quantum	Distribution of Daylight
Room Ref.	Room Use	ADF (%)	RDC
16011	Bedroom	0.4	Met
16012	Bedroom	1	Met
16013	Bedroom	4.0	Met

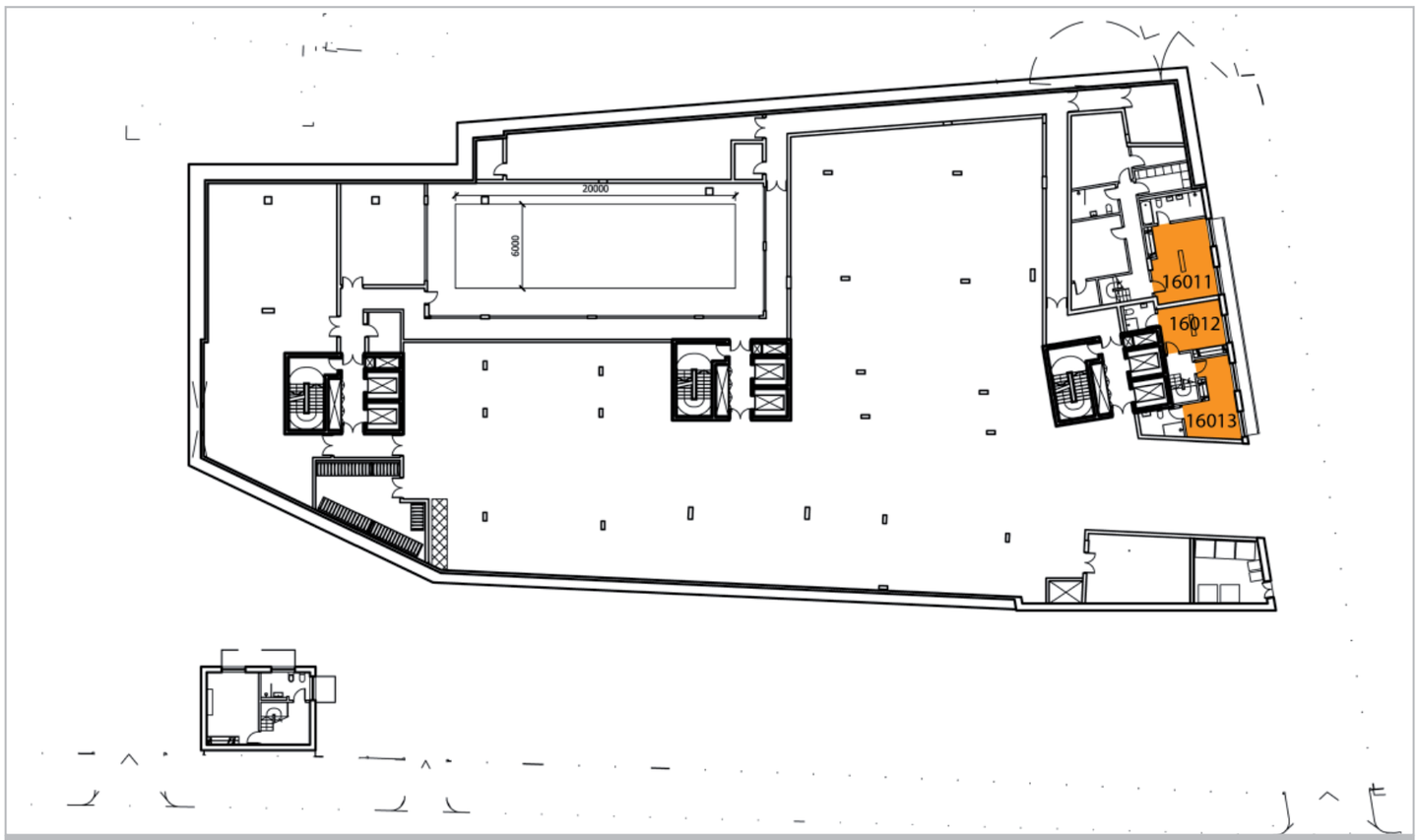


Figure 12: Lower Ground Floor

		Daylight Quantum	Distribution of Daylight
Room Ref.	Room Use	ADF (%)	RDC
16014	Bedroom	2.7	N/A
16015	Bedroom	1.3	Met
16016	L/D/K	2.1	N/A
16017	Bedroom	2.0	Met
16018	Bedroom	1.5	Met
16019	Bedroom	1.9	Met
16020	Bedroom	1.6	Met
16021	Bedroom	1.1	Met
16022	Bedroom	1.9	Met
16023	Bedroom	1.4	Met
16024	Bedroom	1.1	Met
16025	Living room	1.8	Met
16026	Bedroom	1.7	Met
16027	Bedroom	0.2	Met
16028	Bedroom	1.4	N/A
16029	Bedroom	1.0	N/A

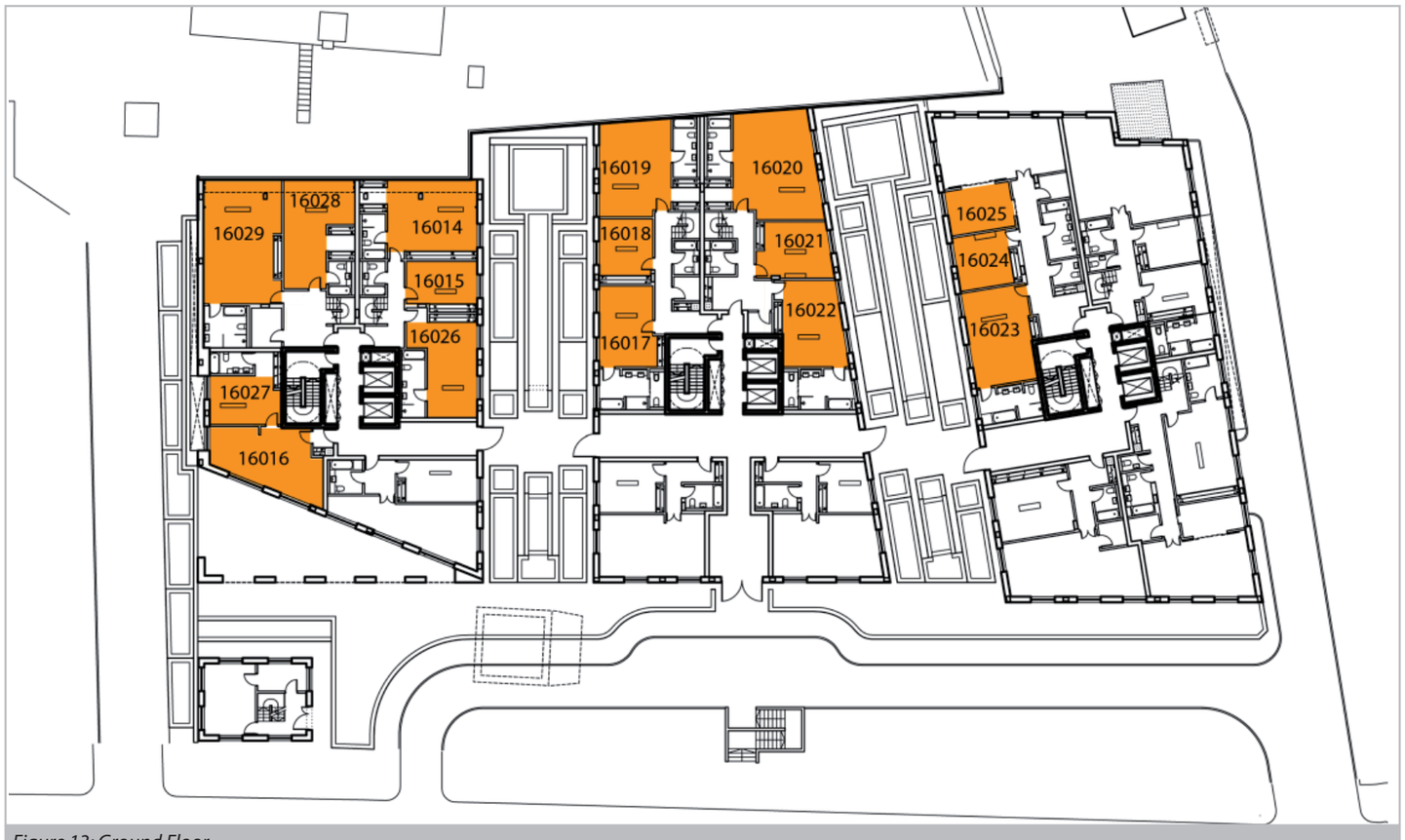


Figure 13: Ground Floor

		Daylight Quantum	Distribution of Daylight
Room Ref.	Room Use	ADF (%)	RDC
16030	L/K/D	2.2	N/A
16031	Bedroom	1.0	Met
16032	Bedroom	1.3	Met
16033	Bedroom	0.7	Met
16034	Living	2.0	Met
16035	Bedroom	1.5	Met
16036	Bedroom	1.9	Met
16037	Bedroom	2.0	Met
16038	Bedroom	1.4	Met
16039	Bedroom	1.7	Met
16040	Bedroom	1.0	Met
16041	Living	1.9	Met
16042	Living	1.7	N/A
16043	Bedroom	1.9	Met
16044	Bedroom	2.5	Met
16045	Bedroom	1.6	Met
16046	Bedroom	1.5	Met

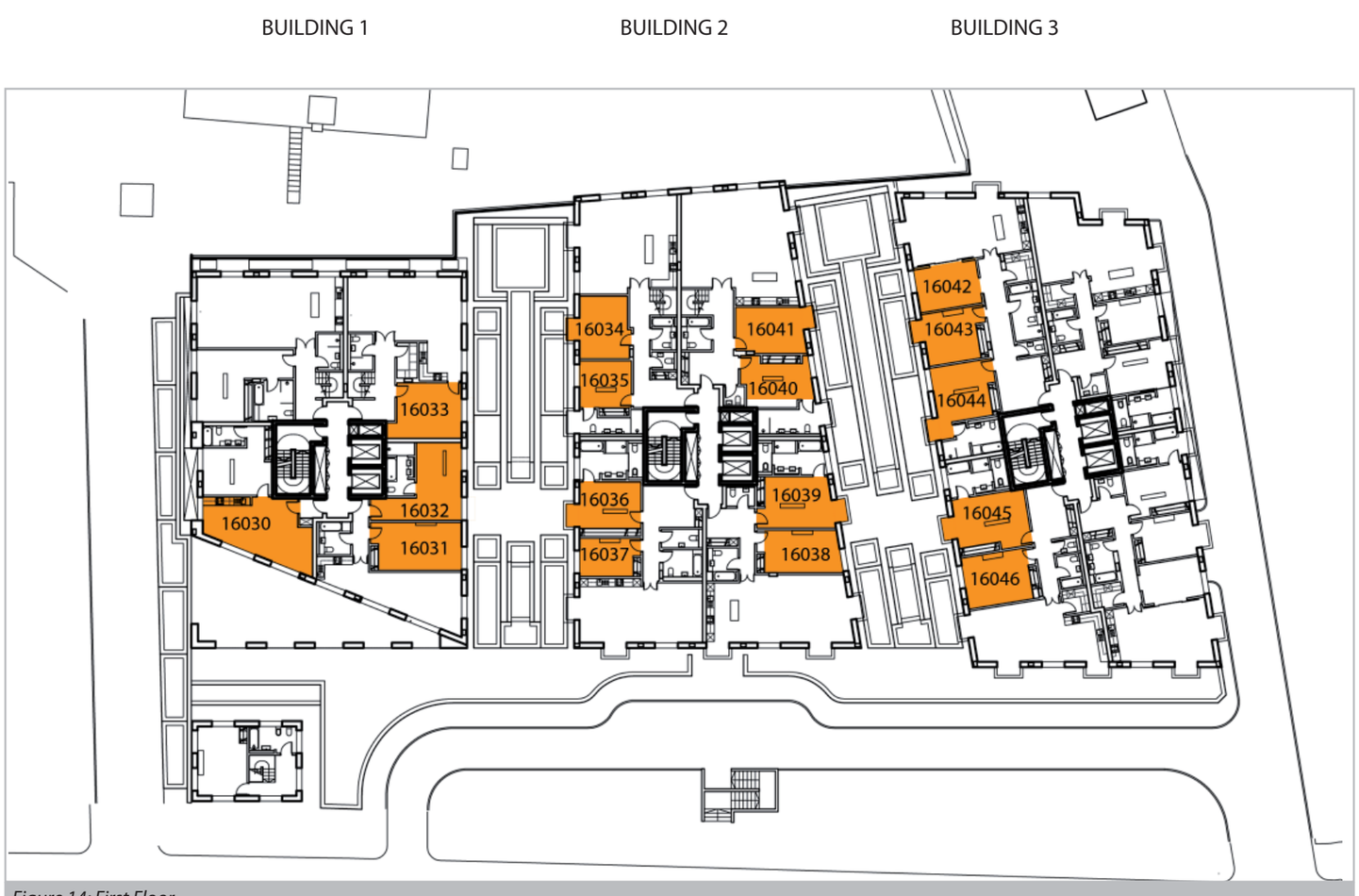


Figure 14: First Floor

		Daylight Quantum	Distribution of Daylight
Room Ref.	Room Use	ADF (%)	RDC
16047	Bedroom	1.3	Met
16048	Bedroom	1.6	Met
16049	Bedroom	1.6	Met
16050	Bedroom	1.1	Met
16051	Bedroom	2.3	Met
16052	Bedroom	1.1	Met
16053	Bedroom	1.9	Met
16054	Bedroom	1.5	Met
16055	Bedroom	1.8	Met
16056	Bedroom	1.7	Met
16057	Bedroom	1.6	Met
16058	Bedroom	2.3	Met
16059	Bedroom	1.8	Met
16060	Bedroom	1.5	Met
16061	Bedroom	1.3	Met

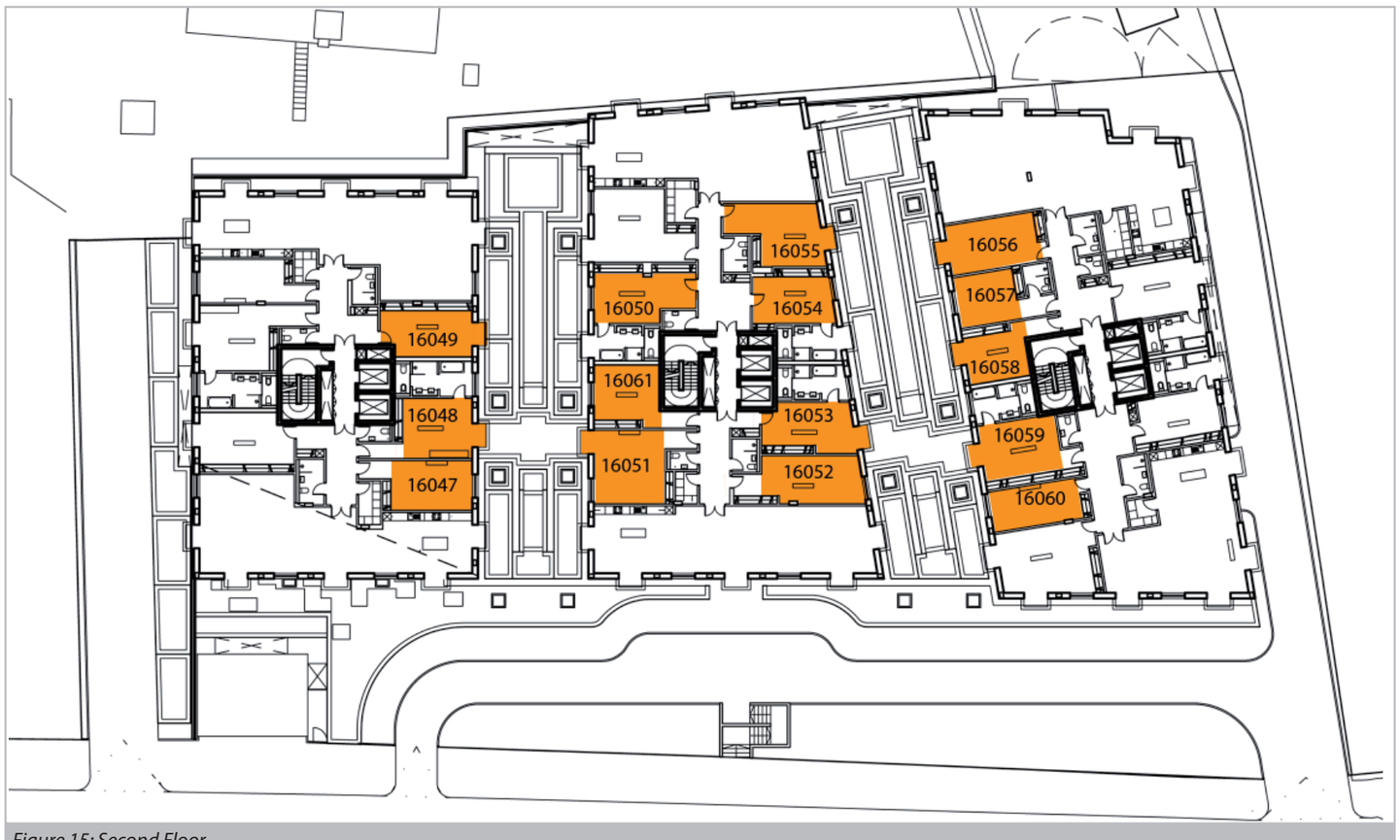


Figure 15: Second Floor

		Daylight Quantum	Distribution of Daylight
Room Ref.	Room Use	ADF (%)	RDC
16062	Bedroom	2.2	Met
16063	Bedroom	1.8	Met
16064	Bedroom	2.3	Met
16065	Bedroom	2.6	Met
16066	Bedroom	1.5	Met
16067	Bedroom	1.9	Met

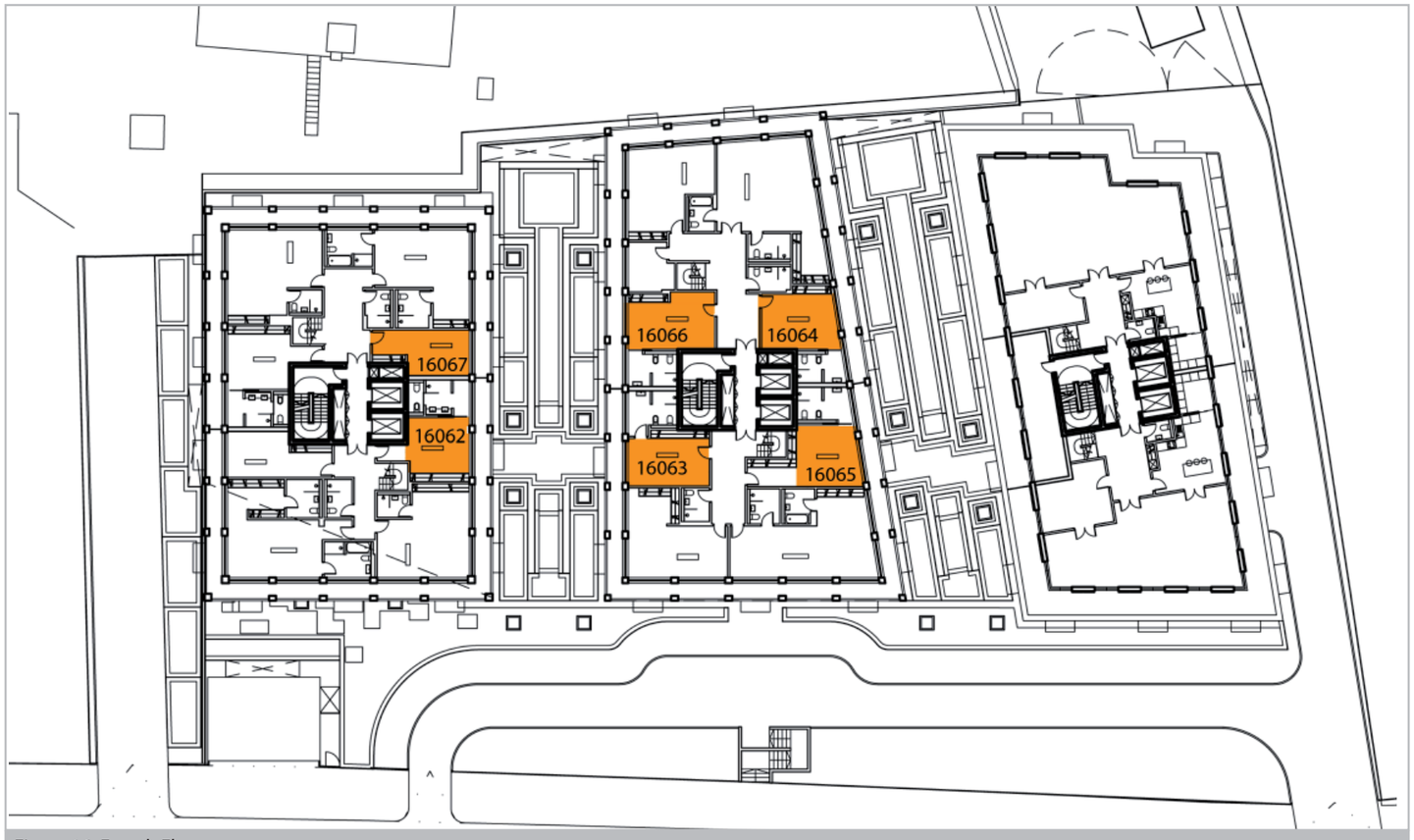


Figure 16: Fourth Floor

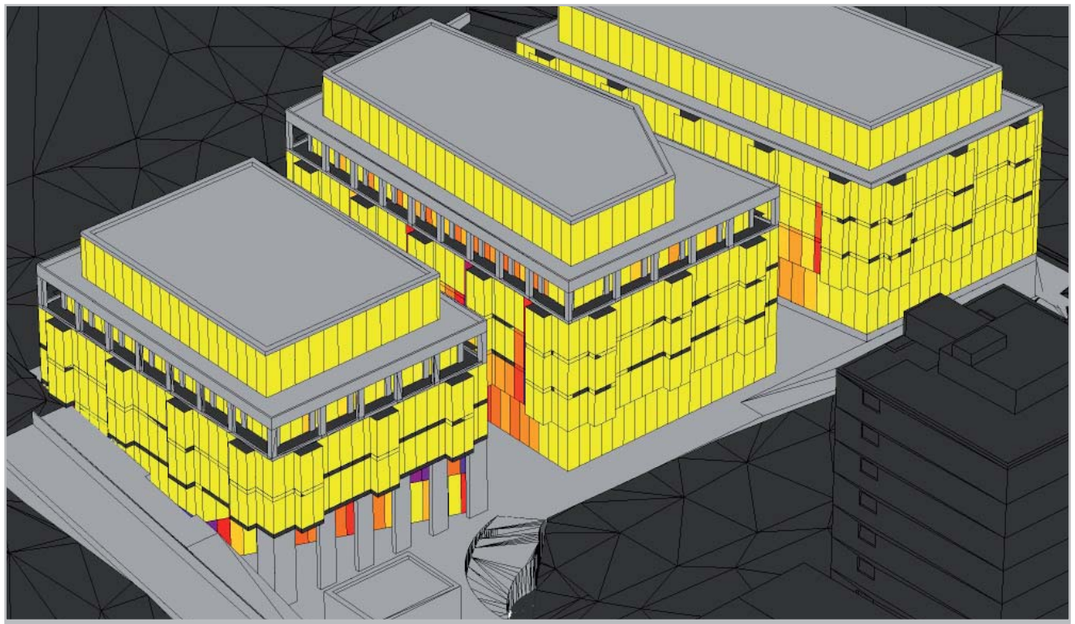


Figure 17: Total APSH, view from South-West

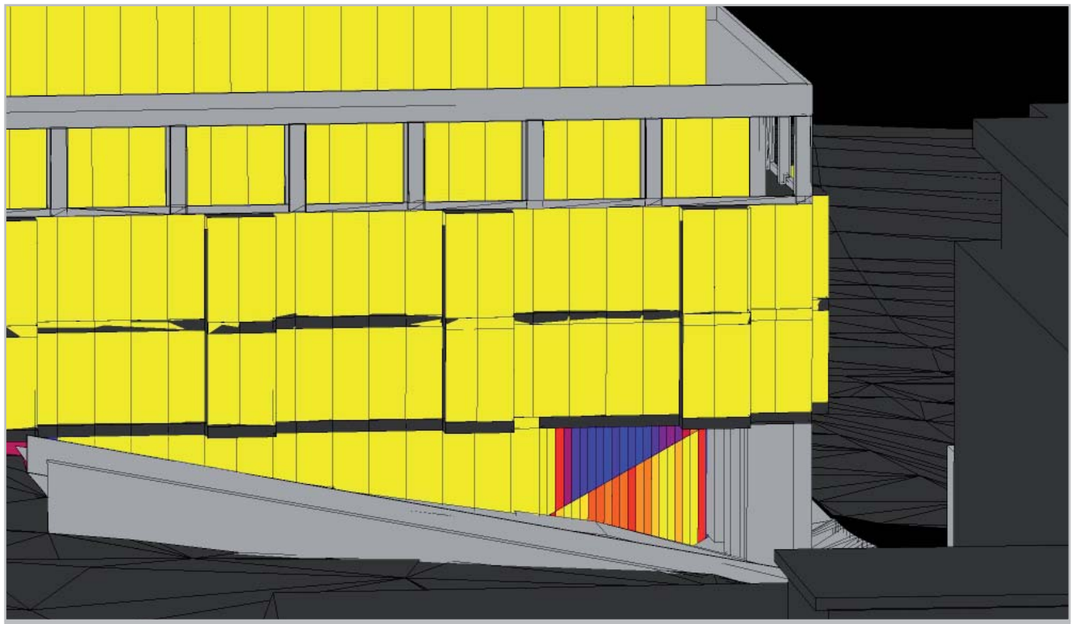


Figure 18: Total APSH, detail of recess of building 1

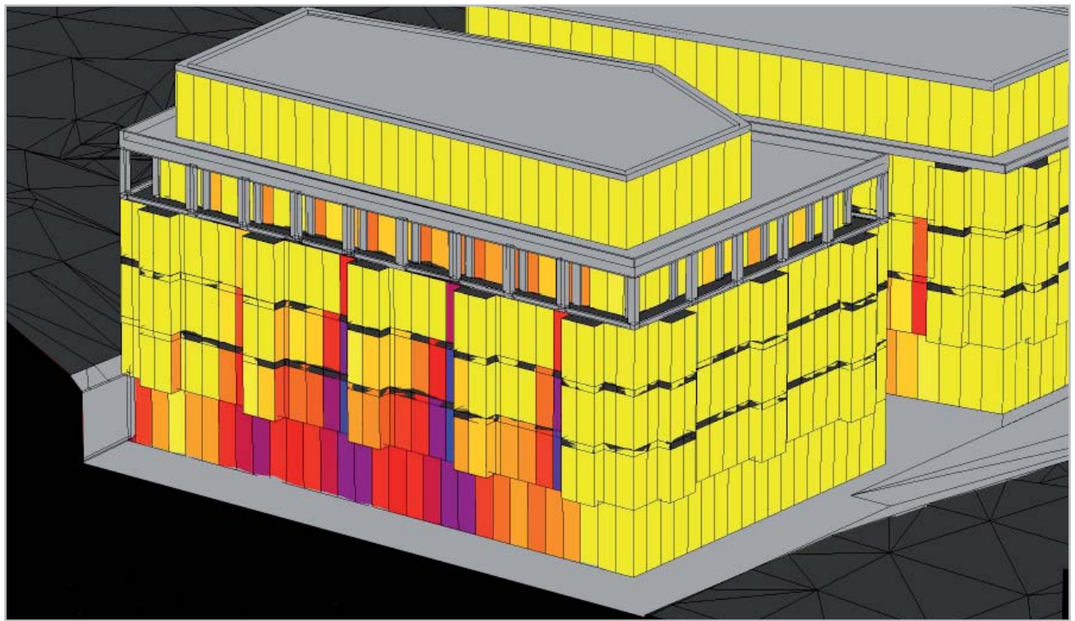


Figure 19: Total APSH, South-West elevation of building 2

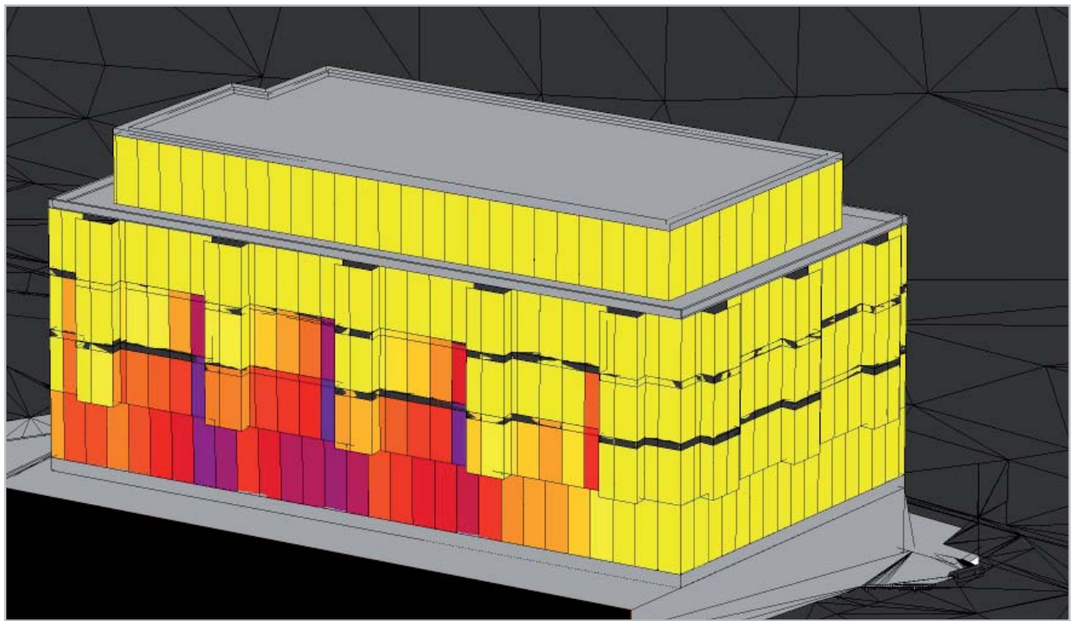
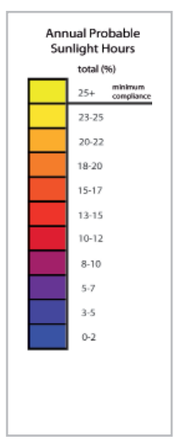


Figure 20: Total APSH, South-West elevation of building 3



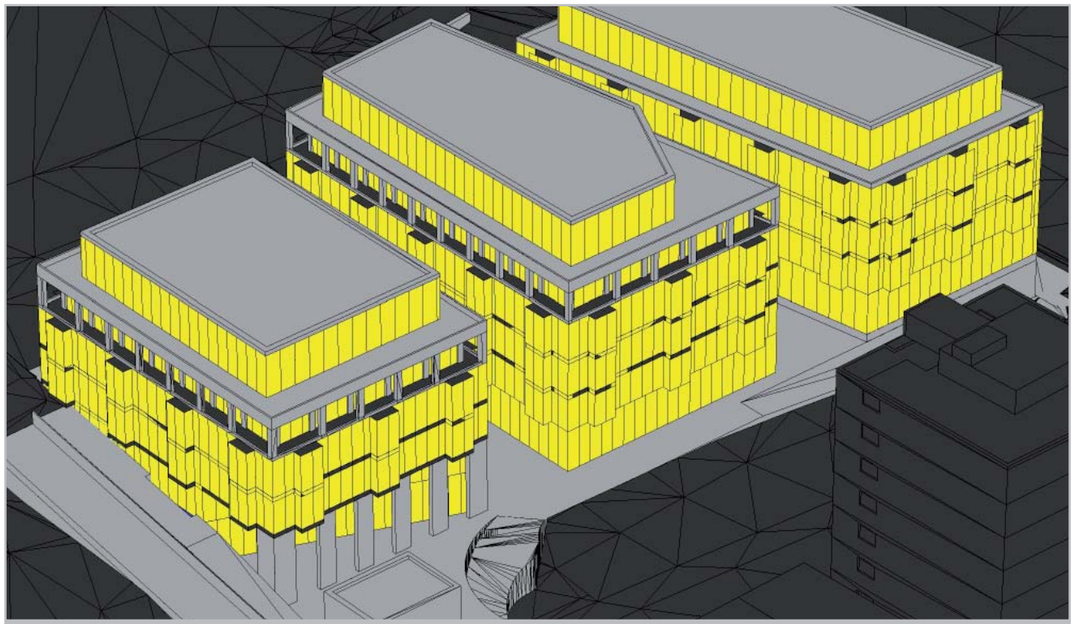


Figure 21: APSH in winter, view from South-West

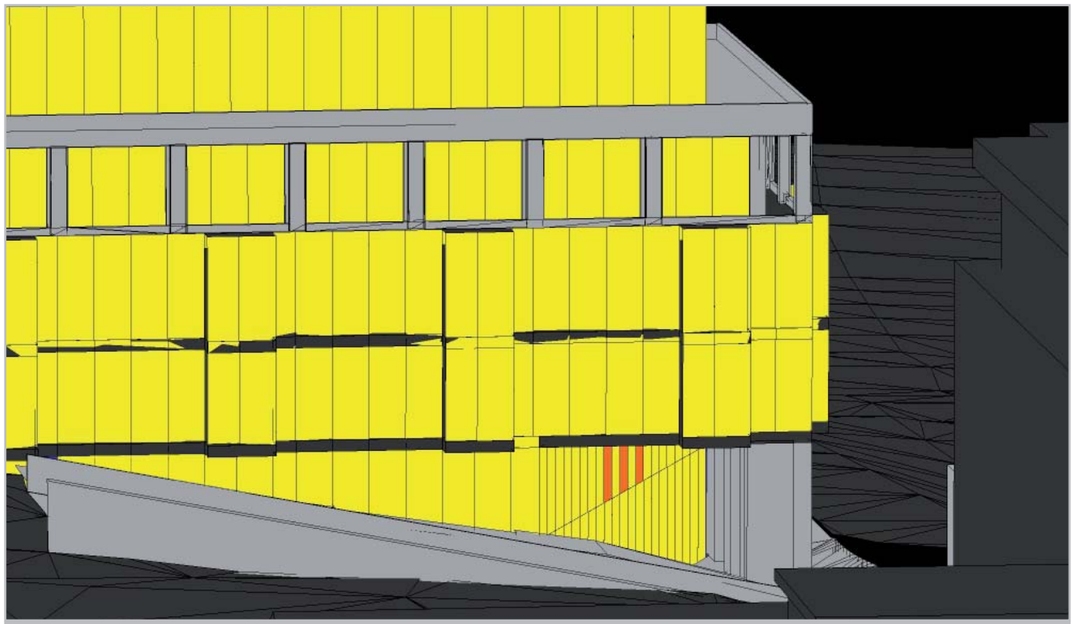


Figure 22: APSH in winter, detail of recess of building 1

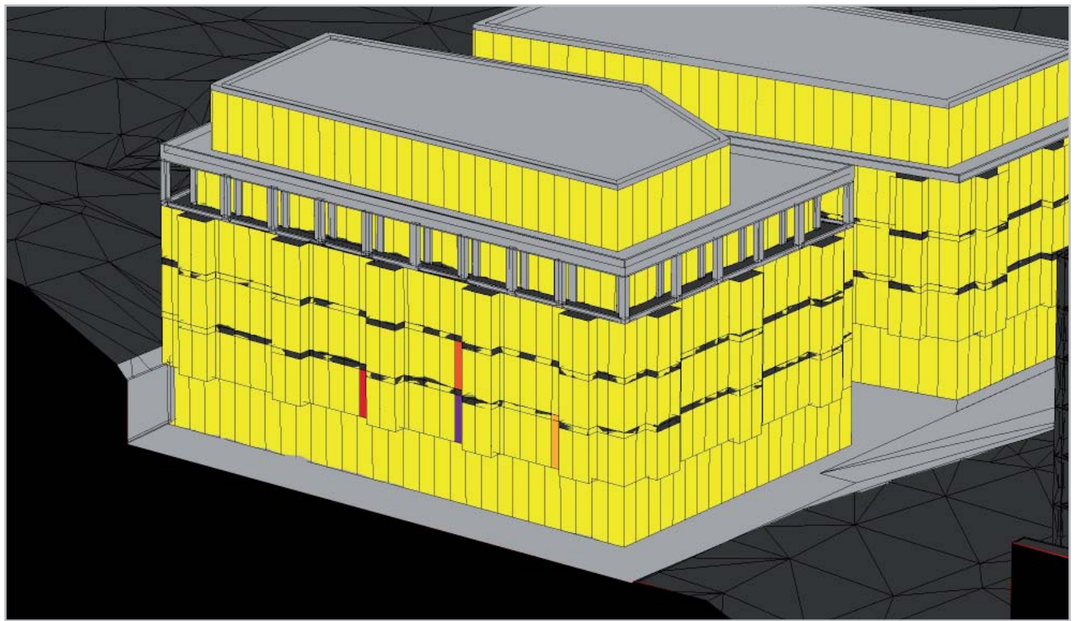


Figure 23: APSH in winter, South-West elevation of building 2

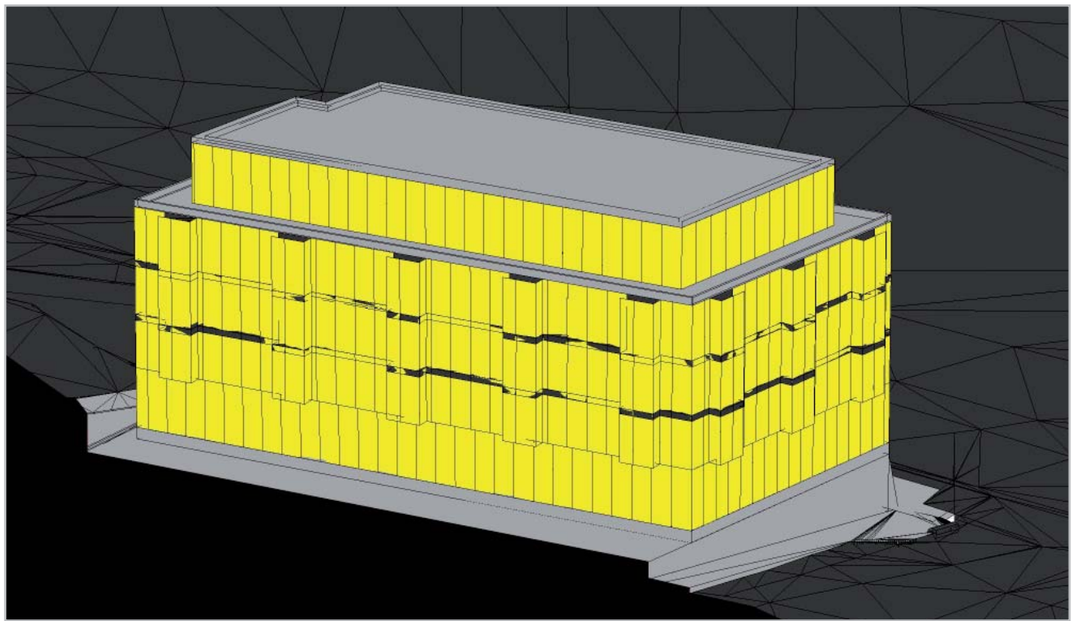


Figure 24: APSH in winter, South-West elevation of building 3