

## 9 Microclimate: Daylight and Sunlight

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### 9.1 Introduction

- 9.1.1 This Chapter of the Environmental Statement (ES) assesses the likely significant effects of the Proposed Development on the environment with regard to daylight and sunlight availability to nearby receptors. It also addresses the overshadowing effects to nearby existing open spaces.
- 9.1.2 The analyses undertaken to complete this ES Chapter have been based on the description of the Proposed Development in Chapter 5 of this ES, the Development Specification and the Parameter Plans.
- 9.1.3 This Chapter describes relevant planning policies and sets out the methods used to assess the effects. Baseline conditions currently experienced at the existing residential properties adjacent to the Site are established and the potential direct and indirect effects of the Proposed Development are assessed. Consideration is then given to the mitigation measures required to prevent, reduce or offset those effects, and the residual effects remaining following mitigation are stated. Finally, consideration is given to the additional or cumulative effects as a result of committed developments in the vicinity of the Application Site.
- 9.1.4 This Chapter has been written by Drivers Jonas Deloitte and is supplemented by Technical Appendices which includes detailed analysis tables and drawings. The list of Technical Appendices is as follows:
- Technical Appendix 9.1 Baseline and/or Proposed Vertical Sky Component and/or Annual Probable Sunlight Hours' - assessments of residential areas selected for study.
  - Technical Appendix 9.2 Rollins House assessment.
  - Technical Appendix 9.3 Permanent Overshadowing Assessment of existing open space at Millwall Football Club.
- 9.1.5 The assessment results of the following tests are summarised within the chapter text and at the end of the chapter at Table 9.8: Summary of Residual Daylight, Sunlight and Overshadowing Effects, and are detailed further in the Technical Appendices.
- Vertical Sky Component (VSC) analysis to existing surrounding habitable rooms,
  - Annual Probable Sunlight Hours (APSH) analysis to existing surrounding habitable rooms which face within 90 degrees of due south; and
  - Permanent Overshadowing Assessment of existing open space at Millwall Football Club.

### 9.2 Policy Context

#### National Planning Policy

- 9.2.1 There is no specific national legislation applicable to daylighting, sunlighting, overshadowing, solar dazzle and light trespass.

- 9.2.2 The 'Planning for Sustainable Development' section of PPS1 (paragraph 20, page 8) includes a reference to the need for mitigation and reduction of light pollution when considering the scope of development plan policies for the protection and enhancement of the environment.

### **Regional Planning Policy**

#### The London Plan Consolidated with Alterations since 2004 (2008)

- 9.2.3 Policy 4B.9 of the London Plan (GLA, 2004) and consolidated in 2008 considers the impact of large-scale buildings, suggesting at paragraph 4.121 on page 253 that they should: *"be sensitive to their impact on micro-climates in terms of wind, sun, reflection and overshadowing" and "pay particular attention, in residential environments, to privacy, amenity and overshadowing"*

#### The Draft Replacement London Plan (October 2009)

- 9.2.4 Policy 7.69 (Architecture) considers under the 'Planning decisions' section on page 174 considers buildings and structures, suggesting that they should: *"d) Not cause unacceptable harm to the amenity of surrounding land and buildings, particularly residential buildings, in relation to privacy, overshadowing, wind and microclimate. This is particularly important for tall buildings"*

- 9.2.5 Policy 7.7 (Location of tall and large buildings) considers under the 'Planning decisions' section on page 175 considers tall buildings, suggesting: *D Tall buildings should not:*  
*a) affect adversely their surroundings in terms of microclimate, wind turbulence, overshadowing, noise, reflected glare, aviation, navigation and telecommunication interference*

### **Local Planning Policy**

#### The London Borough of Lewisham Local Development Plan - Core Strategy, October 2010

- 9.2.6 Core Strategy Policy 18 'The location and design of tall buildings' contains the following reference to overshadowing:  
*"2. Tall buildings elsewhere in the borough will be assessed as to whether their development meets the aims identified for the Core Strategy Spatial Policies, for their impact on the character of identified heritage and open space features..."*  
*"7. An assessment will be made on the potential developmental, overshadowing or micro-climatic problems at street level."*

#### The London Borough of Lewisham Unitary Development Plan July 2004

- 9.2.7 Chapter 5 'Housing' contains the following policy which specifically refers to the neighbourliness and natural lighting with regard to new residential development: *"HSG 5 Layout and Design of New Residential Development*  
*The Council expects all new residential development to be attractive, to be neighbourly and to meet the functional requirements of its future inhabitants. The Council will, therefore, only permit new residential development which:*  
*(a) provides a satisfactory level of privacy, outlook and natural lighting with appropriate provision of private amenity space;*  
  
*...Housing development must also have regard to the amenities, stability and security of any existing community in which it is built...."*

## 9.3 Methodology and Assessment Criteria

### Guidance Documents

- 9.3.1 The daylight and sunlight assessment methodology is based on the BRE guidance document 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice', 1991.
- 9.3.2 This guidance gives advice on site layout planning to:  
*'...Achieve good sunlighting and daylighting within buildings and in the open spaces between them.'*
- 9.3.3 The guidance is intended for used by building designers, architects and planning officials and the advice given in it:  
*'...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. In special circumstances the developer or Planning Authority may wish to use different target values. For example, in a historic city centre a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings.'*

### Daylight/Sunlight Assessment to Neighbouring Residential Properties

- 9.3.4 With regard to the assessment of daylight and sunlight, the methods prescribed primarily relate to existing adjacent domestic buildings where the occupants have a reasonable expectation of daylight and sunlight. Commercial properties that have continuous artificial lighting, such as offices are not considered to have an expectation for natural daylight or sunlight and, in accordance with the guidance, have not been assessed.
- 9.3.5 The BRE guidance provides numerical values, which are advisory, and suggests that different criteria may be used where higher degrees of obstruction are unavoidable.
- 9.3.6 The adjacent properties were accurately surveyed and the resultant measured drawings used for the daylight and sunlight assessments in order to improve their accuracy.

### Daylight

- 9.3.7 In summary, the BRE guidance states the following in relation to daylight:  
*"If any or part of a new building... measured in a vertical section perpendicular to a main window wall or an existing building, from the centre of the lowest window, subtends an angle of more than 25 degrees (°) to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either: The vertical sky component (VSC) measured at the centre of an existing main window is less than 27%, and less than 0.8 times its former value; or the area of the working plane in a room which can receive direct sunlight is reduced to less than 0.8 times its former value."*
- 9.3.8 The 25° BRE tests ('the first daylighting test method') have not been conducted for the relevant nearby residential buildings, instead Drivers Jonas Deloitte have gone straight to the 'second daylighting' test method.

- 9.3.9 The second daylighting test method calculates the Vertical Sky Component (VSC) at the centre point of each affected window. The VSC test is an external daylighting calculation that measures the daylight level to a specific window point on the outside of a property. The calculations fundamentally assess the amount of blue sky that can be seen, converting the result into a percentage. A window looking across an empty field will achieve a maximum value of 40% VSC. The BRE Guidelines suggest that 27% VSC is indicative of a 'good level' of daylight. If a window does not achieve the 27% VSC, then the 'third test' is considered necessary.
- 9.3.10 The third daylighting test method involves calculating the VSC of the window in the existing situation prior to redevelopment. If the VSC with a development proposal in place is both less than 27% and less than 0.8 times its former value, then the BRE Guidelines suggest that occupants of the existing building are likely to notice the reduction.

### Sunlight

- 9.3.11 In relation to sunlight, again the BRE guidance primarily relates to neighbouring residential properties. The guidance highlights the following:

*'If a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° 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 the annual probable sunlight hours including at least 5% of annual probable sunlight hours between the 21st September and the 21st March, and less than 0.8 times its former sunlight hours during either period.'*

- 9.3.12 Therefore, any adjacent residential windows facing 90° of due north have not been assessed as they are considered to have no expectation of receiving sunlight.
- 9.3.13 With regard to sunlighting, the BRE Guidelines first suggest that the 25° angle test is used in the daylight assessment. If the profile of any proposed building does not subtend this angle (i.e. the proposed building passes through this 25° line), then the second method needs to be applied.
- 9.3.14 For the second sunlighting test the BRE Guidelines suggest using the same skylight indicator and reference point used to assess daylighting to calculate the percentage of Annual Probable Sunlight Hours (APSH). The BRE Guidelines state that:  
*"If this window reference point can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months between 21st September and 21st March, then the room should still receive enough sunlight".*
- 9.3.15 If the suggested APSH levels are not achieved the BRE Guidelines suggest that the occupants are likely to notice an effect if the reduction in APSH at the given point is less than 0.8 times its former value in either the total sunlight hour's percentage or those received in the winter months.

### Permanent Overshadowing Assessment Methodology

9.3.16 Part 3.3 of the BRE Guidelines provides guidance and methodology for assessing the effect of overshadowing of gardens and amenity areas for both existing and new spaces. The methodology for permanent overshadowing is highlighted within the BRE Guidelines and encompasses main gardens and open spaces.

9.3.17 The BRE Guidelines suggest an indication of significance, based on amenity, as follows:

*"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 of the amenity areas should be prevented by buildings from receiving any sunlight at all on 21st March. Sunlight at an altitude of 10° or less does not count."*

9.3.18 The permanent overshadowing test was conducted on March 21st, as it is the vernal equinox, between the two solstices of summer and winter. Therefore it represents a good average for the year and results are expected to improve towards the summer solstice of June 21st and from the winter solstice of December 21st.

### **Transient Overshadowing Assessment Methodology**

9.3.19 The guidance documents do not contain any numerical based criteria for assessing transient overshadowing although the images assist in determining the pattern of shadows throughout the year. The assessment has therefore applied professional judgement to determine the significance of any potential effect.

9.3.20 The assessment methodology has used sunpath images for March 21st as an average for the entire year, as it is midway between the winter and summer solstices. Due to this, the shadow patterns for September 21st will be identical as this day is also midway between the solstices.

9.3.21 The assessment has been made without taking into account cloud cover, which is unpredictable to model, although it may be assumed that this is more present in the months closest to winter. The images therefore represent a slightly idealised situation and this should be taken into account when considering their significance.

### **Definition of significance**

9.3.22 In order to determine significance criteria for the assessment, the BRE Guidelines are taken into account along with expert opinion. The significance criteria that have been applied to this assessment, relating to either negligible (no noticeable effect), adverse (negative or deterioration) or beneficial (positive or improvement) are as follows:

9.3.23 **Negligible** – there is no anticipated effect to daylight/sunlight availability at the receptors and no noticeable deterioration/improvement in daylight/sunlight availability;

9.3.24 **Minor** – there is a minor deterioration/improvement in daylight/sunlight availability and the relevant standards are not met in some locations;

9.3.25 **Moderate** - there is a moderate deterioration/improvement in daylight/sunlight availability and the relevant standards are not met in some locations; and

9.3.26 **Major** - there is a major deterioration/improvement in daylight/sunlight availability and the relevant standards are not met in some locations.

9.3.27 In terms of the findings of this assessment, the significance criteria are relevant to both before and after mitigation measures are considered and relate to those locations where there is an expectation for daylight and sunlight (e.g. habitable rooms such as living rooms).

Table 9.1 Criteria for Assessing Daylight Effects

Magnitude of Effect	Criteria for Assessing Daylight & Sunlight Effects
High	Beneficial: daylighting and sunlighting levels for existing neighbouring residential properties experience a ratio increase greater than 1.2. Adverse: daylighting and sunlighting levels for existing neighbouring residential properties experience a reduction ratio greater than 0.6.
Medium	Beneficial: daylighting and sunlighting levels for existing neighbouring residential properties experience a ratio increase between 1.1 and 1.2. Adverse: daylighting and sunlighting levels for existing neighbouring residential properties experience a reduction ratio between 0.6 and 0.7.
Low	Beneficial: daylighting and sunlighting levels for existing neighbouring residential properties experience a ratio increase between 1.0 and 1.1. Adverse: daylighting and sunlighting levels for existing neighbouring residential properties experience a reduction ratio between 0.7 and 0.8.
Negligible	The Development could be expected to result in none or a small, barely noticeable negative effect on daylighting, sunlighting and overshadowing to neighbouring residential properties as predicted by the VSC / ASPH / Permanent Overshadowing tests.  Daylighting, sunlighting and overshadowing levels for existing neighbouring residential properties experience a reduction ratio between 0.8 and 1.0 or are above the minimum recommended level.

Table 9.2 Classification of Receptor Sensitivity

Sensitivity	Example of Receptor
High	Adjacent residential habitable rooms with low existing levels of daylight and sunlight.
Medium	Adjacent residential habitable rooms with adequate existing levels of daylight and sunlight. Existing football pitch at Millwall Football Club
Low	Adjacent residential habitable rooms with unusually high existing levels of daylight and sunlight.

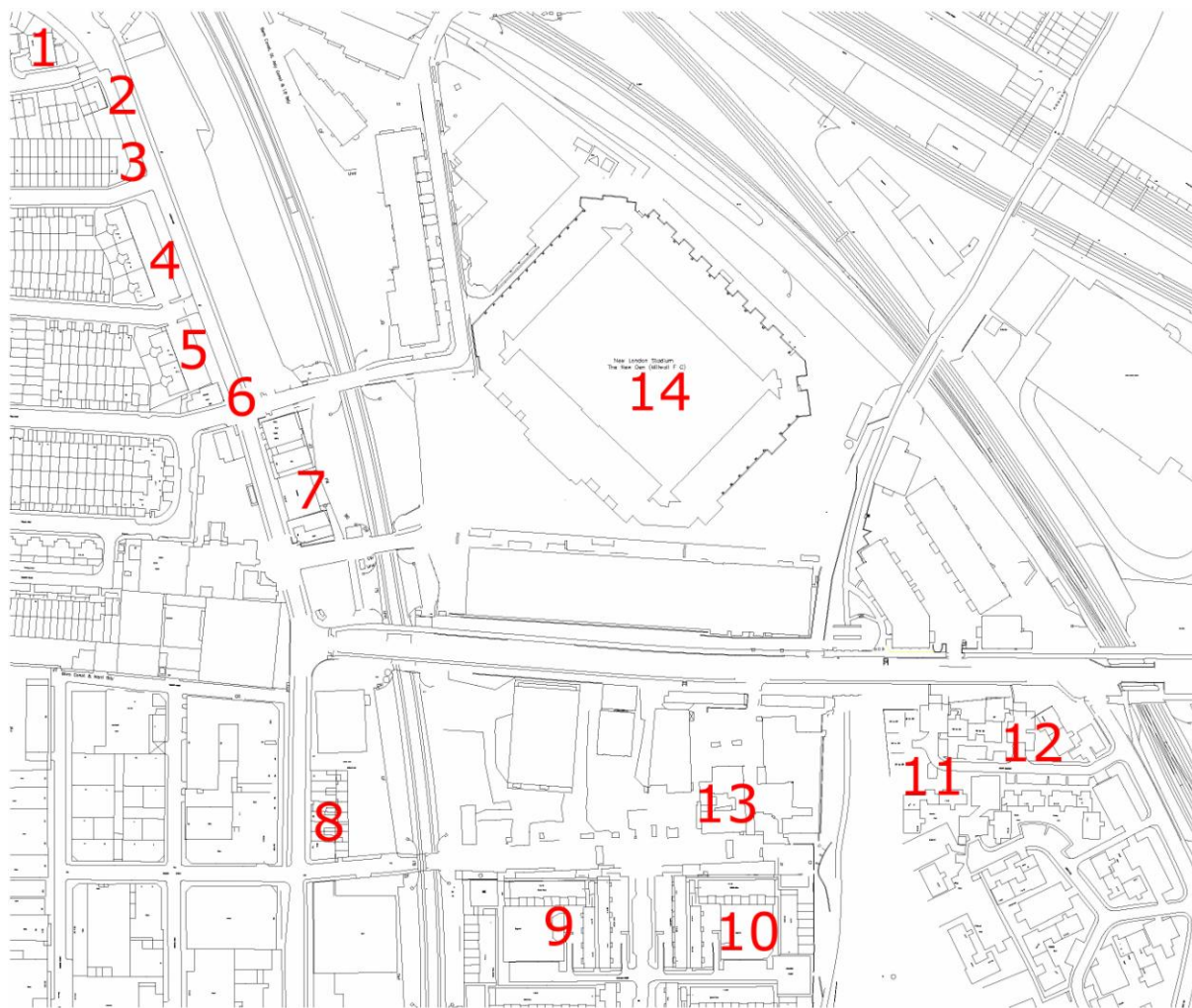
Table 9.3 Effect Significance Matrix

Magnitude	Value and Sensitivity		
	Low	Medium	High
High	Moderate	Moderate/major	Major
Medium	Minor/moderate	Moderate	Moderate/major
Low	Minor	Moderate	Moderate
Negligible	Minor/no effect	Minor/moderate	Minor/moderate

**Study Area**

9.3.28 Figure 9.1 shows a plan of the study area, highlighting the identified sensitive environmental receptors which were selected for assessment.

Figure 9.1 Daylight, Sunlight and Overshadowing Study Area



Key: 1) 21-43 Ilderton Road, 2) 38 Delaford Road, 3) 37 Ablett Street, 4) 52-56 Ilderton Road, 5) 45-47 Ilderton Road, 6) Cliftonville Tavern, 7) 179 Ilderton Road, 8) 209-225 Ilderton Road, 9) Reculver House, 10) Chilham House, 11) 9-24 Myers Lane, 12) 1-18, 27-45, 49-57 and 58-69 Bridge Meadows, 13) Rollins House, 14) Millwall Football Club Football Pitch.

9.3.29 The following medium sensitive daylight and sunlight receptors have been identified in the vicinity of the Proposed Development:

- Windows to existing residential habitable rooms facing the Application Site at 21 to 43 Ilderton Road.
- Windows to existing residential habitable rooms facing the Application Site at 38 Delaford Road.
- Windows to existing residential habitable rooms facing the Application Site at 37 Ablett Street.
- Windows to existing residential habitable rooms facing the Application Site at 52 to 56 Ilderton Road.
- Windows to existing residential habitable rooms facing the Application Site at 45 to 47 Ilderton Road.
- Windows to existing residential habitable rooms facing the Application Site at Cliftonville Tavern, 128 Ilderton Road.
- Windows to existing residential habitable rooms facing the Application Site at 179 Ilderton Road.
- Windows to existing residential habitable rooms facing the Application Site at 209 to 229 Ilderton Road.
- Windows to existing residential habitable rooms facing the Application Site at Reculver House, Rollins Street.
- Windows to existing residential habitable rooms facing the Application Site at Chilham House, Rollins Street.
- Windows to existing residential habitable rooms facing the Application Site at 1-18, 27-45, 49-57 and 58-69 Bridge Meadows.
- Windows to existing residential habitable rooms facing the Application Site at 9-24 Myers Lane.
- Windows to existing residential habitable rooms within the Application Site at Rollins House, Rollins Street.
- Millwall FC football pitch.

### **Consultations**

9.3.30 No statutory consultation has been undertaken regarding the effects of daylight and sunlight. However, the scoping responses received from London Borough of Lewisham dated 14 July 2010 and appended 'Detailed Comments on Individual Topic Areas' made references to addressing both general peak potential effects and also a 'snap shot' description of an agreed period of peak activity which have been addressed below. The scoping response also referred to the requirement for consideration of schemes both consented and under construction in the vicinity of the Application Site, which has also been addressed below. The 'Detailed Comments on Individual Topic Areas' made clear the requirement to select and assess appropriate sensitive environmental receptors irrespective of the boundary between the London Borough of Southwark and the London Borough of Lewisham, which has also been adhered to.

### **Worst Case Scenarios**

9.3.31 For the purposes of these assessments, in the vast majority of cases we assessed all the adjacent windows to residential properties facing the Application Site as we were unable to gain access in order to determine their actual use. In reality, it is expected that some of these windows are likely to serve non-habitable rooms, but in order to be as robust as possible we have chosen to assess all windows equally and therefore have given a worst case scenario.

9.3.32 Furthermore, for the purposes of these assessments, we have used the Maximum Heights and Extents of the proposed plots within the Proposed Development as shown on the Parameter Plans in order to represent the scenario anticipated to have the greatest effects.

### Uncertainty/ Assumptions

- 9.3.33 In the case of Rollins House, we were able to get some limited detail on the internal layouts and were therefore able to make some further assumptions in relation to this property with regard to internal configurations and the presence of a roof light.
- 9.3.34 Adjacent commercial properties were not assessed for effects to daylight and sunlight as it is assumed they have a low expectation and more dependant upon artificial light.

## 9.4 Baseline Situation

- 9.4.1 The baseline condition assessment takes into account daylighting and sunlighting levels to the sensitive receptors identified above and neighbouring the Site without the Proposed Development.
- 9.4.2 Daylighting and Sunlighting levels of neighbouring residential properties are judged to be of a medium level of sensitivity, as guidelines used for assessment purposes are not mandatory and can be interpreted flexibly. The assessment of significance ultimately relies on professional judgement and comparing the extent of the effect with criteria and standards specific to each environmental topic guides this judgement.
- 9.4.3 3D Computer Aided Design (CAD) modelling was undertaken to determine the baseline levels of daylight and sunlight. The results of this exercise are summarised below at Table 9.4: 'Summary of Baseline VSC Results' and Table 9.5: 'Summary of Baseline APSH Results'. Detailed schedules of the results can be found at Technical Appendix 9.1 'Vertical Sky Component and Annual Probable Sunlight Hours Results'.

Table 9.4 Summary of Baseline VSC Results

Assessment Area	Baseline VSC Range
21 to 43 Ilderton Road	38%-39%
38 Delaford Road.	37%-39%
37 Ablett Street	>27%
52 to 56 Ilderton Road	39%
45 to 47 Ilderton Road	25% - 39%
Cliftonville Tavern	38% - 40%
179 Ilderton Road	39%-40%
209 to 229 Ilderton Road	39% - 40%
Reculver House	8%-40%
Chilham House	7%-39%
1-18 Bridge Meadows	36% - 39%
27-45 Bridge Meadows	23% - 39%
49-57 Bridge Meadows	39%
58-69 Bridge Meadows	25%-39%
9-24 Myers Lane	36%-39%
Rollins House	12%-38%

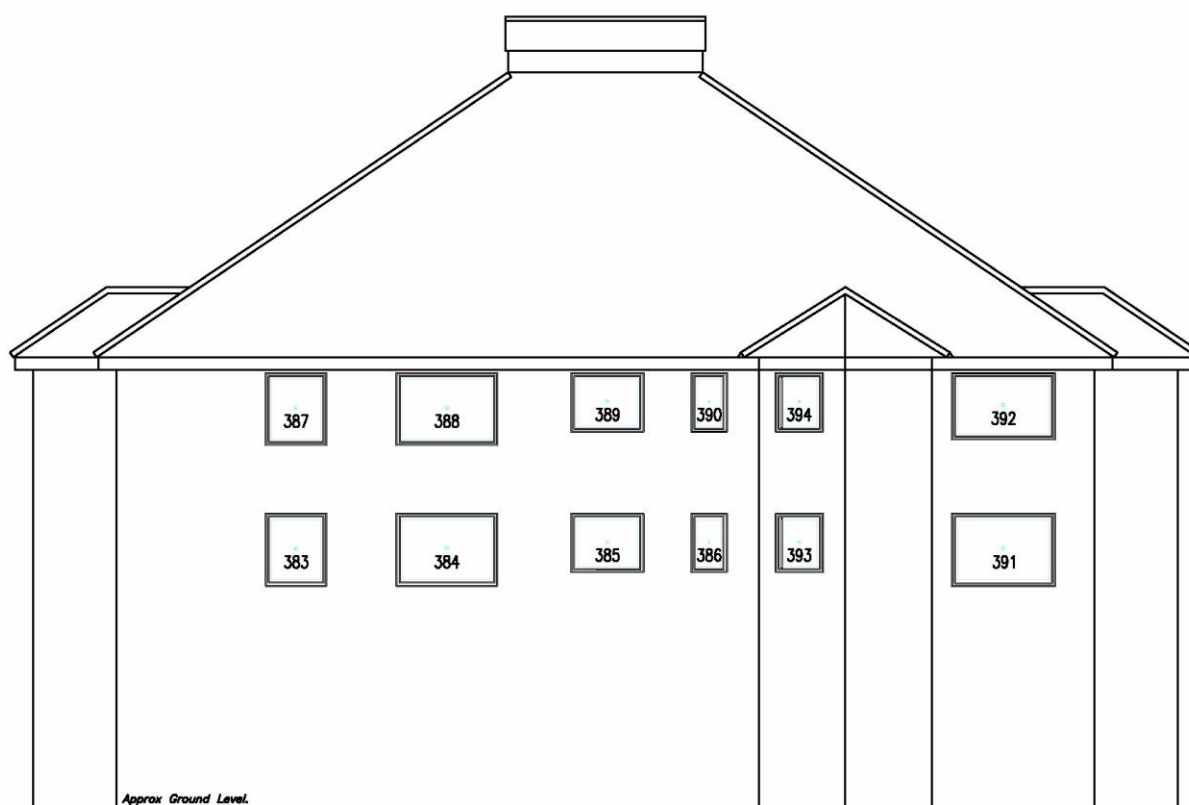
Table 9.5 Summary of Baseline APSH Results

Assessment Area	Baseline APSH Range
21 to 43 Ilderton Road	23% - 46% (T) 3% - 15% (WM)
38 Delaford Road.	>25% (T) 5% (WM)
37 Ablett Street	Not assessed as within 90° of due north
52 to 56 Ilderton Road	Not assessed as within 90° of due north
45 to 47 Ilderton Road	Not assessed as within 90° of due north
Cliftonville Tavern	>25% (T) 5% (WM)
179 Ilderton Road	Not assessed as within 90° of due north
209 to 229 Ilderton Road	Not assessed as within 90° of due north
Reculver House	Not assessed as within 90° of due north
Chilham House	Not assessed as within 90° of due north
1-18 Bridge Meadows	Not assessed as within 90° of due north
27-45 Bridge Meadows	Not assessed as within 90° of due north
49-57 Bridge Meadows	Not assessed as within 90° of due north
58-69 Bridge Meadows	>25% (T) 5% (WM)
9-24 Myers Lane	>25% (T) 5% (WM)
Rollins House	Not assessed as within 90° of due north

**21 to 43 Ilderton Road**

9.4.4 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.1 below shows elevational land survey of these windows.

Figure 9.1 Windows assessed at 21 to 43 Ilderton Road



Daylight

9.4.5 The VSC for the windows facing the Site from 21 to 43 Ilderton Road was measured and found to achieve between 38% and 39% in the baseline condition.

9.4.6 These results are all in excess of the BRE guideline recommendation of 27% VSC.  
Sunlight

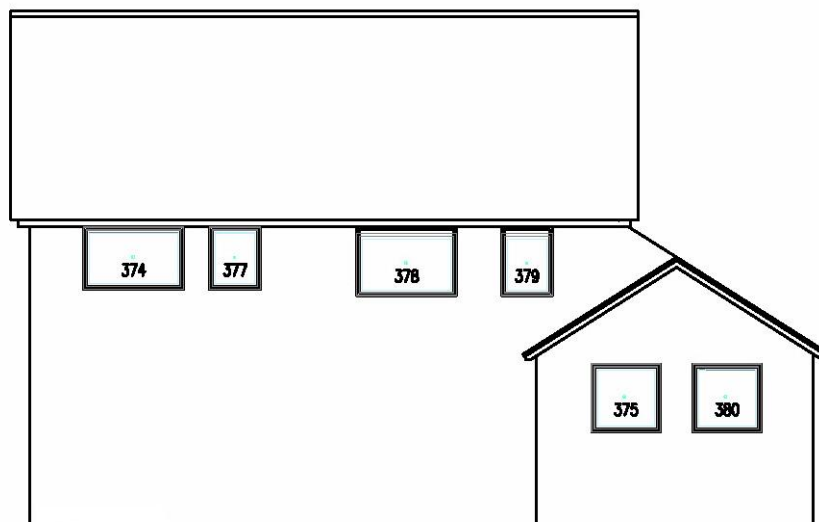
9.4.7 The APSH for the windows facing the Site from 21 to 43 Ilderton Road was measured and found to achieve between 23%, of which 3% winter months and 46%, of which 15% winter months in the baseline condition.

9.4.8 The BRE recommendation of 25% APSH, of which 5% winter months is not met at 3 windows out of the 12 assessed.

### 38 Delaford Road

9.4.9 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.2 below shows elevational land survey of these windows.

Figure 9.2 Windows assessed at 38 Delaford Road



#### Daylight

9.4.10 The VSC for the windows facing the Site from 38 Delaford Road was measured and found to achieve between 37% and 39% in the baseline condition.

9.4.11 These results are all in excess of the BRE guideline recommendation of 27% VSC.

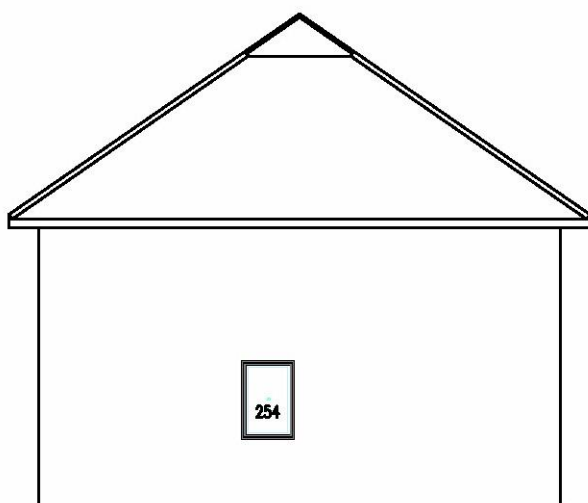
#### Sunlight

9.4.12 The APSH for the windows facing the Site from 38 Delaford Road was measured and found to be greater than the BRE recommendation of 25% APSH, of which 5% winter months.

### 37 Ablett Street

9.4.13 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.3 below shows elevational land survey of these windows.

Figure 9.3 Windows assessed at 37 Ablett Street



**Daylight**

9.4.14 The VSC for the windows facing the Site from 37 Ablett Street was measured and found to achieve in excess of the BRE guideline recommendation of 27% VSC in the baseline condition.

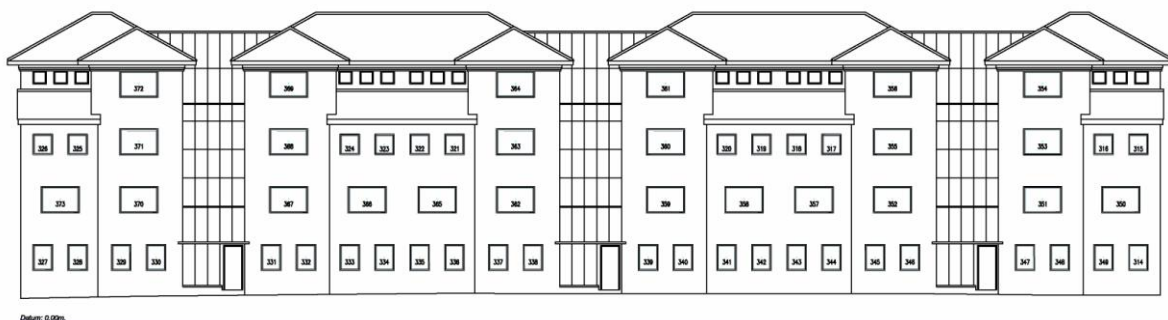
**Sunlight**

9.4.15 The APSH for the windows facing the Site from 37 Ablett Street was not measured as they face within 90° of due north as set out in the BRE Guidelines.

**52 to 56 Ilderton Road**

9.4.16 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.4 below shows elevational land survey of these windows.

Figure 9.4 Windows assessed at 52 to 56 Ilderton Road



Daylight

9.4.17 The VSC for the windows facing the Site from 37 Ablett Street was measured and found to achieve in excess of the BRE guideline recommendation of 27% VSC in the baseline condition.

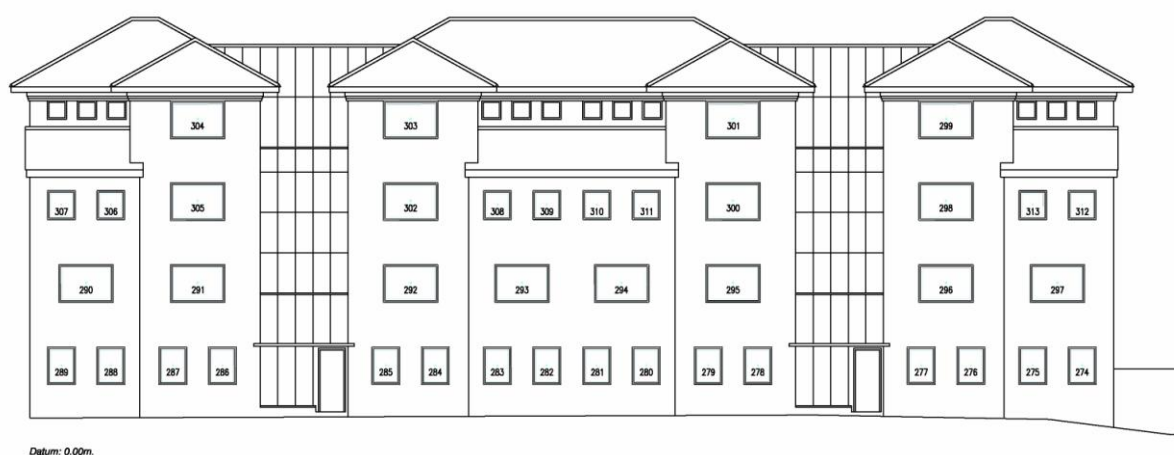
Sunlight

9.4.18 The APSH for the windows facing the Site from 37 Ablett Street was not measured as they face within 90° of due north as set out in the BRE Guidelines.

**45 to 47 Ilderton Road**

9.4.19 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.5 below shows elevational land survey of these windows.

Figure 9.5 Windows assessed at 45 to 47 Ilderton Road



Daylight

9.4.20 The VSC for the windows facing the Site from 45 to 47 Ilderton Road was measured and found to achieve between 25% and 39% in the baseline condition.

9.4.21 These results are marginally below the BRE guideline recommendation of 27% VSC in some cases due to some windows experiencing a greater sense of enclosure than others.

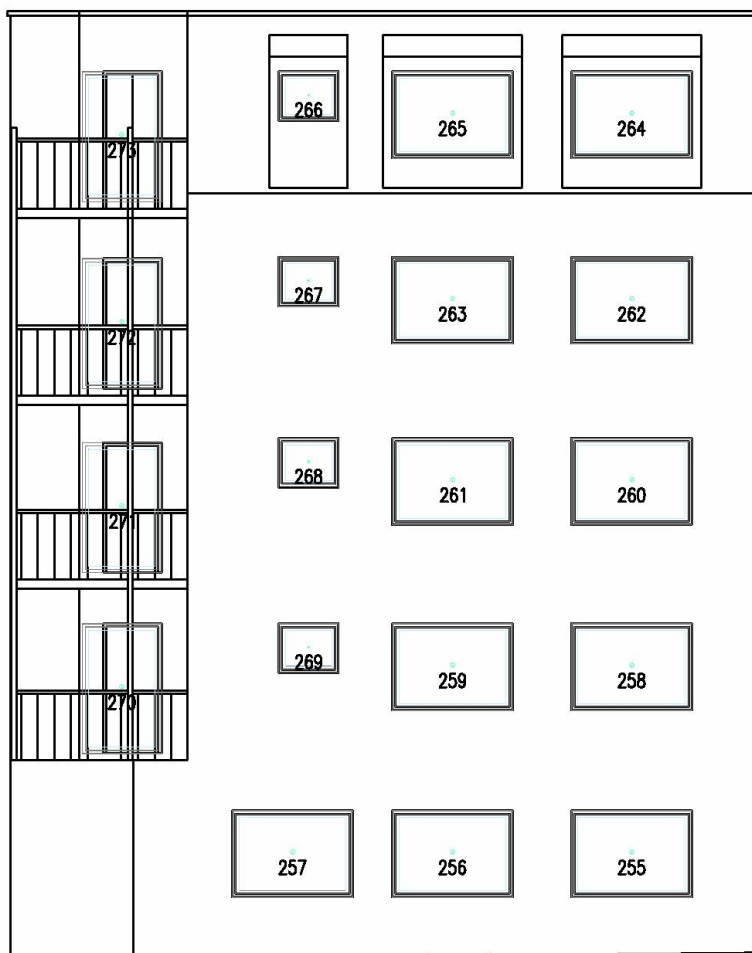
Sunlight

9.4.22 The APSH for the windows facing the Site from 45 to 47 Ilderton Road was not measured as they face within 90° of due north as set out in the BRE Guidelines.

**Cliftonville Tavern, 128 Ilderton Road**

9.4.23 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.6 below shows elevational land survey of these windows.

Figure 9.6 Windows assessed at Cliftonville Tavern, 128 Ilderton Road



**Daylight**

- 9.4.24 The VSC for the windows facing the Site from Cliftonville Tavern was measured and found to achieve between 38% and 40% in the baseline condition
- 9.4.25 These results are all in excess of the BRE guideline recommendation of 27% VSC.

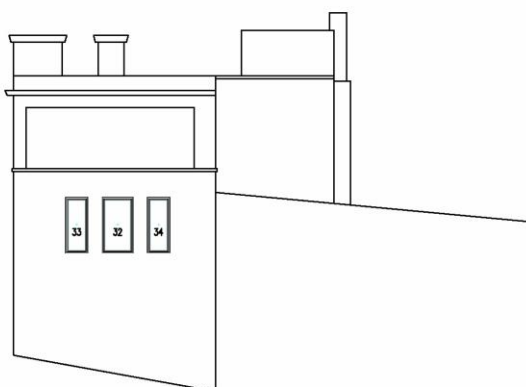
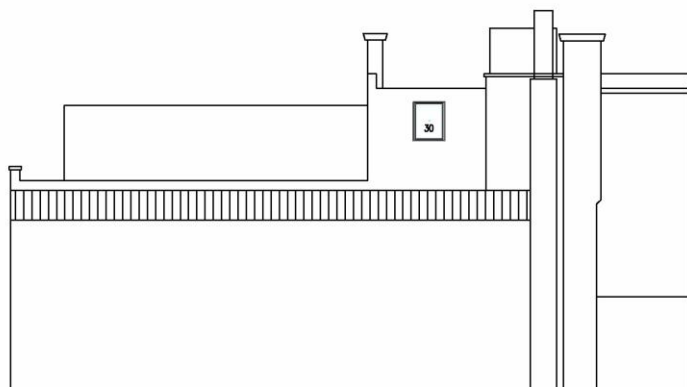
**Sunlight**

- 9.4.26 The APSH for the windows facing the Site from Cliftonville Tavern was measured and found to be greater than the BRE recommendation of 25% APSH, of which 5% winter months.

**179 Ilderton Road**

- 9.4.27 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.7 below shows elevational land survey of these windows.

Figure 9.7 Windows assessed at 179 Ilderton Road



**Daylight**

9.4.28 The VSC for the windows facing the Site from 179 Ilderton Road was measured and found to achieve between 39% and 40% in the baseline condition.

9.4.29 These results are all in excess of the BRE guideline recommendation of 27% VSC.

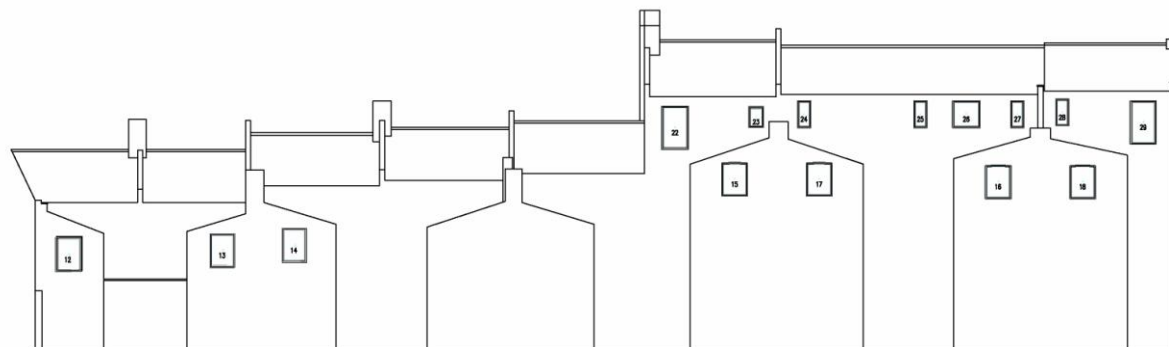
**Sunlight**

9.4.30 The APSH for the windows facing the Site from 179 Ilderton Road was not measured as they face within 90° of due north as set out in the BRE Guidelines.

**209 to 229 Ilderton Road**

9.4.31 The nearest windows facing the Site were assessed, assumed to serve habitable rooms. Figure 9.8 below shows elevational land survey of these windows.

Figure 9.8 Windows assessed at 209 to 229 Ilderton Road



Detail: 0.00m

**Daylight**

9.4.32 The VSC for the windows facing the Site from 209 to 229 Ilderton Road was measured and found to achieve between 39% and 40% in the baseline condition.

9.4.33 These results are all in excess of the BRE guideline recommendation of 27% VSC.

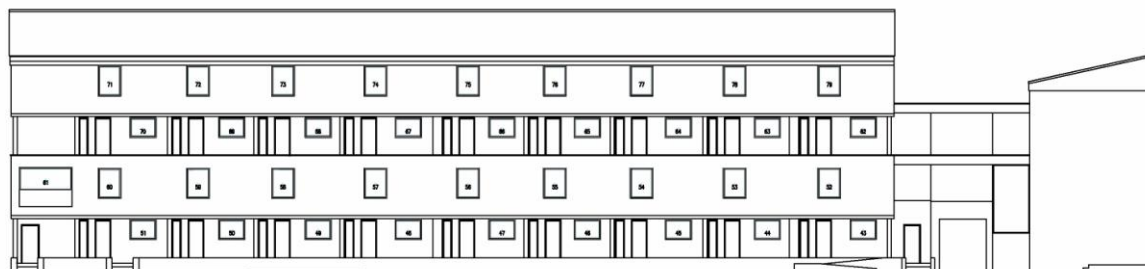
**Sunlight**

9.4.34 The APSH for the windows facing the Site from 209 to 229 Ilderton Road was not measured as they face within 90° of due north as set out in the BRE Guidelines.

**Reculver House, Rollins Street**

9.4.35 The nearest windows facing the Site were assessed, assumed to serve habitable rooms. Figure 9.9 below shows elevational land survey of these windows.

Figure 9.9 Windows assessed at Reculver House, Rollins Street



Detail: 0.00m

**Daylight**

9.4.36 The VSC for the windows facing the Site from Reculver House was measured and found to achieve between 8% and 40% in the baseline condition.

9.4.37 These results are substantially below the BRE guideline recommendation of 27% VSC in some cases due to alternating floor levels which have deep overhanging balconies above.

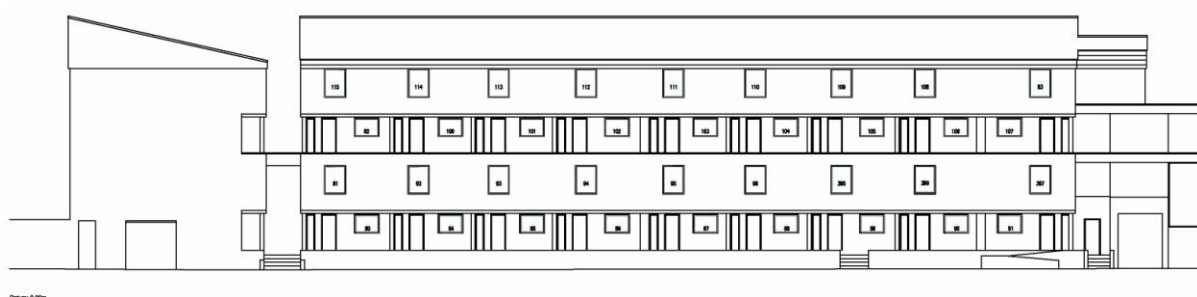
#### Sunlight

The APSH for the windows facing the Site from Reculver House was not measured as they face within 90° of due north as set out in the BRE Guidelines.

### Chilham House

9.4.38 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.10 below shows elevational land survey of these windows.

Figure 9.10 Windows assessed at Chilham House



#### Daylight

9.4.39 The VSC for the windows facing the Site from Chilham House was measured and found to achieve between 7% and 39% in the baseline condition.

9.4.40 These results are substantially below the BRE guideline recommendation of 27% VSC in some cases due to alternating floor levels which have deep overhanging balconies above.

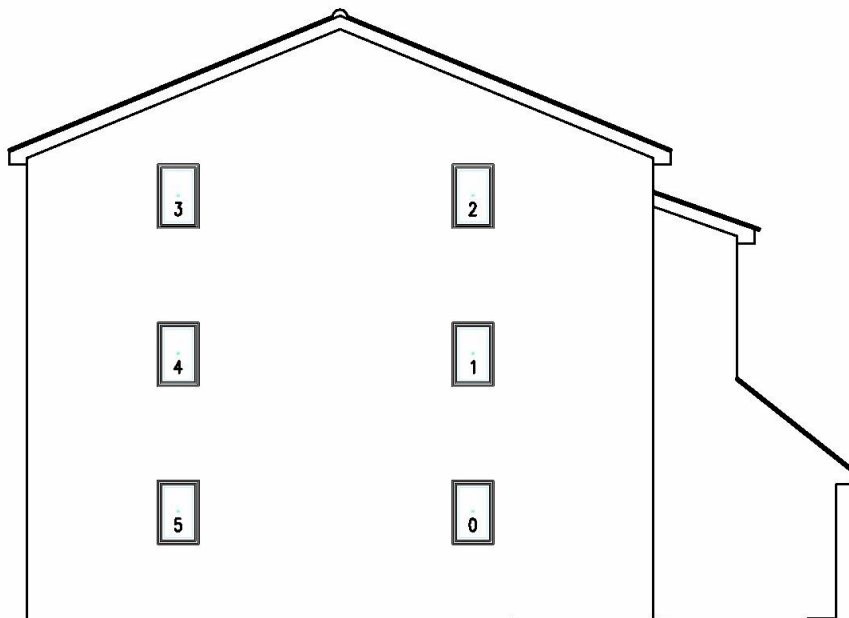
#### Sunlight

9.4.41 The APSH for the windows facing the Site from Chilham House was not measured as they face within 90° of due north as set out in the BRE Guidelines.

### 1-18 Bridge Meadows

9.4.42 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.11 below shows elevational land survey of these windows.

Figure 9.11 Windows assessed at 1-18 Bridge Meadows



**Daylight**

9.4.43 The VSC for the windows facing the Site from 1-18 Bridge Meadows was measured and found to achieve between 36% and 39% in the baseline condition.

9.4.44 These results are in excess of the BRE guideline recommendation of 27% VSC in all cases.

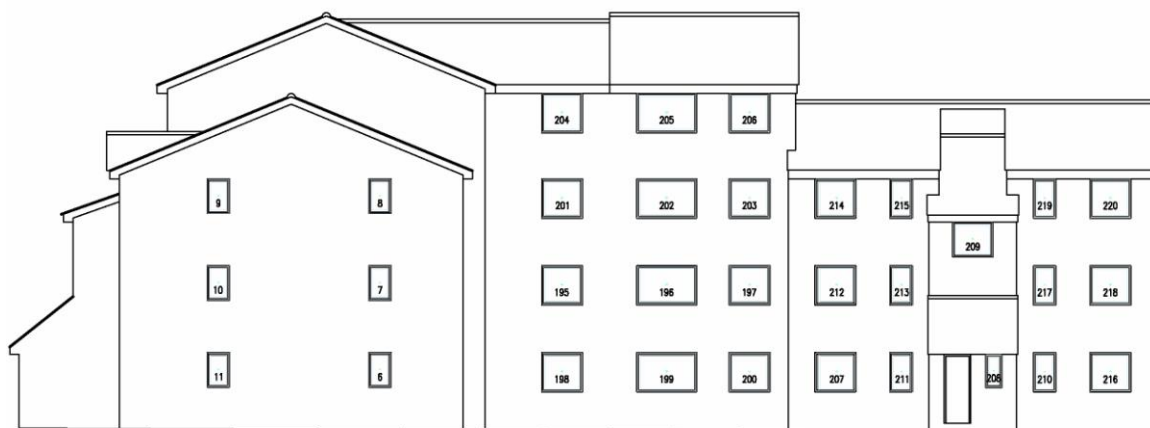
**Sunlight**

9.4.45 The APSH for the windows facing the Site from 1-18 Bridge Meadows was not measured as they face within 90° of due north as set out in the BRE Guidelines.

**27-45 Bridge Meadows**

9.4.46 The nearest windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.12 below shows elevational land survey of these windows.

Figure 9.12 Windows assessed at 27-45 Bridge Meadows



**Daylight**

9.4.47 The VSC for the windows facing the Site from 27-45 Bridge Meadows was measured and found to achieve between 23% and 39% in the baseline condition.

9.4.48 These results are below the BRE guideline recommendation of 27% VSC in some cases due to some windows experiencing a greater sense of enclosure than others.

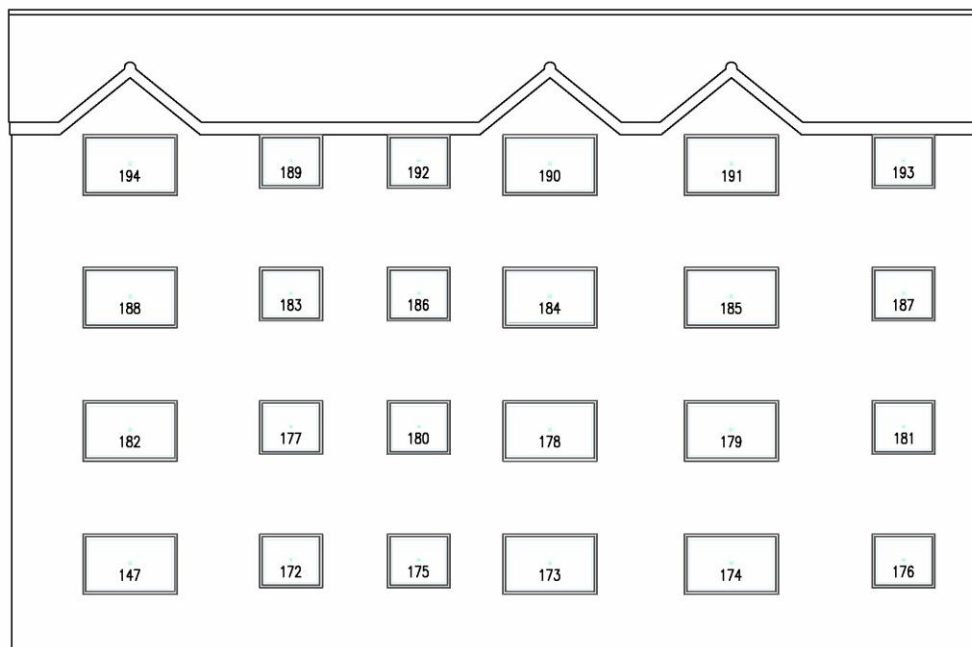
**Sunlight**

9.4.49 The APSH for the windows facing the Site from 27-45 Bridge Meadows was not measured as they face within 90° of due north as set out in the BRE Guidelines.

**49-57 Bridge Meadows**

9.4.50 The nearest windows facing the Site were assessed, assumed to serve habitable rooms. Figure 9.13 below shows elevational land survey of these windows.

Figure 9.13 Windows assessed at 49-57 Bridge Meadows



#### Daylight

- 9.4.51 The VSC for the windows facing the Site from 49-57 Bridge Meadows was measured and found to achieve 39% in the baseline condition.
- 9.4.52 These results are above the BRE guideline recommendation of 27% VSC in all cases.

#### Sunlight

- 9.4.53 The APSH for the windows facing the Site from 49-57 Bridge Meadows was not measured as they face within 90° of due north as set out in the BRE Guidelines.

#### 58-69 Bridge Meadows

- 9.4.54 The nearest windows facing the Site were assessed, assumed to serve habitable rooms. Figure 9.14 below shows elevational land survey of these windows.

Figure 9.14 Windows assessed at 58-69 Bridge Meadows



Daylight

9.4.55 The VSC for the windows facing the Site from 58-69 Bridge Meadows was measured and found to achieve between 25% and 39% in the baseline condition.

9.4.56 These results are marginally below the BRE guideline recommendation of 27% VSC in some cases due to some windows experiencing a greater sense of enclosure than others.

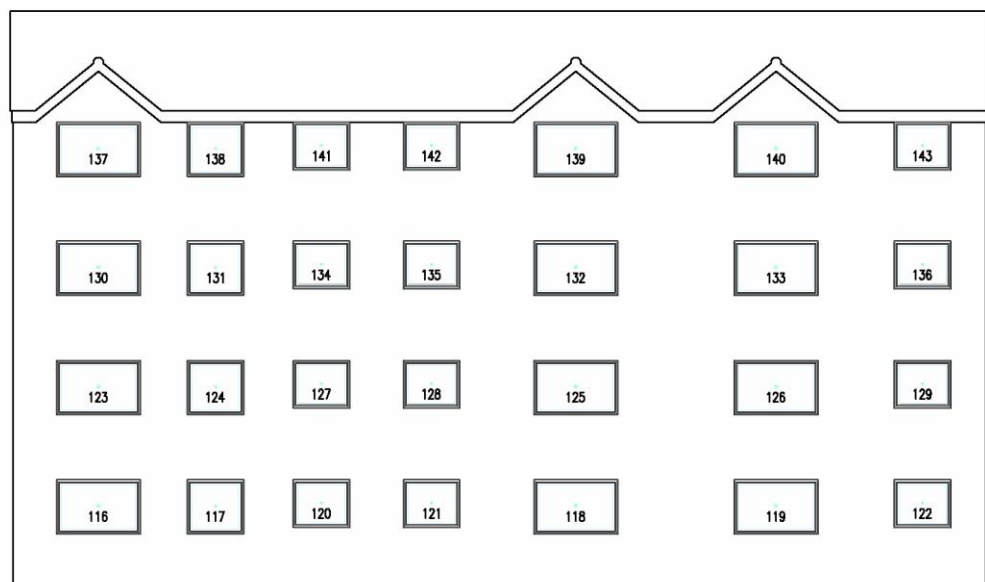
Sunlight

9.4.57 The APSH for the windows facing the Site from 58-69 Bridge Meadows was measured and found to be greater than the BRE recommendation of 25% APSH, of which 5% winter months.

**9-24 Myers Lane**

9.4.58 The nearest windows facing the Site were assessed, assumed to serve habitable rooms. Figure 9.15 below shows elevational land survey of these windows.

Figure 9.15 Windows assessed at 9-24 Myers Lane



**Daylight**

9.4.59 The VSC for the windows facing the Site from 9-24 Myers Lane was measured and found to achieve between 36% and 39% in the baseline condition.

9.4.60 These results are in excess of the BRE guideline recommendation of 27% VSC in all cases.

**Sunlight**

9.4.61 The APSH for the windows facing the Site from 9-24 Myers Lane was measured and found to be greater than the BRE recommendation of 25% APSH, of which 5% winter months.

**Rollins House**

9.4.62 The windows facing the Site were assessed, likely to serve habitable rooms. Figure 9.16 below shows aerial photography of these windows.

9.4.63 The assessment focussed on the windows facing the Site at ground and first floors, as it was assumed that the mezzanine floor is lit by a large roof light. It is also likely that this roof light will provide some ambient internal daylight within any other spaces which it serves. Further detail of the rooms and windows assessed can be found at Technical Appendix 9.2

**Figure 9.16** Windows assessed at Rollins House



Daylight  
9.4.64 The VSC for the windows within the Site at Rollins House was measured and found to achieve between 12% and 38% in the baseline condition.

9.4.65 These results are in excess of the BRE guideline recommendation of 27% VSC is met at 5 windows out of the 8 assessed. The remaining windows are below the BRE guideline recommendation of 27% VSC due to a high level of surrounding obstructions.

#### Sunlight

9.4.66 The APSH for the windows within the Site at Rollins House was not measured as they face within 90° of due north as suggested in the BRE Guidelines.

## 9.5 Identification and assessment of effects

### Introduction

9.5.1 This section of the chapter considers the likely significant effects on the environment with respect to daylight and sunlight to the identified sensitive receptors as a result of the Proposed Development. These effects will cover:

- The likely significant effects arising from the demolition and construction phases (with regard to the Proposed Development sequencing as shown in Chapter 6 of this ES) ; and
- The likely significant effects of the operational Proposed Development.

### Phasing

9.5.2 Details of the Proposed Development's indicative phasing appear in Chapter 6 of this ES and have been used as a basis to provide an assessment of the interim effects on daylight and sunlight and overshadowing to the identified receptors at a point during the proposed sequencing.

Table 9.6 Proposed Indicative Sequencing

Phase	Buildings	Infrastructure	Anticipated Commencement date	Anticipated Completion Date
Phase 1A	Excelsior 1-4	Road to east side of Excelsior and junction on to Surrey Canal Road	Late 2012	Mid 2015
Phase 1B	Orion	New junction on to Surrey Canal Road and closure of existing crossover from Orion	Late 2012	Early 2015
Phase 2	Timber Wharf 1 and 2	Road between Timber Wharf and Excelsior	Mid 2015	Early 2018
Phase 3	Stockholm 1 and 2	Table top junction across Surrey Canal Road linking Stockholm and Timber Wharf and new junction to east of Stockholm 2	Early 2018	Mid 2020
Phase 4	Senegal 1 and 2 plus Stadium Avenue and Stadium 1 and 2	Road through Stadium Avenue	Mid 2020	Late 2021
Phase 5	Bollina North 1 and 2 and Bollina West	Bollina Road to be closed off and then reformed in new position	Late 2021	Late 2024

<b>Phase 5A</b>	Bollina East		Late 2024	Early 2026
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9.5.3 Subject to underlying assumptions, phases 1A and 1B are presently considered to represent the periods of greatest environmental effects and therefore chosen for the purposes of providing an 'environmental snapshot' of the associated interim daylight and sunlight effects.

#### **Phase 1A/1B (Late 2012 – Early/Mid 2015)**

9.5.4 During the demolition stages of phases 1A and 1B, there are likely to be increasing short-term beneficial daylight and sunlight effects on the identified sensitive receptors situated at Chilham House, Rollins House 9-24 Myers Lane and 1-18, 27-45, 49-57 and 58-69 Bridge Meadows. This is as a result of the progressively reduced bulk and massing on Site as the existing buildings within phases 1A and 1B are removed, therefore reducing obstructions to daylight and sunlight reaching these sensitive receptors. However, as they are short-term and temporary they are considered to be of minor beneficial significance.

9.5.5 Once the demolition stages of phases 1A and 1B are complete, there are likely to be increasing adverse daylight and sunlight effects proportionate with the progressively larger bulk and mass of blocks Excelsior 1-4 and Orion built on the cleared Site to these same identified sensitive receptors until the completion of phases 1A/1B. In a similar fashion to the effects predicted in the demolition phases, these adverse effects as a result of Site operations are predicted to be short-term and temporary and therefore considered to be of minor adverse significance.

9.5.6 Once subsequent phases are complete, the long-term effects are predicted to be limited to those assessed for the completed Development below.

#### **Operational effects**

9.5.7 This section considers the daylight, sunlight and overshadowing levels to the identified sensitive environmental receptors once the Proposed Development is complete. The results here are therefore long-term and of greater significance than those in the demolition and construction site operation phases.

9.5.8 The predicted effects as a result of the completed Proposed Development are compared with the corresponding baseline figures to ascertain significance.

Table 9.7 Summary of Proposed VSC Results – Surrounding Residential Properties

Assessment Area	Baseline VSC Range	Predicted VSC Range with Development	Ratio Reduction	Significance of Predicted Effect
21 to 43 Ilderton Road	38%-39%	34%-35%	VSC > 27%	<b>Negligible</b>
38 Delaford Road.	37%-39%	32%-35%	VSC > 27%	<b>Negligible</b>
37 Ablett Street	>27%	31%	VSC > 27%	<b>Negligible</b>
52 to 56 Ilderton Road	39%	32%-33%	VSC > 27%	<b>Negligible</b>
45 to 47 Ilderton Road	25% - 39%	20% - 33%	Ratio reduction <0.8	<b>Negligible</b>
Cliftonville Tavern	38% - 40%	30% - 34%	VSC > 27%	<b>Negligible</b>
179 Ilderton Road	39%-40%	25%-35%	Ratio reduction <0.6 >0.7, VSC > 27%	<b>Minor Adverse</b>

209 to 229 Ilderton Road	39% - 40%	31% - 33%	VSC > 27%	<b>Negligible</b>
Reculver House	8%-40%	0.1%-28%	Ratio reduction > 0.6, VSC > 27%	<b>Minor Adverse</b>
Chilham House	7%-39%	2%-29%	Ratio reduction > 0.6, VSC > 27%	<b>Minor Adverse</b>
1-18 Bridge Meadows	36% - 39%	26% - 29%	Ratio reduction >0.8, VSC > 27%	<b>Minor Adverse</b>
27-45 Bridge Meadows	23% - 39%	14% - 30%	Ratio reduction <0.5 >0.8, VSC > 27%	<b>Moderate Adverse</b>
49-57 Bridge Meadows	39%	22% - 27%	Ratio reduction <0.6 >0.7, VSC > 27%	<b>Moderate Adverse</b>
58-69 Bridge Meadows	25%-39%	15% - 27%	Ratio reduction <0.6 >0.7, VSC > 27%	<b>Moderate Adverse</b>
9-24 Myers Lane	36%-39%	28%-33%	VSC > 27%	<b>Negligible</b>
Rollins House	12%-38%	4%-11%	Ratio reduction <0.3 >0.7	<b>Major – Moderate Adverse</b>

Table 9.8 Summary of Proposed APSH Results - -- Surrounding Residential Properties

Assessment Area	Baseline APSH Range	Predicted APSH Range with Development	Ratio Reduction	Significance of Predicted Effect
21 to 43 Ilderton Road	23% - 46% (T) 3% - 15% (WM)	18% - 41% (T) 2% - 14% (WM)	Ratio reduction <0.8 (T) Ratio reduction <0.9 >0.7 (WM)	<b>Negligible</b>
38 Delaford Road.	>25% (T) 5% (WM)	>25% (T) 5% (WM)	APSH > 25%(T) 5% (WM)	<b>Negligible</b>
37 Ablett Street	Not assessed as within 90° of due north			
52 to 56 Ilderton Road	Not assessed as within 90° of due north			
45 to 47 Ilderton Road	Not assessed as within 90° of due north			
Cliftonville Tavern	>25% (T) 5% (WM)	>25% (T) 5% (WM)	APSH > 25%(T) 5% (WM)	<b>Negligible</b>
179 Ilderton Road	Not assessed as within 90° of due north			
209 to 229 Ilderton Road	Not assessed as within 90° of due north			
Reculver House	Not assessed as within 90° of due north			
Chilham House	Not assessed as within 90° of due north			
1-18 Bridge Meadows	Not assessed as within 90° of due north			
27-45 Bridge Meadows	Not assessed as within 90° of due north			
49-57 Bridge Meadows	Not assessed as within 90° of due north			
58-69 Bridge Meadows	>25% (T) 5% (WM)	>25% (T) 5% (WM)	Ratio reduction <0.7 >0.6 (T) Ratio reduction <0.8 >0.5 (WM)	<b>Moderate Adverse</b>
9-24 Myers Lane	>25% (T) 5% (WM)	>25% (T) 5% (WM)	APSH > 25%(T) 5% (WM)	<b>Negligible</b>

Rollins House	Not assessed as within 90° of due north
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### 21 to 43 Ilderton Road

#### Daylight

- 9.5.9 The VSC in the proposed situation for the windows at 21 to 43 Ilderton Road were all in excess of the 27% VSC which the BRE Guidelines recommend and therefore experience a negligible effect.

#### Sunlight

- 9.5.10 The total APSH in the proposed situation for the windows assessed at 21 to 43 Ilderton Road was lower than the baseline condition, although this was limited to reductions of less than 20%.
- 9.5.11 This is within the 0.8 ratio which the BRE Guidelines recommend as acceptable, stating there will be no noticeable loss in sunlight.
- 9.5.12 There were some reductions to the winter months APSH greater than 20%, although this was due to low existing levels, which lead to misleadingly high ratios when compared to the existing. Therefore the reductions are classified as **negligible**.

### 38 Delaford Road

#### Daylight

- 9.5.13 The VSC in **the** proposed situation for the windows at 38 Delaford Road were all in excess of the 27% VSC which the BRE Guidelines recommend and therefore experience a **negligible** effect.

#### Sunlight

- 9.5.14 The total APSH in the proposed situation for the windows assessed at 38 Delaford Road remain in excess of 25%, of which 5% winter months.
- 9.5.15 The sunlight results are above the BRE guideline recommendation in all cases and therefore experience a **negligible** effect.

### 37 Ablett Street

#### Daylight

- 9.5.16 The VSC in the proposed situation for the windows at 37 Ablett Street were all in excess of the 27% VSC which the BRE Guidelines recommend and therefore experience a **negligible** effect.

#### Sunlight

- 9.5.17 The windows at 37 Ablett Street likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

### 52 to 56 Ilderton Street

#### Daylight

- 9.5.18 The VSC in the proposed situation for the windows at 52 to 56 Ilderton were all in excess of the 27% VSC which the BRE Guidelines recommend and therefore experience a **negligible** effect.

Sunlight

- 9.5.19 The windows at 52 to 56 Ilderton Road likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

**45 to 47 Ilderton Road**

Daylight

- 9.5.20 The VSC in the proposed situation for the windows at 45 to 47 Ilderton Road were in some cases below the 27% VSC which the BRE Guidelines recommend, although all reductions were within the 20% the BRE Guidelines consider noticeable and therefore experience a **negligible** effect.

Sunlight

- 9.5.21 The windows at 45 to 47 Ilderton Street likely to be affected by the Proposed Development were not assessed for sunlight effect as they face within 90° of due north.

**Cliftonville Tavern, 128 Ilderton Road**

Daylight

- 9.5.22 The VSC in the proposed situation for the windows at Cliftonville Tavern were all in excess of the 27% VSC which the BRE Guidelines recommend and therefore experience a **negligible** effect.

Sunlight

- 9.5.23 The total APSH in the proposed situation for the windows assessed at Cliftonville Tavern remain in excess of 25%, of which 5% winter months.

- 9.5.24 The sunlight results are above the BRE guideline recommendation in all cases and therefore experience a **negligible** effect.

**179 Ilderton Road**

Daylight

- 9.5.25 The VSC in the proposed situation for the windows at 179 Ilderton Road were in some cases below the 27% VSC which the BRE Guidelines recommend. Some of these reductions were in excess of the 20% the BRE Guidelines consider noticeable, and therefore experience a **minor adverse** effect.

Sunlight

- 9.5.26 The windows at 179 Ilderton Road likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

**209 to 229 Ilderton Road**

Daylight

- 9.5.27 The VSC in the proposed situation for the windows at 209 to 229 Ilderton Road were all in excess of the 27% VSC which the BRE Guidelines recommend and therefore experience a **negligible** effect.

Sunlight

- 9.5.28 The windows at 209 to 229 Ilderton Road likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

**Reculver House**

#### Daylight

- 9.5.29 The VSC in the proposed situation for the windows at Reculver House showed a wide range of effects which depended on their position and baseline result.
- 9.5.30 In the proposed situation the majority of windows at third floor level exceeded the BRE Guidelines recommendations, obtaining VSC levels of 27% or higher. At first floor level, the VSC was reduced by between 30% and 40%.
- 9.5.31 At ground and second floor levels, the baseline VSC results were low due to overhanging balconies, and the proposed reductions were much greater - being between 80% and 100%.
- 9.5.32 It is therefore considered that the design of these units and their current low levels of daylight in the baseline condition place an increased burden on the Application Site as any further reduction, no matter how slight, will result in misleadingly high ratio results in excess of the BRE Guidelines.
- 9.5.33 It is also possible that the windows which are beneath overhanging balconies, which will experience greater effects, will serve non-habitable, small kitchens which rely mainly upon artificial light. The existing levels of VSC suggest that these rooms were never intended to rely solely upon natural light.
- 9.5.34 The results were varied and overall given the urban context of the Site and the low existing results due to the deeply balconied façade facing the Site, these windows are considered to experience a **minor adverse** effect.

#### Sunlight

- 9.5.35 The windows at Reculver House likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

### Chilham House

#### Daylight

- 9.5.36 The VSC for the windows at Chilham House in the proposed situation also showed a wide range of effects which depended on their position and baseline result.
- 9.5.37 In the proposed situation all windows at third floor level exceeded the BRE Guidelines recommendations, obtaining VSC levels of 27% or higher. At first floor level, the VSC was reduced by 30%, to around 26% VSC. This is marginally below the BRE Guidelines suggestion of 27% VSC.
- 9.5.38 At ground and second floor levels, the baseline VSC results were low due to overhanging balconies, and the proposed reductions were much greater - being between 60% and 90%.
- 9.5.39 It is therefore considered that the design of these units and their current low levels of daylight in the baseline condition place an increased burden on the Application Site as any further

reduction, no matter how slight, will result in misleadingly high ratio results in excess of the BRE Guidelines.

9.5.40 It is also possible that the windows which are beneath overhanging balconies are therefore predicted to experience greater effects serve non-habitable, small kitchens which rely mainly upon artificial light. The existing levels of VSC suggest that these rooms were never intended to rely solely upon natural light.

9.5.41 The results were varied and overall given the urban context of the Site and the low existing results due to the deeply balconied façade facing the Site, these windows are considered to experience a **minor adverse** effect.  
Sunlight

9.5.42 The windows at Chilham House likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

### **1 – 18 Bridge Meadows**

#### Daylight

9.5.43 The VSC for the windows at 1 – 18 Bridge Meadows in the proposed situation showed a range of reductions.

9.5.44 In most cases this reduction was to a level which remained above the 27% VSC which the BRE Guidelines recommend. The single window, which was reduced to below 27% VSC, experienced a reduction of 30% when compared to the existing situation. This is slightly in excess of the 20% which the BRE Guidelines consider to be noticeable.

9.5.45 The results were varied and therefore overall given the urban context of the Site and the majority remaining to above 27% VSC, these windows are considered to experience a **minor adverse** effect.

#### Sunlight

9.5.46 The windows at 1 – 18 Bridge Meadows likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

### **27 - 45 Bridge Meadows**

#### Daylight

9.5.47 The VSC for the windows at 27 - 45 Bridge Meadows in the proposed situation showed a range of reductions.

9.5.48 In some cases this reduction was to a level which remained above the 27% VSC which the BRE Guidelines recommend. The remaining windows experienced a reduction of between 20% and 50% when compared to the existing situation. These are in excess of the 20% which the BRE Guidelines consider to be noticeable.

9.5.49 These reductions are considered to be mainly due to the enclosed courtyard surrounding these windows and also the low buildings on Site which these windows currently face.

- 9.5.50 The results were varied and overall given the urban context of the Site and some windows remaining in excess of 27% VSC, these windows are considered to experience a **moderate adverse** effect.

Sunlight

- 9.5.51 The windows at 27 - 45 Bridge Meadows likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

#### 49- 57 Bridge Meadows

Daylight

- 9.5.52 The VSC for the windows at 49 - 57 Bridge Meadows in the proposed situation showed similar levels of reduction.

- 9.5.53 In some cases this reduction was to a level which remained above the 27% VSC which the BRE Guidelines recommend. The remaining windows experienced a reduction of between 30% and 40% when compared to the existing situation. These are in excess of the 20% which the BRE Guidelines consider to be noticeable.

- 9.5.54 These reductions are considered to be mainly due to the low buildings on Site which these windows currently face.

- 9.5.55 The results were varied and overall given the urban context of the Site and some windows remaining in excess of 27% VSC, these windows are considered to experience a **moderate adverse** effect.

Sunlight

- 9.5.56 The windows at 49-57 Bridge Meadows likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

#### 58 - 69 Bridge Meadows

Daylight

- 9.5.57 The VSC for the windows at 58 - 69 Bridge Meadows in the proposed situation showed similar levels of reduction.

- 9.5.58 In one case this reduction was to a level which remained above the 27% VSC which the BRE Guidelines recommend. The remaining windows experienced a reduction of between 30% and 40% when compared to the existing situation. These are in excess of the 20% which the BRE Guidelines consider to be noticeable.

- 9.5.59 These reductions are considered mainly to be due to the low buildings on Site which these windows currently face.

- 9.5.60 The results were varied and overall given the urban context of the Site, these windows are considered to experience a **moderate adverse** effect.

Sunlight

9.5.61 The windows at 58-69 Bridge Meadows likely to be affected by the Proposed Development showed a range of effects. In most cases, the reductions were between 30% and 40%, which is in excess of the 20% which the BRE Guidelines consider to be noticeable.

9.5.62 In many cases, the existing levels are very high, unusually so for an urban environment due to the baseline nature of the Site, characterised by low buildings and railway tracks beyond. The proposed levels of APSH are considered to be more atypical of the context, although in moving from the baseline to the proposed situation, the reductions are likely to be noticeable.

9.5.63 The results were varied and therefore overall given the urban context of the Site, these windows are considered to experience a **moderate adverse** effect.

### **9-24 Myers Lane**

#### Daylight

9.5.64 The VSC in the proposed situation for the windows at 9-24 Myers Lane were all in excess of the 27% VSC which the BRE Guidelines recommend and therefore experience a **negligible** effect.

#### Sunlight

9.5.65 The total APSH in the proposed situation for the windows assessed at 9-24 Myers Lane remain in excess of 25%, of which 5% winter months.

9.5.66 The sunlight results are above the BRE guideline recommendation in all cases and therefore experience a **negligible** effect.

### **Rollins House**

#### Daylight

9.5.67 The VSC for the windows at Rollins House was reduced by between 30% and 70% in the proposed situation. Of the eight windows assessed for daylight effects, four were predicted to experience a reduction of 70%, one a 60% reduction, one a 50% reduction and two a 30% reduction.

9.5.68 This is in excess of the 20% reduction in VSC which the BRE Guidelines recommend as noticeable.

9.5.69 The remaining habitable rooms within this property were likely to be lit by a large roof light, which will remain unaffected by the Proposed Development.

9.5.70 Further detail of the assessment for Rollins House can be found at Technical Appendix 9.2.

9.5.71 In common with other properties adjacent to the Proposed Development, the windows to this property are currently facing over comparatively low buildings or towards railway tracks and therefore will experience a reduction in daylight levels which is in excess of the BRE Guidelines recommendations.

- 9.5.72 For the above reasons and due to the inherent flexibility within the BRE Guidelines (please refer to section 9.3.3 above for the relevant quote from the BRE Guidelines), it is considered that this is a situation where the standards should not be rigidly enforced and therefore these windows are considered to experience a **moderate adverse** effect.

#### Sunlight

- 9.5.73 The windows at Rollins House likely to be affected by the Proposed Development were not assessed for sunlight effects as they face within 90° of due north.

### **Millwall Football Club**

#### Overshadowing

- 9.5.74 The permanent overshadowing test conducted to the existing adjacent football pitch at Millwall Football Club demonstrated that 9.77% of its area will experience permanent shadow on the assessment day of March 21<sup>st</sup> and therefore this amenity space exceeds the BRE Guidelines recommendations.

- 9.5.75 The effect of the proposed development on permanent overshadowing to Millwall Football Club is therefore considered to be **negligible**.

## **9.6 Opportunities for further mitigation measures**

- 9.6.1 The baseline Site condition, which features many low rise buildings and open, unobstructed areas due to the presence of wide railway tracks means that development which aims to achieve the regeneration and associated significant development for which the Site is allocated will inevitably result in some effect on daylighting/sunlighting to the neighbouring properties.
- 9.6.2 The daylight assessments for the surrounding properties show greater effects to those windows situated in buildings which currently overlook low rise areas of the Site or which have deep overhanging balconies above which currently restricts their access to daylight and/or sunlight.
- 9.6.3 In the situations where existing adjacent windows overlook open space, the baseline levels of daylight are considered to be exceptional and therefore place an increased burden on development of adjacent sites.
- 9.6.4 It is therefore considered that the results need to be looked at as a whole and that the wider regeneration benefits as a result of the Development being borne in mind when interpreting the results of the assessments.
- 9.6.5 The BRE Guidelines consider that a greater level of reduction may be unavoidable in central urban areas and that different target values may be adopted, especially where neighbouring development place an unfair burden. This is considered to be appropriate in this urban environment identified for regeneration and no mitigation measures are considered necessary.
- 9.6.6 The sunlight assessments followed a broadly similar pattern, with the main reductions experienced to the windows located within buildings which overlook low rise areas of the Site or feature deep overhanging balconies above. As previously stated, in the context of a central urban environment and when considering the intended application of the BRE guidance to

suburban contexts and inherent flexibility plus the wider regenerative benefits of the Proposed Development, it is considered that no mitigation is required.

- 9.6.7 The permanent overshadowing results for the adjacent football pitch at Millwall Football Club demonstrated that it will not experience any excessive levels of permanent overshadowing with the Proposed Development in place and therefore no mitigation measures are suggested.

#### **Demolition and Construction**

- 9.6.8 No specific measures required for mitigation of effects of daylight/ sunlight levels as the effects are temporary and short term.

#### **Completed Development**

- 9.6.9 No specific measures required for mitigation of effects of daylight/ sunlight levels.

## **9.7 Summary of residual effects**

- 9.7.1 The Proposed Development seeks to mitigate effects on daylight and sunlight availability to neighbouring properties by positioning reduced bulk and massing to the south of the Application Site, where the most sensitive environmental receptors are located. Drivers Jonas Deloitte has given advice on the evolving design process, in order to assist in balancing the dual concerns of achieving the significant regenerative development for which the Site is allocated against the need to consider the daylight, sunlight and overshadowing to adjacent existing properties.

- 9.7.2 As no further mitigation measures are proposed or considered necessary, the residual effects of the Proposed Development will remain the same as described in the 'Completed Development' section.

Table 9.9 Summary of Residual Daylight and Sunlight Effects

<b>Issue</b>	<b>Potential Effect</b>	<b>Mitigation</b>	<b>Residual Effect</b>
<b>Demolition and Construction Phases</b>			
21 to 43 Ilderton Road	<b>Short term, temporary increase in daylight and sunlight levels as existing buildings removed. Reversed as construction commences until construction complete.</b>	<b>none</b>	<b>Short term, temporary increase in daylight and sunlight levels as existing buildings removed. Reversed as construction commences until construction complete.</b>
38 Delaford Road.			
37 Ablett Street			
52 to 56 Ilderton Road			
45 to 47 Ilderton Road			
Cliftonville Tavern			
179 Ilderton Road			
209 to 229 Ilderton Road			
Reculver House			
Chilham House			
1-18 Bridge Meadows			
27-45 Bridge Meadows			
49-57 Bridge Meadows			
58-69 Bridge Meadows			
9-24 Myers Lane			
Rollins House			
<b>Completed Development</b>			
21 to 43 Ilderton Road	<b>Negligible long term</b>	<b>none</b>	<b>Negligible long term</b>

	<b>effects to daylight and sunlight.</b>		<b>effects to daylight and sunlight.</b>
38 Delaford Road.	<b>Negligible long term effects to daylight and sunlight.</b>		<b>Negligible long term effects to daylight and sunlight.</b>
37 Ablett Street	<b>Negligible long term effects to daylight.</b>		<b>Negligible long term effects to daylight.</b>
52 to 56 Ilderton Road	<b>Negligible long term effects to daylight.</b>		<b>Negligible long term effects to daylight.</b>
45 to 47 Ilderton Road	<b>Negligible long term effects to daylight.</b>		<b>Negligible long term effects to daylight.</b>
Cliftonville Tavern	<b>Negligible long term effects to daylight and sunlight.</b>		<b>Negligible long term effects to daylight and sunlight.</b>
179 Ilderton Road	<b>Minor Adverse long term effects to daylight.</b>		<b>Minor Adverse long term effects to daylight.</b>
209 to 229 Ilderton Road	<b>Negligible long term effects to daylight.</b>		<b>Negligible long term effects to daylight.</b>
Reculver House	<b>Minor Adverse long term effects to daylight.</b>		<b>Minor Adverse long term effects to daylight.</b>
Chilham House	<b>Minor Adverse long term effects to daylight.</b>		<b>Minor Adverse long term effects to daylight.</b>
1-18 Bridge Meadows	<b>Minor Adverse long term effects to daylight.</b>		<b>Minor Adverse long term effects to daylight.</b>
27-45 Bridge Meadows	<b>Moderate Adverse long term effects to daylight.</b>		<b>Moderate Adverse long term effects to daylight.</b>
49-57 Bridge Meadows	<b>Moderate Adverse long term effects to daylight.</b>		<b>Moderate Adverse long term effects to daylight.</b>
58-69 Bridge Meadows	<b>Moderate Adverse long term effects to daylight and sunlight.</b>		<b>Moderate Adverse long term effects to daylight and sunlight.</b>
9-24 Myers Lane	<b>Negligible long term effects to daylight and sunlight.</b>		<b>Negligible long term effects to daylight and sunlight.</b>
Rollins House	<b>Moderate Adverse long term effects to daylight.</b>		<b>Moderate Adverse long term effects to daylight.</b>
Millwall FC Football Pitch	<b>Negligible long term effect to permanent overshadowing</b>	<b>none</b>	<b>Negligible long term effect to permanent overshadowing</b>

## 9.8 Assessment of Cumulative Effects

- 9.8.1 The cumulative developments listed in Chapter 2 have been reviewed and it is considered that they are too distant from the Site to lead to any likely cumulative effects with respect to daylight & sunlight. This also applies to the Silwood Estate development Lewisham planning ref (DC/09/73169) which is closest the Application Site, but is characterised by low rise blocks, separated from the Site by wide railway tracks.
- 9.8.2 It was therefore concluded that daylight and sunlight effects to the existing residential properties within the scope of this chapter are likely to be limited to the predicted effects contained within the Potential Effects section above.

## 9.9 References

- 9.9.1 Littlefair, P.J. (1991) 'Site layout planning for daylight and sunlight: a guide to good practice'  
BRE, Watford